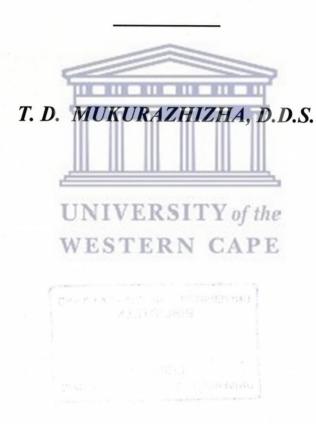
FACTORS INFLUENCING THE ATTENDANCE OF CHILDREN AT TWO COMMUNITY DENTAL CLINICS.



Key Words: Dental pain, factors influencing, time lapse, children, perceived need, demands and impact.



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THIS IS AN INVESTIGATION OF THE FACTORS THAT INFLUENCE THE DENTAL ATTENDANCE OF CHILDREN UNDER THIRTEEN YEARS OF AGE AT TWO COMMUNITY DENTAL CLINICS IN THE WESTERN CAPE, SOUTH AFRICA.



SUBMITTED IN PART FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF M.Sc. (DENT) IN THE FACULTY OF DENTISTRY OF THE UNIVERSITY OF THE WESTERN CAPE

SUPERVISOR:

DR. S. YASIN-HARNEKAR

DECLARATION

I DECLARE THAT

"FACTORS INFLUENCING THE DENTAL ATTENDANCE OF CHILDREN AT TWO COMMUNITY DENTAL CLINICS"

IS MY OWN WORK AND THAT ALL THE SOURCES I HAVE USED OR QUOTED HAVE BEEN INDICATED AND ACKNOWLEDGED BY MEANS OF COMPLETE

REFERENCES.

UNIVERSITY of the WESTERN CAPE SIGNED:

T. D. MUKURAZHIZHA, D.D.S.

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LIST OF FIGURES

	Page	
1. Marital status	26	
2. Incidence of family car, telephone, and medical aid	27	
3. Accommodation and income	28	
4. Level of mother's education	29	
5. Level of father's education	30	
6. Transport used to access clinic	31	
7. One way fare – parent and child	32	
8. Toothbrushing	34	
9. Dotplot showing days parent was aware of child's dental		
problem	36	
10. Time lapse after pain experience		
11.Analgesic crushed	40	
12. Time lapse after parent became aware of child's problem	41	
13.Decision to take child to dentist SITY of the	42	
14. Why specifically today	46	

LIST OF TABLES.

	Page
1. Sample size / age	25
2. Distance travelled by patients to the clinic	31
3. Dental attendance of parents and children	33
4. Toothpaste availability and substitutes	35
5. Inclusive percentages for Fig. 9 – first 30 days	36
6. Type and treatment of pain	39
7. Time lapse	43
8. Hindrances to dental utilisation	44
9. Impact	45
10.A comparison of pain duration observed in the study and the	ose
by Mani et al (1997) and Gibson et al (1993)	49
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WESTERN CAPE	

TABLE OF CONTENTS

Contents		Page
• Title	e Page	I
• Why	y Thesis	II
• Decl	laration	III
• Ack	nowledgements	IV
• List	of Figures	\mathbf{V}
• List	of Tables	VI
1 Sumn	nary	3
2 Intro	duction	5
2.1 F	Problem	9
2.2 F	Purpose	9
3 Litera	ature Review	10
4 Aims		17
5 Objec	etives	18
6 Mater	rials and Methods IVERSITY of the	18
6.1	Study Design ESTERN CAPE	18
6.2	Definition of Terms	18
6.3	Sample Size	18
6.4	Study Population	19
6.5	Sampling Procedure	19
6.6	Validity and Reliability	21
6.7	Data collection	21
6.8	Data Analysis	22
7 Ethics		24

8 Resi	ilts	25
8.1	Demography	25
8.2	Attendance Pattern	33
8.3	Oral Hygiene at Home	34
8.4	Pain Management	36
8.5	Impact of Pain	45
9 Disc	ussion	47
10 Co	nclusions	56
11 Red	commendations	56
12 Ref	erences	57
15 A	ppendices	
A	Request for Use of Community Dental Clinics	60
В	Consent Form - English	61
\mathbf{C}	Questionnaire - English	62
D	Expansion of Open-ended Questions	72
\mathbf{E}	Consent Form - Xhosa SITY of the	76
F	Questionnaire E Xhosa RN CAPE	77
\mathbf{G}	Consent Form – Afrikaans	85
H	Questionnaire – Afrikaans	86
I	Miscellaneous Treatment	95
J	Other Reasons for Time Lapse	95
K	Area Man	06

1. SUMMARY

AIMS AND OBJECTIVES

Most children presenting to dental clinics have pain of varying intensity that usually, has been endured for long periods of time. A study done at Cardiff in the United Kingdom, found that only 15% of children that had dental pain visited the dentist. Therefore, understanding the motivations of patients in seeking health care is vital to the quality of life in the family and community and to the success of any oral health planning process.

This study explored factors influencing the time between the initial pain experience and definitive dental treatment, that is, the *time lapse*. It assessed how factors such as pain, individual and community characteristics affect the timing of dental visits.

METHOD

Parents or guardians accompanying children visiting two community dental clinics in Guguletu and Mitchells Plain in the Western Cape were asked to indicate how factors such as severity and duration of pain, efficacy of self-treatment, and impact on parents affected the decision to seek treatment. A total of one hundred and twenty six parents were interviewed using a structured questionnaire. The English questionnaire was translated into Xhosa and Afrikaans and used with the help of interpreters when necessary.

Children attending these community dental clinics for treatment on a particular morning were included in the study sample. Children up to thirteen years of age (primary, mixed, and early permanent dentition) comprised the study sample. Only children that had a dental problem were included in the study. Children that were not accompanied by a parent or guardian were excluded.

RESULTS

Close to half the children (43 - 45%) had never been to the dentist before. Parents from Mitchells Plain knew earlier of their children's dental problems (most knew 14 days before visit) than those from Guguletu where most knew within the last 7 days. However, Guguletu children were presented to the dentist sooner after the painful experience (69.2% within 7 days) than Mitchells Plain where only 48.3% were presented within the same period.

It was found that for these communities, the distance from the clinic, the mode of transport, and the fares charged greatly influenced dental attendance. Most families lived within 3km, and walked (more prevalent in Guguletu) or rode a taxi (more prevalent in Mitchells Plain). With taxi the most prevalent mode of transport, money was an important factor of dental attendance.

Long queues at the clinic and waiting long for appointments, were cited by parents as the major hindrances to attendance.

While a worsening of pain, loss of sleep and sensitivity to chewing hastened dental attendance, parental work commitment and the child's school delayed it.

Most families (79%) tried some treatment at home prior to the dental visit.

The remedies offered such as Disprin®, direct placement of crushed Disprin® and Panado® were a concern because they were potentially harmful.

Both communities were in the low socio-economic class with Guguletu consistently the poorer of the two. They both had disrupted family life as reflected by the low rates of married parents.

WESTERN CAPE

CONCLUSION

In the presence of pain Guguletu children were presented to the dentist sooner than those of Mitchells Plain.

Accessibility of the clinics was a real concern especially in Guguletu.

There was rampant inappropriate use of medications such as aspirin and antibiotics.

The greatest impact of the child's pain on the parents was on affected sleep.

The non-regular attendance pattern of the children closely followed that of the parents.

2. INTRODUCTION

Dental practitioners treating children are often moved when a child presents with facial swelling and / or obvious signs of severe pain (malaise, irritability, withdrawal or disinterest in play). A logical question to the parent as one tries to come to grips with the situation is "When did the problem start?" The answer often reveals that unacceptably long periods of time have elapsed since discomfort was first experienced. An array of factors that prompt or delay a visit to the dentist come to light as questioning continues. The most frequent one is severity of pain as evidenced by effect on sleep and how vocal or dramatic the child was in presenting the problem to the parent. Still the question must be asked "What prevents people from going to the dentist or prompts attendance when there is an obvious need for dental attention?"

Children are dependent on their parents for the relief of their dental pain, either by seeking professional advice or treatment or by giving the child prescription or over the counter medication. There are factors however, that determine how soon a child with dental pain will see the dentist. The dental health knowledge, beliefs and attitudes of parents may therefore, influence a child's care and pain management (Andlaw and Rock, 1992, Primosch et al, 1996, and Mason et al, 1997). The high prevalence of dental caries and the propensity for accidents among children will always guarantee high numbers of children with dental pain in most communities.

Gobetti (1992) defined pain as a complex, subjective response of intensity, time, quality, impact and personal meaning that manifest as an unpleasant sensory and emotional experience arising from actual or potential tissue damage or described in terms of such damage.

Taking an attendance of once in two years as regular, van Wyk et al (1989b) found that low percentages of South Africans (6.1% Black, 7.6% Coloured, 8.6% Asian and 28.9% White) are in the habit of visiting the dentist regularly. Gibson et al (1993) in a Canadian sample cohort also found low percentages of regular (at least once a year) attendees. In their study, 68.7% of their Vancouver sample was not regular attendees.

Chesters et al (1992), Primosch et al (1996) and Murray (1998) found various factors such as pain, fear, aesthetics, socio-economic class, parents, the children themselves, dentists and clinics, and available remedies keep away children with perceived needs from dental services.

The lower socio-economic class tends to have more of these factors at play and some are beyond their control (Reddy and Tobias, 1994). For example, taking time off work in order to take a child to the dentist is often not possible for some parents. Miller (1978), with regard to this states that "anything that is not essential is discouraged by management". Parents may have problems with finance and transport to distant clinics. They often have to endure queuing for hours while waiting for busy dentists. The fear and apprehension of the child further exacerbates the situation. The interplay of these factors may lead to a greater use of over the counter drugs in the hope that a visit to the dentist may be avoided altogether. This further contributes to the delay in presenting to the dentist (Mason et al, 1997).

There are many references in the literature on caries prevalence, post surgical pain, post-operative pain, early pain management and the impact of pain on the dental attendance of patients (Miller, 1978, Gobetti, 1992, Primosch et al, 1996, and Mason et al, 1997). Few of these studies have addressed dental pain in children and the quantification of time lapse between the perceived need and demand for treatment. However, none has addressed the question of inhibition or encouragement of dental visits as experienced locally in the South African context.

This study was conducted in communities that are at the lower end of the economic classification scale (Du Plessis, 1997, Mani et al, 1997 and Gugushe, 1998). They typically exhibit low oral health services utilisation, are more likely to have curative or irregular attendance, and receive services that may not promote tooth retention.

Guguletu and Mitchells Plain both fall under the jurisdiction of the City of Cape Town but have different district administration offices. The Guguletu office is named

Feseka Ikapa after Feseka High School, which was once housed there and Ikapa, the indigenous Xhosa name for Cape Town. Guguletu bears a colonial heritage in its street names which all start with the letters NY (short for Native Yard). Guguletu is 1.5 km at its widest (east - west) and 3 km at its longest (north - south) while Mitchells Plain measures 4 km at its widest (east - west) and 6 km at its longest (north - south). The two clinics are 7.6 km apart as the crow flies. A map of the area is attached as Appendix J.

The 1994 population census gave the population of Guguletu as 132,700. Feseka Ikapa (Cape Town City Council) updates this figure annually by a factor of 15%. This gives a 1999 population of 266,907. The adjusted 1991 population for Mitchells Plain was 239 661 (UNISA, 1993). Applying the same annual update rate of 15% gives a 1999 figure of 733,126.

The two community dental clinics were selected for their perceived socio-cultural and economic differences among other variables. Mitchells Plain is a formal suburb with a medium to high population density while Guguletu is a high-density suburb with both formal and informal components. Both clinics also draw patients from surrounding periurban informal settlements. These clinics are state funded and are serviced through the Faculty of Dentistry of the University of the Western Cape.

WESTERN CAPE

Morrish and Schaefer (1992) compared these two suburbs and reported that 6.5% and 16% had medical aid in Guguletu and Mitchells Plain respectively. Guguletu had 2.5 medical consultations per person per year while that for Mitchells Plain was 1.8 in that year. During the month of September 1999, 1053 dental patients were seen at the Guguletu dental clinic while 746 were seen at the Mitchells Plain dental clinic. The Guguletu dental clinic sees patients across the full age range and Mitchells Plain dental clinic sees only paediatric patients up to 12 years of age.

This study was concerned with factors influencing the time lapse between perceived need and presentation for dental treatment. Attempts were also made to quantify this time

period. The representative clinics selected helped to focus on the served area assuming that their patients were drawn from the immediate area around the clinics. Additionally, this places the study in a regional geographic context.

The terms *need*, *demand* and *utilisation* are used as defined by van Wyk et al, (1989a & b) and are given in section **6.** The terms *parent* and *time lapse* as used in this study context are also defined there.



2.1. PROBLEM.

Most children present to dentists with dental pain or discomfort of varying intensity and duration. History often shows that pain was first experienced several days earlier than the visit but was ignored, brushed aside or efforts were made to treat it at home. Some present to the dentist after having sought relief from other sources such as medical doctors or pharmacists.

Parents, caregivers and teachers often have to make decisions on how to handle dental pain in children. Many of them make inappropriate decisions that at times contribute to delays in seeking professional help. Practices such as the placement of crushed analgesics on the painful tooth or soft tissue are harmful as it can cause an "aspirin burn". The consumption of aspirin itself by children under 16 may cause Reye's syndrome (Morris and Klimberg, 1986) or prolong bleeding. Also, the often-observed practice of wrapping warm pads around the cheeks to ease the pain runs the risk of skin perforation as the abscess is drawn towards heat.

Dental pain impacts on the misery, anxiety and the disruption of life's routines that are experienced by children and their families. Every year, there are a number of economic days lost due to dental disease. School is missed and work hours are lost. These could significantly be reduced or avoided (Miller, 1978, Mason et al, 1997 and Vigild et al, 1999). Timing has a bearing on whether pain can be dealt with in a quick, conservative, cost effective and less traumatic manner.

2.2. PURPOSE

Information gathered could be of value to health educators and planners in their endeavour to better serve their communities through prevention, health promotion and timely relief of painful symptoms. Parents and caregivers also need to be taught safe ways for the early management of dental pain.

3. LITERATURE REVIEW

Most dental pain is the result of caries in teeth or trauma to the mouth area. Caries prevalence has been studied and written on quite extensively. It has now become standard for countries to carry out regular (such as 5 yearly) national oral health surveys. The National Health and Nutritional Examination Surveys (NHANES) of the United States, Children's Dental Health in England and Wales, and the National Oral Health Survey of South Africa have become regular contributors to the prevalence, aetiology and pathogenesis knowledge on caries. This is important when recognition is given to the fact that infection was the cause of pain in 76.7% of patients who presented as dental emergencies to the University Hospital dental clinic, Vancouver, Canada (Gibson et al, 1993). In turn dental pain was the most common cause of self-referral to emergency clinics as was the case in those attending the Bristol Dental Hospital Emergency and Oral Medicine Clinic (Matthews et al, 1994).

Studies in the literature have reported on dental pain in relation to caries prevalence, post-surgery pain, post-restorative pain, early management of dental pain and the social impact of dental pain. The vast majority is on **post-surgery pain** (Acs and Drazner, 1992), the frequency, severity, onset and duration of it. Stratification has been done by age, sex, socio-economic, socio-cultural, the anaesthesia used intra-operatively and the postoperative analgesic prescribed.

Matthews et al (1994) in their study on the efficacy of dental pain management in Bristol, phoned people who had received treatment 24 hours earlier. The most common presenting conditions in their study were acute apical periodontitis, irreversible pulpitis and reversible pulpitis, all resulting from dental caries. They found 87% obtained marked or total pain relief as a result of professional dental treatment received.

In a study at the School of Nursing, University of California at San Francisco in the United States, Faucet et al (1994) reported significantly less severe post-operative pain in subjects of European descent than those of black American or Latino descent. They also reported that gender was significant, with men reporting less pain than women regardless

of ancestry. Their hypothesis is that these differences could be due to potential differences in physiology, in addition to social learning. Mares et al (1997) partially countered these findings in their study on intra-operative pain felt by children (6-14 years old) at the Department of Social Medicine, Charles University, Hradec Kralove. They found no statistical difference between boys and girls but found that the social workers more often tried to support girls. This latter factor may be contributing to the social learning.

In more recent years studies have been carried out on **post-restorative pain** (Acs and Drazner, 1992). There are very few post-restorative pain studies in the literature compared to post-extraction studies. Furthermore, these studies are typically on adults. In their study, Acs and Drazner (1992) used a questionnaire that the parents of children aged 6-13 years completed. They found that 31.5% of the study sample had reported post-restorative pain and that 52.9% of these needed analgesics for the pain. It was significant that in the 6-9 year age group, more females (50%) reported pain compared to males (6.2%). Of these, 42.9% females needed analgesics but no males needed analgesics.

The literature also has many studies on the **impact of pain**. Studies have been on social and psychological impact, physical limitations and functional disability resulting from dental pain. Miller's publication, "Waste of Dental Pain" specifically addresses this aspect (Miller, 1978).

It has been noted that parents may lose a part of their wages while obtaining dental treatment for their children (Miller, 1978). Fearing such financial loss, parents try to deal with the child's problem without taking time off. Thus parents and teachers give their children and pupils "over the counter" medication, and at times natural ointments to soothe the toothache. In a London study by Mason et al (1997), parents were found to also consult medical doctors (20%) and pharmacists (5%) for advice before going to the dentist. A further 2% said that they discussed their child's problem with a friend or relative first.

The socio-economic status of urbanised families throughout the world influences the caries experience of children (Du Plessis, 1997). People in the lower socio-economic class have higher sickness, incapacity and doctor consultation rates for most diseases like influenza than those in higher classes (Miller, 1978). In a similar study conducted in the Western Cape by Morrish and Schaefer (1992), people in Guguletu, a high-density suburb with most inhabitants in the lower socio-economic class made 2.5 consultations per person per year in 1991. On the other hand those in Mitchells Plain, a high-density suburb with a slightly 'better off' lower socio-economic class, made 1.8 consultations per person per year. The lower socio-economic class also shows a lower rate of dental consultations. This is explained by Miller (1978), "Patients view dentistry from a social or economic angle and as dental disease is generally not lethal, assessed it differently to medical disease".

Within the South African context, disadvantaged communities are more prone to higher periodontal disease (Gugushe, 1998). Du Plessis (1997) contributed further by noting that higher socio-economic groups are associated with lower dental caries experience as expressed by the DMFT (dmft). The "decayed" and "missing" components are low while the "filled" component is high. The converse is true for the low socio-economic group where the 'decayed' and 'missing' components are higher and there are fewer 'filled' teeth. This reflects the unmet need and consequently the type of treatment done.

Access to dental clinics also poses a problem both as to its physical location and financial aspect. Children may have special handicaps and require special facilities, which are not always available, nor affordable (Curzon and Pollard, 1997). The location of dental clinics may also preclude certain population groups who find transport a particular problem. Milnes et al (1993) studied the treatment costs associated with nursing caries in a remote Canadian community. They reported that access to dental treatment is difficult, resulting in long delays in the provision of treatment and, most likely, significant morbidity associated with dental pain and oral infection. Travel to distant centres for treatment under general anaesthesia contributed significantly to the costs.

Studies have also been carried out on the **early management of pain**. These have discussed early efforts by individuals and families to seek relief from dental pain. Factors such as severity and duration of pain, age and sex of the sufferer, socio-economic status of the family, educational level of the head of the family, available medication, prevalent socio-cultural values, dental awareness and behavioural patterns have been well documented.

Children are dependent on parents for the relief of their dental pain or discomfort. When a child gets a dental problem, measurable time starts to tick away until a dentist does something definitive about the problem. This is the 'time lapse' and is defined in section 6. The child tells a parent and describes the problem indicating the severity as best they can. The understanding of pain in children is limited because of the multifactoral complexity of pain perception by children and its assessment by adults. The problem of acute pain management in children centres on the difficulty of assessing their pain objectively because of their limited ability to understand instructions regarding assessment of that pain, and to articulate descriptions of their pain (Primosch et al, 1996).

Many factors influence the total time lapse. For example, parents are affected by the ill health of the child in that they lose sleep when a child loses theirs because of pain (Miller, 1978). As a result of one such night the child is quickly taken to a dentist. Pain was consistently the reason people went to the dentist (Gibson et al, 1993, Primosch et al, 1996, Mani et al, 1997 and Vigild et al, 1999). Similarly, grossly unaesthetic teeth are a reason for children to be brought to the dentist. Anterior teeth that are carious, fractured off, or malpositioned will send a child to the dentist sooner (Murray, 1998). These factors shorten the time lapse.

In a London based study, Mason et al (1997) found that 83% of the children were in pain when they visited the dentist. Another study by Mani et al (1997) at Witwatersrand University, South Africa found 63% of the study population presented with pain. Murray (1998), however, quotes figures from the National Oral Health Survey in the United Kingdom that only 15% of the people with dental pain seek treatment. Why should this

be so when Matthews et al (1994) found that 87% of cases of acute dental pain may receive marked or complete relief within 24 hours when they consult a dentist?

Other factors prolong the time lapse. These factors are patient related, financial, attitudinal and the availability of dental services (Faber et al, 1989).

Children have refused to go to the dentist because of fear emanating from past experiences or imagined fear from siblings and friends who relate horror stories of their experiences at the dentist (Sutcliffe, 1984). This is contrary to Acs and Drazner (1992) who state that pain is partially a learned response so the reaction to a given stimulus should vary with their own life experiences. Sutcliffe (1984) reported that fear caused 25% of the people not to go to the dentist. If the children eventually go, their behaviour is uncooperative and unmanageable because of this fear (Mason et al, 1997 and Curzon and Pollard, 1997).

Parents can influence their children's attendance in both negative and positive ways. Their lack of money, time off work, or simple procrastination has kept children away from dental treatment (Miller, 1978). A working, low socio-economic class mother is less likely to have time to take her child to the dentist (Andlaw and Rock, 1992). They also stated that the father's occupation forms the basis for the socio-economic classification of a child. Parents' dental health knowledge, beliefs and attitudes may influence a child's care and pain management (Mason et al, 1997). Some parents through their own fears and ignorance do more harm than good when they try to prepare the child for their first visit to the dentist (Andlaw and Rock, 1992). With knowledge, they are more likely to demonstrate timeous dentist consultations. Parents are best placed to assess pain in their children and to articulate descriptions of that pain to health care providers (Primosch et al, 1996)

Children have a remarkable similarity in caries experience to their parents when both the parents' susceptibility is the same (either high or low). However, when the caries susceptibility of parents is different, the children's susceptibility tends to be more like

that of the mother than that of the father. This finding was particularly evident in daughters (Bixler, 1994)

Parents with a low educational level (Vigild et al, 1999) and large family sizes (Miller, 1978), were associated with those who only went to the dentist when they were in pain. Children from families with a low income are less likely to visit the dentist regularly as is seen in financial stress, when dentistry becomes crisis oriented and visits to the dentist are for pain or grossly unaesthetic conditions (DiOrio, 1983). The Finnish study by Suominen-Taipale and Widstrom (1998) found a 10% decrease in dental utilisation by the younger age group (25-38 years) during the recession of 1990-4 and that subsidised treatments do not strongly affect dental utilization.

It is not always possible to consult the dentist when need arises (Sutcliffe, 1984 and Faber et al, 1989). In a British survey, 70% of children with damaged incisors failed to receive treatment (Murray, 1998). Dental services utilisation rate correlates with the dentist to population ratio. This ratio is usually high in under served areas, which leads to unmet demand because the dentist is too busy (McCombie, 1979).

Mason et al (1997) found that analgesics were frequently given for pain relief. Paracetamol (76.3%) was top of the list followed by Aspirin (8.8%). Aspirin prescription is inappropriate as it has the risk of Reye's Syndrome and is therefore contraindicated in children (Morris and Klimberg, 1986). Parents will use these medications to alleviate pain and to avoid the need for professional dental health care (Acs and Drazner, 1992). It is worth noting that although 86% had some degree of pain relief from these prescriptions, only 7.9% had complete relief of painful symptoms (Mason et al, 1997).

Morris and Klimberg (1986) found that antibiotics are often prescribed for dental symptoms by non-dental personnel such as medical practitioners (22.4%) and accident and emergency departments (7.5%). Thomas et al (1996) investigated the pattern of antibiotic prescribing for acute dental conditions at Cardiff Dental Hospital. They found that 30% of these patients needed antibiotics. Of these, 41% had sought treatment from

medical practitioners before consulting dentists. The antibiotics were frequently prescribed without criteria and there was a variation in prescribing amongst the doctors. Antibiotics are usually aimed at a probable causative agent. However, in a study by Thomas et al, 1996 it was found that different doctors prescribed different antibiotics that were not compatible with a similar agent suspected but was based more on personal preferences.

It is evident from the literature that the presence of pain, its intensity and many external factors influence the timing of a visit to the dentist for treatment. These factors effect the time lapse to varying degrees in different communities.

The reviewed literature showed deficiencies in:

- 1. Local publications that put the topic in the South African context,
- 2. The number of research papers on dental pain in children,
- 3. Quantification of time lapse from the initial pain perception to the demand for dental services. How long on average do people with dental pain stay away from dentists?
- 4. The identification of the trigger factor for visiting the dentist.

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Why are 86% of people in Britain with dental pain not consulting dentists (Murray, 1998)? Why are 90% of Africans walking around with dental pain (Thorpe, 1995)? There is need for a study that attempts to answer the question "What prevents or inhibits people from going to the dentist when there is an obvious need for dental attention?"

4. AIMS

The study was conducted at two community clinics that have different socio-cultural backgrounds to:

- (i) Assess factors influencing the time lapse
- (ii) Assess how the pain, individual and community characteristics impact on utilisation of dental services.

5. OBJECTIVES

- 1. To determine the time lapse between the initial pain symptoms or discomfort and when treatment was sought at the dental clinic.
- 2. To determine both social and economic factors that impact on dental attendance.
- 3. To determine the action and remedies employed for the relief of oral pain.
- 4. To assess parental awareness and attitude toward dental care.
- 5. To compare the results from the two clinics.

6. MATERIALS AND METHODS

6. 1. STUDY DESIGN

The study design was a cross-sectional quantitative and qualitative analytical one with a structured questionnaire administered to the accompanying parent or guardian in an interview format.

6. 2. DEFINITIONS

Parent: shall be used to include a guardian who ordinarily lives with the child and is financially responsible for that child whether or not it is legally sanctioned. Parent will not be used to extend to a caregiver.

Time-lapse: the period from when a need such as pain is perceived to when the patient demands dental services.

In this study the words demand, need and utilisation have their meanings as defined by van Wyk et al, 1989a / b.

Demand for health care: demand derives from an attempt to seek health care. It is established when a consumer actually requests health care.

Need: any situation where the consumer can benefit from health care is an expression of needs (wants). It is based on their awareness of potential disease and on personal experience, and depends on cultural, religious, educational and social status.

Utilisation: begins when a consumer with need makes a demand for service and that service is available, affordable, accessible and acceptable.

After the approval of the protocol by the Research Committee of the University of the Western Cape, permission was sought in writing from the Hospital Clinical Committee responsible for these clinics. A copy of the request letter is attached as Appendix A.

6. 3. SAMPLE SIZE

The population of children under 14 years of age in the Western Cape is 28% (Population Census. Report No.: 03-01-11, 1996). Using this percentage on the calculated 1999 populations of Guguletu and Mitchells Plain gives a child population

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in this age group of 74,734 for Guguletu and 205,275 for Mitchells Plain. A total study sample of 126 children under 13 years old was used.

6. 4. STUDY POPULATION

All parent-accompanied children under 13 years of age presenting daily for treatment at the dental clinics between 8.00am and 12.00 noon, were invited to participate in the study. The interviews took place before the attending dentist saw the children. The study was comprised of 61 children from Guguletu and 65 from Mitchells Plain clinics. At Guguletu, 31 girls and 30 boys were seen while at Mitchells Plain, 24 girls and 41 boys were seen. It was not possible to better stratify the children by gender in Mitchells Plain in the time allocated.

6. 5. SAMPLING PROCEDURE

Parents of children under 13 years old and presenting for treatment of dental pain or problem at Guguletu and Mitchells Plain dental clinics were interviewed before the children were seen by the dentist. The structured questionnaire elicited information on social data, severity and duration of pain, remedies tried and the impact of the problem on the parents.

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The selection criteria was that:

- a) the child had to have a dental problem such as pain or discomfort but not routine / periodic examination or recall visits, and
- b) they had to be accompanied by a parent or guardian. A caregiver was not acceptable since the interviewee had to be conversant with the personal family details that were being asked for.

The initial selection was through the receptionist who screened for age. While they waited to see the dentist, the parent and child were asked to join the researcher in the interview room. In that room, the first task was to ascertain that selection criteria were met. Secondly, a brief verbal explanation of the study was given and a formal invitation to participate was extended. The Consent Form (Appendix B) was given to

the parent. Time was allowed for the parent to read the form and sign it if they accepted. All the parents of selected children consented to being interviewed. Parents were interviewed on available days from Monday to Friday until the required number was reached.

At Guguletu, an operatory was used for the interviews. Both parent and interviewer sat on dental stools facing each other. The child was offered a seat on the dental chair but if they were apprehensive, they either sat on the parent's lap or stood by them. At Mitchells Plain an office was used. The parent and researcher sat on armchairs partly facing each other while the child sat on a couch that completed a triangle with the other two. In the initial stages, the interpreter stood by as part of the group but later was working elsewhere and only came to assist when need arose.

At both clinics there was a slight and unavoidable variation in that some children were selected from among those the dentist had already anaesthetised but were waiting in the lounge before going back to the treatment room for extraction.

At the beginning the interviews took 25 minutes. That time was reduced to 10 minutes after about 10 interviews.

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At both clinics patients are seen on a walk-in first come first served basis as well as by appointment. Patients at Mitchells Plain started arriving at 7.30 am for registration that started at 8.00. The queues outside the Guguletu clinic start forming as early as 6.00 am. One grandmother retorted that she and her charge had gotten up at 4.30 am after having failed the previous day because all the numbers had been allocated for the day! Another lady and her child had walked 10 km from a neighbouring community.

The doctors started at 9.00 am at both clinics giving the researcher an hour head start.

6. 6. VALIDITY AND RELIABILITY

There was inevitable selection bias in that the study sample was self-selected by being presented for treatment. Further selection bias might have arisen in that parental co-operation was required.

Differences in parental recall (memory) ability may introduce measurement bias. The questionnaire was given to parents only in order to improve reliability since children's memory may be suspect on most of the questions. No questions were directed at children.

It was difficult to repeat interviews after dental treatment had been carried out. This check on validity was therefore not done.

6. 7. DATA COLLECTION

An English questionnaire was developed. A pilot study in this medium was conducted at the Mitchells Plain clinic on the 12th August 1999. One child aged 110 months and two children aged 129 months participated. The Mitchells Plain nurse selected to be the interpreter / interviewer was present as part of her training. As a result of this pilot study, changes were made to the instrument viz:

- 1) The question sequence was altered to give a smoother and more logical flow,
- 2) Some questions were re-worded to eliminate ambiguities that became apparent,
- 3) Some questions were removed altogether because they were superfluous or irrelevant,
- 4) Others were merged together, and
- 5) New ones were added as follow on questions.

The results of this pilot study were not included in the main study. The final questionnaire is attached as Appendix C. The Xhosa and Afrikaans are Appendix F and G respectively.

South Africa has eleven official languages. Three of these are commonly spoken in the Western Cape. It is not unusual to find a patient who speaks only one language especially in the communities selected for the study. It was thought prudent to

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translate the English language questionnaire.

The English questionnaire was given to people fluent in both English and isiXhosa, and English and Afrikaans to develop Xhosa and Afrikaans versions. The translated versions were typed and presented to a second set of equally qualified (language competent) people for corrections and comments. In both cases many ambiguities were ironed out.

One nurse each from Guguletu and Mitchells Plain was selected and trained as an interviewer / interpreter in isiXhosa and Afrikaans respectively. Pilot studies were done in isiXhosa and Afrikaans at Guguletu and Mitchells Plain. The interpreters / interviewers conducted these interviews as part of their on going training. Three parents were interviewed at each location. The interviews ran very well and the results were incorporated in this study.

Most (92.3%) of the interviews at Mitchells Plain were in English. The remainder of 7.7% was in isiXhosa. All the Afrikaans speaking families preferred to be interviewed in English. Quite often they spontaneously commented that although they are Afrikaans speaking, they speak to the children in English. IsiXhosa was the language of choice in Guguletu for all even though a handful of the parents were quite fluent in English.

At the end of the questionnaire the parents were asked for any comments either in writing (Appendix D) or verbally. The interviewer was also free to make any pertinent comments on the same form. Very few comments were made.

6. 8. DATA ANALYSIS

Data from the study was captured using Excel spreadsheet and saved as dBase IV. The UN EPI INFO 6 programme was used to analyse this data to produce frequency percentages shown in the results tables. Where applicable, mean range, mode, and p values were generated. The percentages were tabulated to compare

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Guguletu and Mitchells Plain for individual variables. The computer then put this data into graphs and charts.

MINITAB PROGRAM (Minitab Inc, Minitab Release 12.22) was also used to analyse the data from Excel spreadsheet and produced chi-square, F, and p values at the 95% level of significance and a = 0.05. In this way Guguletu and Mitchells Plain were compared with respect to variables such as age, gender, accommodation, dental attendance, pain, etc. Analysis of variance (ANOVA) was performed on the age mean. Further, Minitab generated dotplots for age and time lapse.



7. ETHICS

The protocol and relevant appendices were submitted to and approved by an Ethical Committee of the University of the Western Cape. Permission was sought from and granted by the Hospital Clinical Committee for use of the community clinics (Appendix A).

Parent's informed consent was obtained. Although a verbal consent would have been adequate for this study, a form was used to avoid misunderstandings and to reassure participants. It was explained to them that they had the right to refuse participation with no prejudice to themselves or their child (Appendix B). Responses were kept anonymous and confidential. Information gathered will be used only for the purpose of this study.

Analysed results, conclusions and any recommendations made will be circulated to the relevant authorities. Further, publication in a professional journal may be made.



8 RESULTS

8. 1. DEMOGRAPHIC FEATURES OF THE SURVEY

The results are presented according to the demographic pattern of the two populations, the attendance pattern, home oral care, early pain management, and the impact of children's dental problems on parents. In this study, we accepted $p \le 0.05$ at the 95% level of significance.

8. 1. 1. SAMPLE SIZE, GENDER AND AGE DISTRIBUTION

The number of boys and girls in Guguletu was almost equal while in Mitchells Plain there were apparently more boys (63.1%) than girls (Table 1). The average age of the children seeking dental treatment in Mitchells Plain was significantly younger than that of Guguletu (p = 0.001). The subjects averaged 77.7 months in Mitchells Plain and 98.9 months in Guguletu.

TABLE	1:	SAMPLE	SIZE/ AGE
--------------	----	---------------	-----------

		GUGULETU		MITCHE	MITCHELLS PLAIN	
		n	%	n	%	
GENDER:	Boys	30	49.2	41	63.1	
	Girls	31	50.8	24	36.9	
TOTAL	N	61	100	65	100	
AGE		UNIVE Months	TY of the	Months		
	Range	WESTHDN	1524 DE		148	
	Mean	WEST 31 R N	CAFE	77.7	- 10	
	Median	99		74		
	Mode	81		70		

8. 1. 2. INTERVIEWEE

It was observed that mothers accompany children to the dentist more often than guardians or fathers. In Guguletu, 67.2% of the parents who accompany children to the dentist were mothers, while in Mitchells Plain 87.7% of them were mothers. Of the parents interviewed, fathers constituted 8.2% in Guguletu and 6.2% in Mitchells Plain. There were more guardians in Guguletu (24.6%) than in Mitchells Plain (6.2%). When Mitchells Plain and Guguletu, are compared, these features are significantly different (p = 0.011).

8. 1. 3 MARITAL STATUS

In Guguletu, less than half (46%) of the parents were married, 34% were single and 12% were living together parents. On the other hand, Mitchells Plain had 58% married, 25% single and 3.1% living together (Fig 1).

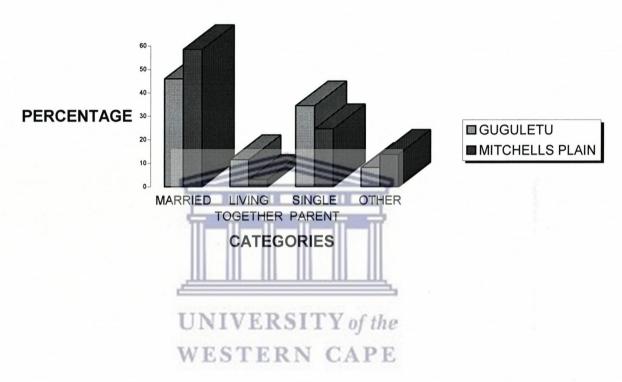
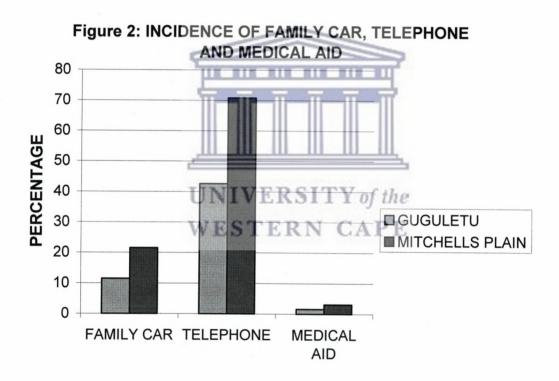


Figure 1: MARITAL STATUS

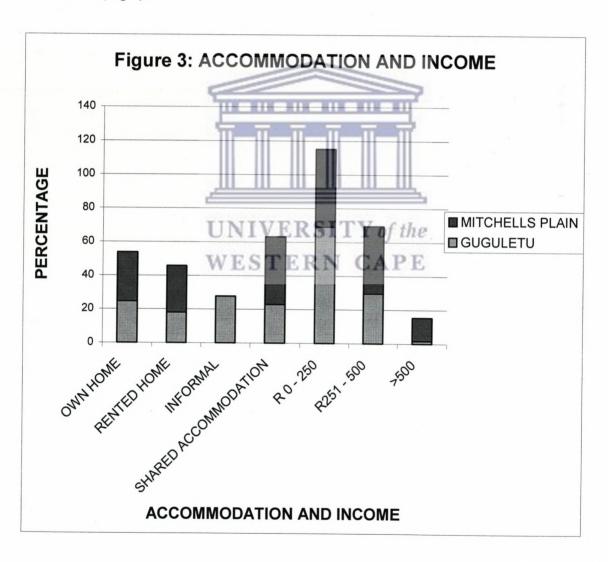
8. 1. 4 PREVALENCE OF FAMILY CAR, HOME TELEPHONE AND MEDICAL AID COVER IN GUGULETU AND MITCHELLS PLAIN.

As shown in Fig 2, it was observed that there was a low incidence of family cars in both Guguletu (11.5%) and Mitchells Plain (21.5%). However, there were higher rates of home telephones with 42.6% of the Guguletu homes and 70.8% of the Mitchells Plain homes having telephones. The observed difference in home telephones between Guguletu and Mitchells Plain was significant (p = 0.001). Medical aid cover was almost non-existent in both. Guguletu had a cover rate of 1.6% while Mitchells Plain had a rate of 3.1%



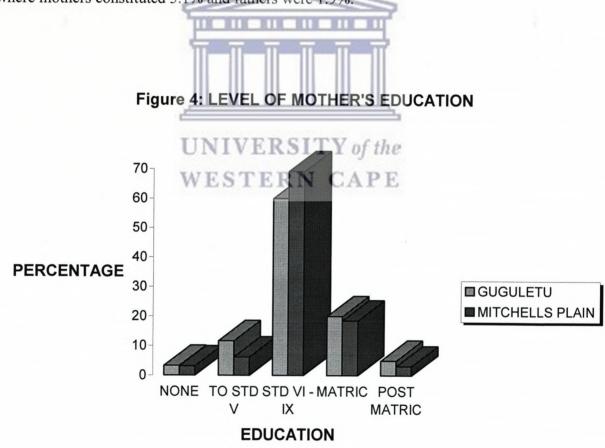
8. 1. 5 TYPES OF FAMILY ACCOMMODATION AND HOUSEHOLD INCOME

In both communities, fewer people own their homes (24.6% for Guguletu and 29.2% for Mitchells Plain). In Guguletu, 27.8% of the families live in informal homes (etyotyombeni), which do not feature at all in Mitchells Plain (Fig 3). Shared accommodation is prevalent at the rate of 40% in Mitchells Plain and 23% in Guguletu. Generally, there were lower household incomes in Guguletu where 69% of households earned less than R250 per week. In comparison, 46% of the households in Mitchells Plain earned less than R250 per week. A further difference was that 13.8% of the Mitchells Plain households earned more than R500 per week compared to 1.6% for Guguletu in that bracket (Fig 3).



8. 1. 6 EDUCATION LEVELS OF PARENTS

Formal education was totally absent in 3.3% of the mothers and 2.4% of the fathers from Guguletu. Correspondingly, 3.1% of mothers and 1.9% of fathers from Mitchells Plain had no formal education (Figs 4 & 5). The majority of parents were educated to between STD V and IX. In this bracket were 60% of Guguletu mothers and 41.5% of its fathers while in Mitchells Plain, mothers constituted 69.2% and fathers 62.3%. It was observed that fathers were less educated than mothers in this bracket. Guguletu's fathers were noticeably lower in education than the other three groups. Fathers however achieve parity with the others at matric level with Guguletu fathers leading the bracket at 24.4% compared to Guguletu mothers at 20% and Mitchells Plain fathers and mothers with 18.9% and 18.5% respectively. It is further observed that Guguletu has superior post matric education with its mothers at 5% and fathers at 4.9% compared to Mitchells Plain where mothers constituted 3.1% and fathers were 1.9%.



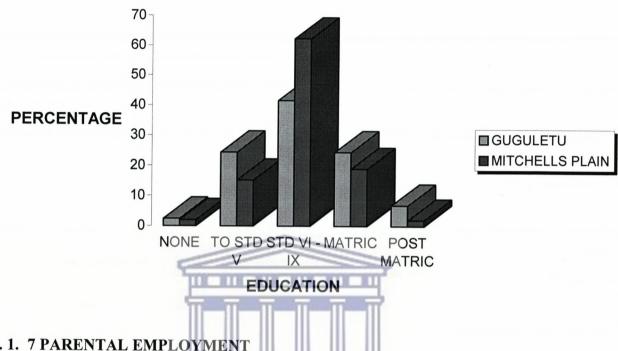


Figure 5: LEVEL OF FATHER'S EDUCATION

8. 1. 7 PARENTAL EMPLOYMENT

More fathers are employed than mothers. Fathers are employed at the rate of 75.5% for Mitchells Plain and 55.6% for Guguletu compared to mothers who were 33.8% for Mitchells Plain and 39.3% for Guguletu.

8. 1. 8 TRANSPORT PATTERN

i) DISTANCE FROM HOME TO THE CLINIC

Almost a third of the Guguletu patients (31.1%) and 16.9% of the Mitchells Plain patients live within 1 km of the dental clinic (Table 2). Over half of the patients live within 3 km of the clinics (59% for Guguletu compared to 53.8% for Mitchells Plain). It was also observed that 29.3% of the Mitchells Plain patients travel distances greater than 3 km to the dental clinic as compared to 9.9% from Guguletu. When tallied together it was observed that 90% of the Guguletu patients and 71% of the Mitchells Plain patients live within 3km from the clinic.

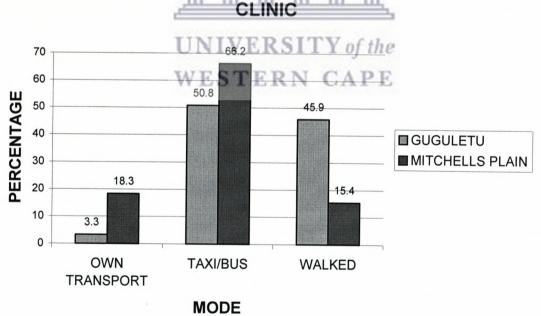
TABLE 2: THE DISTANCE TRAVELLED BY PATIENTS TO THE CLINIC

	GUGU	LETU	MITCHELLS PLAIN		
DISTANCE: Home to clinic (km)	n	%	n	%	
0 - 1.0	19	31.1	11	16.9	
1.1 - 3.0	36	59.0	35	53.8	
3.1 - 5.0 +	6	9.9	19	29.3	
TOTAL	61	100	65	100	

ii) MODE OF TRANSPORT

Overall, the public mode of transport (Taxi/Bus) is the most prevalent mode of transport (Fig 6). When split apart, it is found that the bus component is very small with Guguletu showing 1.6% utilisation compared to Mitchells Plain's 3.1%. However, the taxi component for Guguletu was 49.2% and for Mitchells Plain 63.1%. Very few patients (3.3%) from Guguletu arrived in their own cars compared to 18.3% from Mitchells Plain. Walking was the second most prevalent mode (45.9%) for Guguletu patients compared to 15.4% for Mitchells Plain.

Figure 6:TRANSPORT USED TO ACCESS



iii) FARES TO THE CLINIC: ONE WAY FOR PARENT AND CHILD

For parent and child, 28.3% of Guguletu residents and 36% of Mitchells Plain residents pay between R2 - 3.9 for one way (Fig 7). At the fare rate between R4 - 4.9, Guguletu residents constitute 2.2% while Mitchells Plain residents constitute 54%. Most of the riders from Guguletu (69.6%) pay more than R5 for parent and child one way compared to Mitchells Plain where they constitute only 10%.

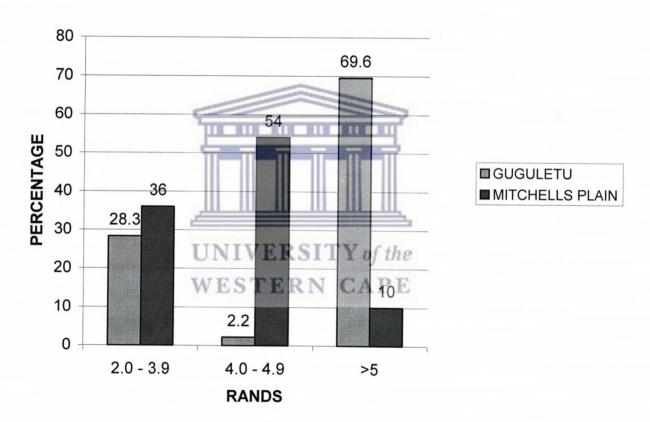


Figure 7: ONE WAY FARE-PARENT AND CHILD

8. 2 ATTENDANCE PATTERN

Most parents and children had not been to the dentist in the last two years and chose to go only when necessary for pain (table 3). In Guguletu, 57.4% of the parents and 47.5% of the children only went to the dentist when it became necessary on account of pain. These figures are almost identical to Mitchells Plain where 58.5% of the parents and 47.7% of the children went for the same reason.

Pain was often the reason why parents (76.1% for Guguletu and 56.9% for Mitchells Plain) and children (83.3% for Guguletu and 77.7% for Mitchells Plain) went to the dentist.

It was observed that 6.6% of Guguletu children and 19.7% of their parents had been to the dentist within the last 6 months. Within the same period, 3.1% of Mitchells Plain children had also been to the dentist. Tallying figures together, 9.9% of Guguletu children and 6.2% of their Mitchells Plain cohorts had also been in the last year. In the same period, their parents had been at the rate of 29.5% from Guguletu and 23.1% from Mitchells Plain.

In the past, 55.7% of the children from Guguletu and 36.9% from Mitchells Plain had experienced toothache. On this visit 55% of these children were in pain.

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TABLE 3: DENTAL ATTENDANCE OF PARENTS AND CHILDREN

	GUGULETU		MITCHE	ELLS PLAIN
	Parent	Child	Parent	Child
LAST visit to the dentist.	%	%	%	%
Within 6 months	19.7	6.6	10.8	3.1
12 months	9.8	3.3	12.3	3.1
2 years	13.1		18.5	1.5
When necessary for pain	57.4	47.5	58.5	47.7
Never before REASON for visit.		42.6		44.6
For pain	76.1	83.3	56.9	77.7
Other	19.4	16.6	40	22.3
IN PAIN at the moment?		55.7		55.4
PREVIOUS TOOTHACHE		55.7		36.9

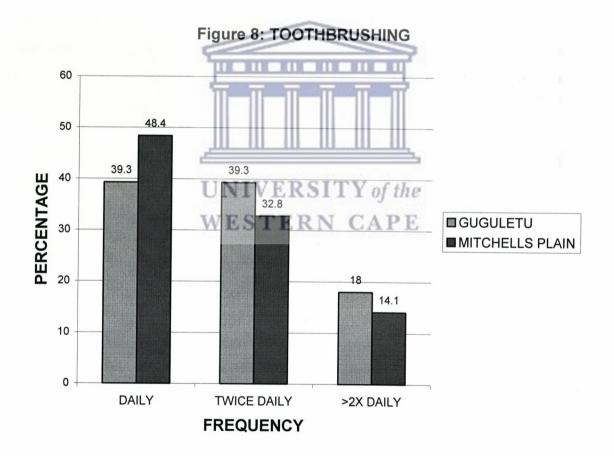
8. 3. ORAL HYGIENE AT HOME

83.1 BRUSHING

The children brush their own teeth (Guguletu 71.7%, Mitchells Plain 53.1) with those in Mitchells Plain receiving more parental help.

There was some toothbrush sharing in Guguletu (8.2%).

In Fig 8, tally shows that 96.6% of the Guguletu children and 95.3% of the Mitchells Plain children claim to brush at least once daily.



TOOTHPASTE AND SUBSTITUTES

Toothpaste was **sometimes** available in about 20% of the Guguletu homes (Table 4) A larger selection of **alternatives** to toothpaste was used in Guguletu (18% Other). These included borrow from next door, don't clean, bicarbonate of soda, TCP®, ash, glycerine, and only brush.

Salt (23.1%) was the most used alternative in Mitchells Plain.

TABLE 4: TOOTHPASTE AVAILABILITY AND SUBSTITUTES

	GUGU	ILETU	MITCHELLS PLAIN		
Toothpaste in the home	n	%	n	%	
Always	48	78.7	63	96.9	
Sometimes	12	19.7	2	3.1	
Toothpaste substitute					
There is always toothpaste	26	42.6	37	56.9	
Soap e.g. sunlight	9	14.4	3	4.6	
Water (warm or cold)	10	16.4	5	7.7	
Salt (with or without water)	5	8.2	15	23.1	
Other	11	18.0	5	7.7	

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8. 4. PAIN MANAGEMENT

8. 4. 1 QUANTIFYING TIME LAPSE

The first 90 days have been plotted to illustrate that most parents became aware within the first 30 days after the children complained (Fig 9). In Guguletu most (>60%) parents knew within the 7 days preceding the visit while most in Mitchells Plain knew within the preceding 14 days i.e. earlier. Apart from this time lapse in the initial stages, there were a few more respondents (21.3% from Mitchells Plain and 10.1% from Guguletu) that lay beyond 90 days.

Figure 9: DOTPLOT SHOWING DAYS PARENT WAS AWARE OF CHILD'S DENTAL PROBLEM

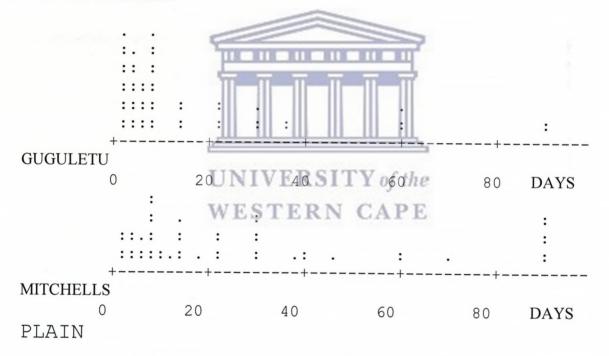


TABLE 5 INCLUSIVE PERCENTAGES FOR FIG. 9 – FIRST 30 DAYS

	GUGULETU	MITCHELLS PLAIN		
7 DAYS	60	35.4		
14 DAYS	68.4	49.1		
30 DAYS	80.1	66		

8. 4. 2 PAIN DURATION

- 1 Guguletu children saw the dentist sooner after pain experience (28% went after 1 day compared to 9.3% in Mitchells Plain) (Fig 10).
- 2 After 2 days (48 hours), 36.2% in Guguletu will have seen the dentist compared to 20.3% from Mitchells Plain.
- By the end of a week, 69.2% in Guguletu will have seen the dentist compared to only 48.3% from Mitchells Plain. A higher proportion from Mitchells Plain delays seeking treatment even past 30 days.

35 30 25 **PERCENTAGE** 20 **■** GUGULETU ■ MITCHELLS PLAIN 15 10 5 0 2 7 30 >30 **■** GUGULETU 27.9 8.2 32.8 14.8 16.4 ■ MITCHELLS PLAIN 9.3 10.8 27.7 27.7 24.6

STARTED (DAYS)

Figure 10: TIME LAPSE AFTER PAIN EXPERIENCE

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8. 4. 3 TYPE OF PAIN

Most pain restricted eating (Guguletu 73.8%, Mitchells Plain 64.6%) but could be relieved by analgesics (Table 6). More children in Guguletu (62.3%) experienced night pain than in Mitchells Plain (44.6%). The effect of pain on sleep on Guguletu children was significantly different from that on Mitchells Plain children (p = 0.047).

No one in Guguletu associated pain onset with the eating of sweets but 50.8% did in Mitchells Plain. This difference was significant (p = 0.024).

8. 4. 4 TREATMENT

The responses here reveal some beneficial and some unacceptable practices that are basically similar in both communities.

- 1. Few people (21%) did not try to treat the pain before going to the dentist (Table 6).
- 2. Warm salt water featured more in Guguletu (29.5%) while the tying of warm pads around the cheeks was slightly more prevalent (21.5%) in Mitchells Plain than in Guguletu (14.8%).
- 3. There were other miscellaneous treatments given to the children (Appendix H).
- 4. Further abuse of the drugs was seen in the use of 'left over' antibiotics at 21.3% in Guguletu and 12.3% in Mitchells Plain.

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8.4.5 CONSULTATIONSWESTERN CAPE

- 1. Guguletu parents tended to consult relatives, friends and neighbours more (32.3%) than Mitchells Plain (16.9%).
- 2. These consultations obtained advice and a sympathetic ear in both communities

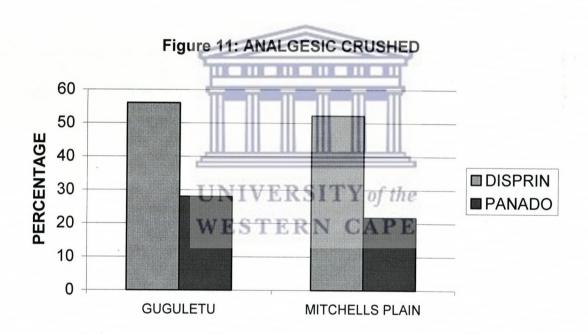
TABLE 6: TYPE AND TREATMENT OF PAIN

		ULETU	MITCH	ELLS PLAIN
TYPE OF PAIN	n	%	n	%
Continuous	23	37.7	14	21.5
Keep child awake at night	38	62.3	29	44.6
Relieved by "pain stoppers"	41	67.2	35	53.8
Increased by heat	28	45.9	20	30.8
Increased by cold	27	44.3	24	36.9
Sensitive on chewing	45	73.8	42	64.6
Sensitive to sweets			33	50.8
EARLY TREATMENT OF PAIN				
No treatment	13	21.3	14	21.5
A painkiller - to swallow	36	59.0	32	49.2
A painkiller - Crushed	26	42.6	24	36.9
Gave some antibiotics I had	13	21.3	8	12.3
Medicinal ointment	7	11.5	6	9.2
Warm salt water to rinse with	18	29.5	9	13.3
Warm pad around the cheeks	9	14.8	14	21.5
Other	6	9.8	9	13.8
CONSULTATIONS	n	11 = 11 % II	n	%
Talked to someone else	20	32.3	11	16.9
(neighbour, relative, friend)				

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8. 4. 6 ANALGESICS

- 1. In Guguletu, 59% of the children got an analgesic to swallow compared to 49.2% in Mitchells Plain (Table 6). Disprin® (61.5%) and Panado® (26.9%) were the most swallowed in Guguletu but in Mitchells Plain the frequencies were reversed with Disprin® 29% and Panado® 64.5%. The observed inter community differences were significant (p = 0.020).
- 2. Disprin[®] (56%) and Panado[®] (28%) were crushed and placed directly onto the painful tooth in Guguletu (Fig. 11). In Mitchells Plain, the frequencies for this behaviour were Disprin[®] (52.2%) and Panado[®] (21.7%).



8. 4. 7 TIME LAPSE

Time lapse is measuring the amount of time that has passed since becoming aware of the child's dental problems. In Fig 12, 1 day would mean that the parent knew about the problem late whereas 30 days and above would mean earlier knowledge. Mitchells Plain parents knew earlier than Guguletu parents when their children had dental problems.

50 **PERCENTAGE** 40 30 **■** GUGULETU 20 ■ MITCHELLS PLAIN 10 0 15 TO 1DAY 2 TO 7 8 TO 14 > 30 30 **■** GUGULETU 13.3 46.7 8.4 11.7 18.4 3.1 32.**3** 13.7 **■** MITCHELLS 16.9 **PLAIN** UNIVER'SITY of the WESTERN CAPE

Figure 12: TIME LAPSE

8.4.8 DECISION

Despite knowing of the problem late (Figs. 9 & 12), Guguletu parents decide sooner (45% "yesterday" i.e. the day before visit) to take their child to the dentist than Mitchells Plain where only 26.2% of the parents had decided by then (Fig 1).

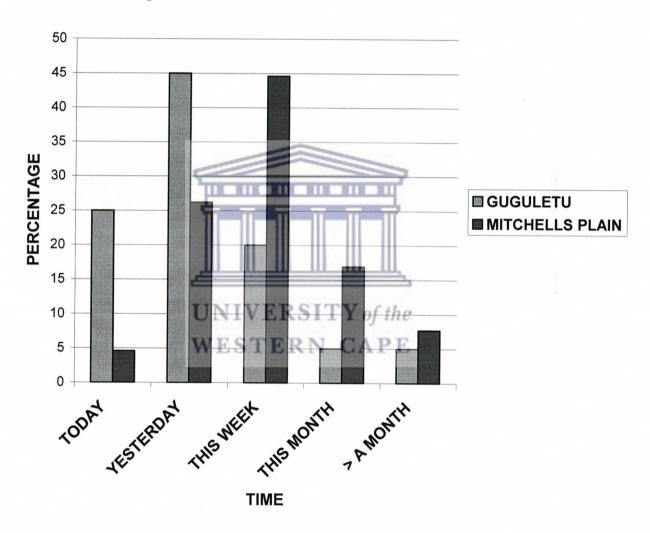


Figure 13: DECISION TO TAKE CHILD TO DENTIST

8. 4. 9 REASONS FOR TIME LAPSE

- 1. In Table 7, children stayed away because the pain was either not severe or was intermittent (Guguletu 28.8% and Mitchells Plain 17.5%).
- 2. Parents failed to take their children to the dentist because they were busy or were at work (Mitchells Plain 34.9% and Guguletu 15.3%).
- 3. In Guguletu, 22% of parents did not think that the pain was serious when first reported and hoped it would spontaneously get better.
- 4. Many of Mitchells Plain parents 19% gave various other reasons (Appendix I).

TABLE 7: TIME LAPSE

	JLETU	MITCH	HELLS PLAIN	
REASON FOR ELAPSED TIME	n	%	n	%
Pain not severe (was on and off)	17	28.2	11	17.5
Waiting for form from school	2	3.4	1	1.6
Clinic closed for the weekend	2	3.4	2	3.2
Child busy (Not to disturb school)	6	10.2	2	3.2
Parents busy (at work)	9	15.3	22	34.9
Waiting for swelling to go down	2	3.2	3	4.8
This is the earliest practical time	4	6.8	1	1.6
Parents hoped it would get better	13cT	TY of the	3	4.8
Treating with pills	2031	1 1 3.4 the	1	1.6
Don't know / no reason	FRN	CAPE	4	6.3
Child afraid / parent afraid	1	1.7	1	1.6
Other	1	1.7	12	19.0

8. 4. 10 OTHER HINDRANCES

The dental services delivery teams and clinic administrations have been cited as causing people to stay away from treatment (Table 8). Waiting in long queues (39.2%) and waiting long periods for appointments (29.5%) were of real concern to Guguletu parents when compared to Mitchells Plain where they were found to be 16.9% and 7.7%, respectively.

In Mitchells Plain, parents complained more about nurses' attitudes and lack of finances (21.5% each) compared to Guguletu where they were 13.1% and 14.8%, respectively. Whereas Mitchells Plain had no complaints about the dentist, 9.8% in Guguletu thought that the dentist was unfriendly.

TABLE 8: HINDRANCES TO DENTAL UTILISATION

The second secon				
The state of the s	GUGULETU			LS PLAIN
HINDRANCES	n	%	n	%
Dentist is unfriendly	6	9.8		
Not available for emergencies	10	16.4	5 7	10.8
Wait long for an appointment	18	29.5	5	7.7
Dentist hurts / I hate Dentists	IVE5K3	1 1 Y8.2 th	e 8	12.3
Long queues put me off	ST24 D	39.20	11	16.9
Bad attitudes of dental nurse	18 K	13.1	14	21.5
Finances (clinic fees, fares)	9	14.8	14	21.5

8. 5. IMPACT OF PAIN

Pain in the child impacts negatively on the family, the brunt of which falls on the mother. The major impact of the child's pain was on sleep (62.3% Guguletu and 50.8% Mitchells Plain). When the child lost sleep, the parents also lost theirs.

Missed work and lost income were important factors in Guguletu where 39.3% had to take time off to accompany the child to the dentist compared to 21.5% in Mitchells Plain (Table 9).

The decision to attend one of these clinics meant getting up very early in the morning. Patients started arriving to form queues from 6am at Guguletu and 7.30am at Mitchells Plain. Essentially, all patients for the day were in by 9 am.

	GUGULETU			MITCHELLS PLA		
IMPACT ON PARENTS		n	%	n	%	
sleep	- 111 111	38	62.3	33	50.8	
Missed work	لللسلللي	19	31.1	4	6.2	
lost part of your income		12	19.7	5	7.7	

8. 5. 1 WHY SPECIFICALLY TODAY?

Some forward planning was evident in Mitchells Plain where the date was decided several days earlier and in some cases an appointment made but which was not evident in Guguletu. A worsening of pain was responsible for the presentation of 50% of the Guguletu children and 30.8% of Mitchells Plain (Fig 14). A further 15% from Guguletu had not slept the night before compared to 6.2% from Mitchells Plain.

In Mitchells Plain 30.8% thought that they now had the time and their presentation on that day was the earliest practical.

Miscellaneous other reasons were given by 25% from Guguletu and 32.3% from

Mitchells Plain. The high frequencies show that the factors are many and in most cases peculiar to individuals. Some of them were: want to prevent further breakdown/got up early/ Have someone to accompany child/ Put mind to it/ Have got money/ No reason/ Got letter from school/ The child is now ready/ Convenient (child on school holiday / other siblings are also being seen).

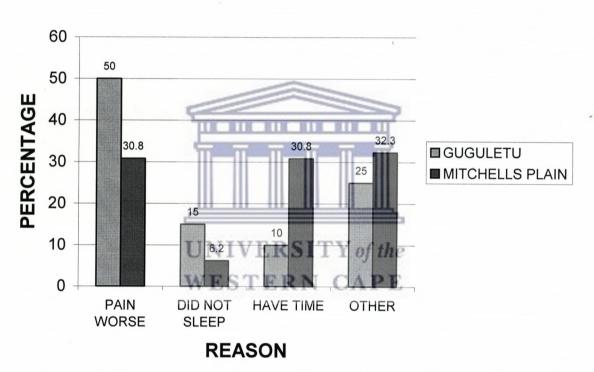


Figure 14: WHY SPECIFICALLY TODAY?

9. DISCUSSION

The study was conducted to assess factors influencing the time lapse and to assess how pain, individual and community characteristics impact on utilisation of dental services. In brief, the communities of Guguletu and Mitchells Plain had similar characteristics but different social, economic and cultural influences. The economic difference was that Mitchells Plain was somewhat better off when considering indicator factors such as cars, telephone, medical aid, home ownership and household income. Mitchells Plain had a higher education to matric level (Figs 4 & 5) and a better employment rate. There were different accommodation patterns. A lot of these differences could be attributed to the inequities of the apartheid era.

Several factors that influence time lapse came to light (Table 7). There were differences in socio-economic and behavioural factors such as the toothpaste substitutes used, mode of transport, the fares paid, and early management of pain. Pain was found to influence both time lapse and dental services utilisation. The various types of pain were presented (Table 6). The parents in Guguletu found the long queues at the dental clinic together with the long wait for appointments to be strong hindrances to the utilisation of dental services. What was also quite high in both communities was the impact that the child's pain had on the sleep of parents.

The two communities are generally similar in that they can be classified in the low socio-economic group when compared to the rest of the Western Cape. They are also similar in dental attendance pattern and brushing frequency. The prevalence of socio-economic factors such as medical aid cover, family car, transport mode, etc contrast with those of Mani et al (1997). Many measured differences are statistically significant and definite trends can be seen in the economic and socio-cultural spheres.

Over 95% of the children claim to brush at least once per day. This finding was higher than those by both Chesters et al (1992) who had 88% and Vigild et al (1999) who had 71.2%. The children brushed their own teeth (Guguletu 71.7%, Mitchells Plain 53.1%) with those in Mitchells Plain receiving more parental help. This may be because they

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were younger or may be a reflection of parental attitudes. Across the board there was not enough parental supervision.

There was some toothbrush sharing (8.2%) only in Guguletu. This was not found anywhere else in the literature covered. Toothpaste is sometimes available in 20% of the Guguletu homes where a larger selection of alternatives to toothpaste were used (18% **Other** in Table 4). What they are brushing with is important since all the locally marketed toothpaste has fluoride, which imparts caries prevention to the teeth. The 18% Guguletu sample is missing out on this protection in exchange for such alternatives as bar sunlight soap, salt, bicarbonate of soda, ash, etc that have questionable efficacies.

Pain was by far the most common reason for dental attendance. Figure 10 shows the assessed pain duration. A cumulative 69.2% in Guguletu will have made it to the dentist by the seventh day compared to 48.3% in Mitchells Plain. In the same figure, 16% of Guguletu and 25% of Mitchells Plain had had their pain start more than a month earlier. These figures are lower than those by Mason et al, 1997 who had 32%. Figure 9 shows that most parents became aware within the first 30 days secondary to the child's complaint. The point was made earlier that there was more parental assistance with brushing in Mitchells Plain. It can now be postulated that the assisting parents are more likely to know earlier when the child has a dental problem. The difference between the two communities was statistically significant (p = 0.004 and chi-square = 19.130).

Despite knowing of the problem late (Fig. 12), Guguletu parents decided sooner (Fig. 13). Seventy percent had taken their children to the dentist by "yesterday" compared to Mitchells Plain where only 30.8% of the parents had made that decision. Figures 9 & 10 also show that a higher proportion in Mitchells Plain delay seeking treatment. Knowledge does not always lead to action!

The table in Fig. 10 shows a tally for Guguletu of 36.2% as being those that have had the pain for less than 2 days (48 hours) and 69.2% for less than 7 days. Taking the inverse of these figures i.e. those that have endured the pain longer than 2 days and 7 days we have

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63.8% and 30.8% respectively. Similar computation gives 79.7% and 51.7% for Mitchells Plain. The observations in Table 10 agree with those given by Gibson et al (1993) and Mani et al (1997).

TABLE 10: A COMPARISON OF PAIN DURATION OBSERVED IN THE STUDY AND THOSE OBTAINED BY MANI ET AL (1997) AND GIBSON ET AL (1993).

	Guguletu	Mitchells P	Mani et al	Gibson et al
More than 48 hours	63.8	79.7	77	80.2
More than 7 days	31.1	51.7	50	73.7
			T 1 .	

Inclusive percentages

This confirms the findings by Murray, 1998 that only 15% of those with dental pain seek treatment and by Thorpe that 90% of Africans have untreated dental pain.

The major reasons given by parents to explain time lapse included the absence of severe and continuous pain. Many children also did not get dental service because the parents were either busy at work or hoped that the pain would get better. The latter was especially prevalent in Guguletu where 22% were affected. The poor are usually unable to take time off for the purposes of taking their child to the dentist as this is considered non-essential by management (Miller, 1978). They therefore resort to home treatment, which has questionable efficacy as part of early dental pain management. In addition, working mothers (just over a third) will make deliberate efforts to plan for their maximum benefit.

Mothers more often accompany children to the dentist than fathers. In this study, 67.2% of the Guguletu and 87.7% Mitchells Plain accompanying parents were mothers. This finding agrees with Todd (1973) who stated that most of the day to day responsibility of bringing the child for treatment and other services lies with the mother. There were more guardians (24.6%) in Guguletu than in Mitchells Plain (6.2%). There was significant difference between the two communities in this regard (p value was 0.011). Could this be

an indication of extended family ties, which tend to be stronger in the lower socio-economic groups as revealed in consultations (Table 6) and the 'borrowing of toothpaste next door' (Table 4 –Other)? Guguletu parents tended to consult relatives, friends and neighbours more (32.3%) than Mitchells Plain (16.9%). Although the difference was significant (p = 0.024), the consultation only resulted, in the parent getting advice and a sympathetic ear in both cases. These figures differ from those by Mason et al (1997) who obtained only 2%.

Parents did not appear to consult other healthcare providers prior to going to the dentist. This could be an indication of the ease of accessibility of dental services or a benefit of the strategic placement on the same grounds as other medical services of the dental clinics.

There was a high number of other miscellaneous reasons that kept Mitchells Plain children away from dentistry. If read together with Fig 14, both communities show that the reasons for time lapse are also peculiar to individuals and as such are difficult to standardise. Some of these reasons for example 'waiting for swelling to go down' show a lack of parental awareness of dental issues.

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A worsening of pain was responsible for the presentation of 50% of the Guguletu children and 30.8% of Mitchells Plain (Fig. 14). A further 15% from Guguletu had not slept the night before. In their study, Mason et al (1997) found 21.6% had lost sleep. It can be said that the vast majority delayed seeking treatment until the pain became unbearable (Gibson et al, 1993).

In Fig. 1, Mitchells Plain had more 'family life' attributes than Guguletu. Absentee fathers for the most part had nothing to do with the upkeep of their children. This breakdown of traditional family life led to further delay in the presentation of the child to the dentist as the mother had to have time to accompany the child.

Socio-economic factors such as a family car, home telephone and medical aid (fig 2)

impact on dental attendance. There were low prevalences of family cars in both Guguletu (11.5%) and Mitchells Plain (21.5%). The telephone difference (Guguletu -42.6% and Mitchells Plain -70.8%) was statistically significant with p=0.001. Medical aid is almost non-existent in both communities. The figures of Guguletu (1.6%) and Mitchells Plain (3.1%) are much lower than those reported by Morrish and Schaeffer (1992) where Guguletu had 6.5% and Mitchells Plain 16%. Have the communities regressed in this area in the past decade? Medical aid is usually linked to employment. The apparent regression could mean that there is now a higher unemployment rate than in 1992. It could also indicate a higher level of self-employment or contract work with the opening up of the economy. The assumption then is that people opt not to have medical aid cover. More likely though is the effect of free treatment for the poor.

Fewer people (24.6% in Guguletu and 29.2% in Mitchells Plain) own their own homes. In Guguletu 27.8% of the families live in informal homes (etyotyombeni). Innovative, cost saving ideas of shared accommodation (40%) and out-house accommodation (10.8%) are more prevalent in Mitchells Plain than Guguletu where they are 23% and 1.6% respectively. The chi square value of 28.191 makes the community differences in accommodation significant (Fig 3).

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Forty one percent of Guguletu families earn R126-250 / week while 40% of Mitchells Plain families earn R251-500 / week. This finding agrees with Mani et al (1997) who found 40% of their sample earned between R100 - R375 per month. Generally there was a higher household income per week in Mitchells Plain (54% earn > R250) than Guguletu (31% earn > R250). The bands used in this study were more sensitive than those of Mani et al (1997). Income and finance play a role in dental attendance since the family would need money for taxi fares and the purchase of toothpaste.

A higher proportion (62.3%) of the Guguletu sample had pain that kept them awake at night but 67.2% of them could get relief from analgesics (Table 6). While the former quickens dental attendance, the latter delays it. Effect on sleep was greater in Guguletu because they knew of the problem late. A child who loses sleep disturbs the parents'

sleep and usually is taken to the dentist the next day. However analgesics tend to prolong the time lapse since some relief albeit temporary, removes the urgency in the dental pain. Some parents hope that no further treatment is necessary after administering pills at home. By the time analgesics fail to contain the pain considerable time would have elapsed and sometimes with irreparable damage to the tooth.

Table 6 shows the various kinds of pain experienced by these children. In both communities the pain was sensitive to chewing signifying advanced pulpitis. Night pain was quite prominent in Guguletu (62.3%). The differences were significant when analysed by the MINITAB program. The reactions to heat and sweets had p values of 0.080 and 0.024 respectively.

Children follow a parental pattern of dental attendance. Most children (Guguletu 57.4% and Mitchells Plain 58.5%) had not been to the dentist in the last two years. In Table 3, most parents and children go only when necessary for pain. The same pattern is seen in response to the question asking for the reason for this current visit. A striking similarity was found between previous toothache experience and being in pain on the current visit. If anything else this is an indictment on the profession in that there is no behaviour change despite previous attendance.

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Pain (76.1% in Guguletu and 56.9% in Mitchells Plain) was the main reason for parents consulting a dentist. Following parental pattern, pain was often the reason children (83.3% for Guguletu and 77.7% for Mitchells Plain) went to the dentist (Table 3). These figures are higher than those of Mani et al (1997) of 67% but agree with both Mason et al (1997) who had 83% and Gibson et al (1993) who had 87.7%.

There were high (19.6% Guguletu and 40% Mitchells Plain) frequencies under "Other" in response to the question 'why did you go to the dentist?' This response needed clarification, which unfortunately was not done and could be incorporated into future studies. Could patient initiated extractions in the absence of pain or other normative needs and the dental services that then arise from this, in keeping with fashion such as the

"Cape Flats Smile" (Morris, 1998) be a part explanation?

At both centres, 48% of the children only went to the dentist when it was necessary for pain. This is much more than the 18% finding of Mani et al (1997). However, that 43% had never been to the dentist before is in agreement with their 40% finding at Witwatersrand. Although dental services are free for children, very few children receive routine preventive dental services (Vargas et al,1998). Could it be that they elect to omit the benefit, or are unaware, or that there is a problem with accessibility such as mothers having to get up at 4.30am, walk 10km, and queue from 6.00am as seen in Guguletu?

There was further agreement in that 55% of the children were in pain on this visit (Table 3). Mason et al (1997) found 55.5% in their British study. Timely dental attention is viewed as a function of parents' priority or level of knowledge about dental development (Todd, 1993). Mani et al (1997) found that 18% of their sample went to the dentist at least every 6 months. In this study, lower figures of 6.6% for Guguletu and 3.1% for Mitchells Plain went at this regular interval. It was also found that much lower rates went at least every year. This study had 9.9% for Guguletu and 6.2% for Mitchells Plain, which differ from those of Gibson et al (1993) who found 68.7%. It would seem that routine dental check ups are not part of the culture in the two communities. In deed van Wyk et al, 1989b said that 'very few South Africans are in the habit of making regular visits to the dentist'.

Parents tried various remedies in the early management of dental pain (Table 6). The responses here reveal some beneficial and some harmful practises that are basically similar in both communities. Some practises such as the direct placement of a crushed analgesic on the painful tooth and the tying of warm pads around the cheeks are potentially harmful.

Both Disprin® and Panado® were crushed and placed directly onto the painful tooth. The crushing and direct placement of analgesics is inappropriate use that could result in injury

to the soft tissue. The so called 'aspirin burn' results from prolonged tissue contact with a salicylate. Furthermore, the consumption of aspirin thins the blood and when used in conjunction with surgery can prolong bleeding.

Morris and Klimberg (1986) showed that an association existed between Reyes syndrome and salicylates such as Disprin® and Grandpas Aspirin Powder® in children under 18 years of age but especially in the 10-14 year age group. Thus the use of Disprin® as in this study is inappropriate. It was double tragedy (Fig 11) when 56% of Guguletu and 52.2% of Mitchells Plain children had a crushed Disprin® placed onto their painful teeth since it will ultimately be swallowed. These figures are far too high for comfort. **Parents need to be educated on the risk they may be exposing their children to.** The use of aspirin declined internationally between 1970 and 1994 in part because of this adverse publicity (Preshaw et al, 1994). However, Preshaw et al (1994) cite Orlowski as saying that more studies have failed to link aspirin to the development of Reyes syndrome but rather have confirmed the lack of association between the two.

Further abuse of the drugs was seen in the use of 'left over' antibiotics at 21.3% in Guguletu and 12.3% in Mitchells Plain (Table 6).

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Some dental health education should be channelled into patient instruction regarding what not to do when suffering dental pain (Preshaw et al, 1994).

More than 60% of parents had Standard VI – IX of education (Fig 6). Fathers lagged behind at this level especially in Guguletu but they had more (31.3%) matriculants and above (Table 4). The Guguletu fathers led the way at the higher education levels. After matric the residents of Mitchells Plain tend to go more into technical fields such as apprenticeships to become artisans while their Guguletu counterparts persue a more academic career such as university. Traditionally, artisan jobs have been more readily available than commercial 'white collar' jobs especially to non-family members.

More fathers are employed than mothers in both societies but there is a big difference

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between the employment rates for Guguletu and Mitchells Plain (p = 0.038). Mitchells Plain has a higher rate of 75.5%. The education and employment rates affect dental attendance as they impact on the available money for fares and payments when these are needed.

Most (90% Guguletu and 71% Mitchells Plain) families live within 3km of their clinic. Guguletu residents are closer to the clinic than Mitchells Plain (p = 0.032). Taxi (63.1%) is the most prevalent mode of transport in Mitchells Plain while walking (45.9%) was the most prevalent in Guguletu. The farthest distance walked was 10km to the Guguletu clinic. The observed walking to the clinic corresponds with the shorter distance to the clinic for Guguletu residents. On the other hand it makes good logic that the taxi would be used more in Mitchells Plain (66.2%) than Guguletu (50.8%). With p = 0.001, the difference is statistically significant. This transport pattern differs from that reported by Mani et al (1997) where 45% arrived by private car, 23% rode a bus and 19% walked.

Could the mode of transport influence dental attendance in that it would encourage only the older children in Guguletu who are better able to walk? This argument is countered by the finding that the Guguletu children are quickly presented once they have a toothache (Figs.10 &13). In addition mother's love would not leave a child suffering a toothache for lack of transport.

Taxi fares are higher in Guguletu (58.7% pay R5 - 5.9) than Mitchells Plain (54% pay R4 - 4.9). Taken together with the closer distance to the clinic, Guguletu residents pay more for shorter rides. These findings suggest that money for transport could be a real problem in Guguletu, which has a higher unemployment rate and there is a need to pay for older children's dental services. These findings make for a strong case for a second clinic that is more accessible. Such a clinic could improve the situation by cutting short the long queus and the waiting period.

10. CONCLUSIONS

- 1. The greatest impact was on parents' sleep.
- 2. 55% of the children were in pain at the time of presentation. Sixteen point four percent of the Guguletu children had endured pain for more than 30 days compared to 24.6% for Mitchells Plain.
- 3. In response to pain, Guguletu children were brought in earlier (68.4% within 14 days) than those of Mitchells Plain (47.8%).
- 4. 43 45% of the children had not been to the dentist before.
- 5. Long waiting periods for appointments and long queues at the clinic put people off.
- 6. Long distances were walked to access the dental clinics.
- 7. Money for fares was a special burden.
- 8. Too many children were getting aspirin (Guguletu-61.5% and Mitchells Plain-29%) and many were having either Disprin® or Panado® crushed onto the painful tooth.
- 9. Guguletu was consistently the poorer of the two communities as shown by employment rates, cars, telephones, home ownership, etc.
- 10. The communities share common trends such as shared accommodation and family life structure (marital status).

11. RECOMMENDATIONS

- 1. Embark on parental education dealing with the early management of pain.
- 2. Add a more accessible dental clinic to improve the congestion and cut waiting period
- 3. Improve the attitude of the dental nurses or investigate why many parents perceive them in a negative way.

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August 11th, 1999

Prof. Y Osman
Chairman,
Hospital and Clinical Committee
University of the Western Cape
Faculty of Dentistry, Oral Health Centre
Private Bag X08
7785 Mitchells Plain.

Dear Professor Osman,

Permission to use community dental clinics for research

I am seeking your permssion to carry out research as part of my Masters in Paediatric Dentistry requirements. I intend carrying out the date collection during the month of August 1999. The dental clinics at Guguletu and Mitchells Plain will be required for the interview of 120 parents or guardians accompanying children under 12 for treatment there.

I am enclosing a copy of my protocol that was submitted to the Ethical Committee of the university for their approval.

I can be contacted by phone on 328116, extension 2262.

I thank you for your assistance.

Sincerely yours,

T D Mukurazhizha D.D.S.

CONSENT FORM

Dear Parent/Guardian, I am carrying out a survey on factors that influence the dental attendance of children such as yours. This is in part fulfilment of my masters' course in children's dentistry. I have prepared a questionnaire that will take a little of your time while you wait to be seen. This will not in any way interfere with your being seen as per arrangement. I would like to ask for your consent to participate in this study. The study involves asking you questions related to your child's visit today and previous relevant experience. Would you please signal your consent by signing this letter that I will keep for my records? Please be informed that although I have to have your name on this form, the study itself is anonymous and confidential. The information provided will be used for the purposes of this study only. If in the unfortunate event that you do not wish to be interviewed, I take this opportunity to thank for reading this far and to assure you that it will not be held against you or your child. UNIVERSITY of the I thank you for your co-operation and assistance. Your Child's Name: Your Name:

Signed at this day of 1999.

Signature ____

QUESTIONNAIRE

DA	TA	E	OF	EXA	11	111	JA	T	IO	N
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4

Mother = 1

D D	M	M	Y	Y
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Guardian = 3

1 PERSONAL INFORMATION

1 I	DENTIFICATION CO	ODE					T		
	Guguletu	100 - 199				_			
	Mitchells Plain	200 - 299	_						
				D	D	M	M	Y	Y
2 YOU	R CHILD'S DATE O	F							
BIRTH		<u>الـــاللــاللــ</u>		Ш	5				
		UNIVER	SITY	of th	he				
A	1GE (months)	WESTE	RN CA	AP	E				
3 C	hild's gender	Male =1	Female =	2					

Interviewee, are you the father, mother or guardian?

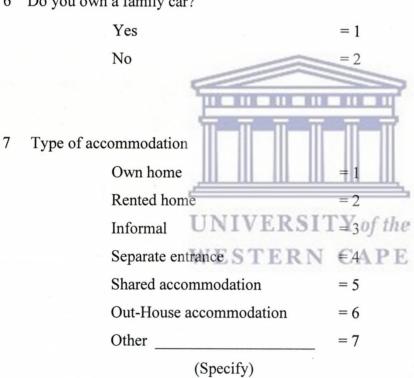
Father = 2

5 Marital Status of Parent

Married	= 1
Divorced/Separated	= 2
Widow/Widower	= 3
Living together not married	= 4
Single parent	= 5
Other	_ = 6

(Specify)

6 Do you own a family car?





8 Is there a telephone at home?

Yes = 1

No =2

9	Language spoken at home	
	1 = English	
	2 = Xhosa	
	3 = Afrikaans	
	4 = Other	
	(Specify)	
2.	EDUCATION & INCOME.	
10	What is the highest level of education for (a) Mother	a
	(b) Father	b
	No formal education = 1	
	Primary school up to STD $V = 2$	
	Standard VI - IX $= 3$	
	Matric or Equivalent = 4	
	Post Matric qualifications = 5	
	Other = 6	
11	Are the parents employed? (a) mother	
	(b) father	
	$Yes = 1 \qquad No = 2$	
12	Which of these best represents the weekly household income?	
	$R \ 0 \ -125 = 1$	
	R126 - 250 = 2	
	R251 - 500 = 3	
	R501 - 1000 = 4	
	P1001 - 5	

13 How far away is your home from	m this clinic?	
	Km •	(code)
14 How did you come to the clinic	today?	
Own transport	= 1	
Taxi	= 2	
Bus	= 3	
Train	= 4	
Walked	= 5	
Other	= 6	
(Specify)		
(-13)		
15 If by public transport, what did	it cost you?	
(single fare parent & child)		
(omgre rate parent et ema)		(code)
16 When last did you (parent) go to	the dentist?	
16 When last did you (parent) go to the dentist? Within 6 months = 1		
	IVERSITY of the	
	STERN CAPE	
I don't go	= 4	
17 Why did you go?		
17 Why did you go?		
For pain	= 1	
Routine check up	= 2	
Other	= 3	
18 Are you on medical aid?		
Yes = 1	No $= 2$	

3 Oral care

19	Does your child clean/brush their teeth?	

Yes
$$= 1$$
 No $= 2$

Once daily = 1Twice daily = 2More than twice daily = 3Irregular (not daily) = 4

Never = 5

21 Who cleans the child's teeth?



UNIVERSITY of the

22 Does your child have his/her own toothbrush?	CAPE	
---	------	--

Has own = 1Shares one = 2

None = 3

23 Is there toothpaste in the home?

Always = 1Sometimes = 2

Never = 3

24 If there is	s no toothpaste, what else does	s the child use?	
	Specify		(code)
4 Dental vis	its.		
25 How ofte	en do you take your child to th	e dentist?	
	Once in 6 months	= 1	
	Once in 12 months	= 2	
	Once in 18 months	= 3	
	Once in 2 years	= 4	
	When necessary (for pain)	= 5	
	Never before	= 6	
	Other	=7	
	time you went? Explain nild experiencing pain at the m	noment? Y of the	(code)
	Yes WESTE	ERN CAPE	
	No	= 2	
28 When did	l this pain or problem start?		
	Today	= 1	
	Last night	= 2	
	Some time yesterday	= 3	
	Two days ago	= 4	
	This week	= 5	
	This month	= 6	
	More than a month now	= 7	
	Other	= 8	

29 Type of	pain. Yes $= 1$ No $= 2$	
	Continuous :	
	Keep child awake at night	
	Relieved by "pain stoppers"	
	Increased by heat	
	Increased by cold	
	Sensitive on chewing	
	Sensitive to sweets	
30 How did	you treat the tooth pain? Yes $= 1$	No = 2
	No treatment	
	A painkiller to swallow	
	(Specify)	
	Crushedonto the painful area	
	(Specify)	
	Gave some antibiotics I had	
	Medicinal ointment from the pharmacy	
	Warm salt water to rinse with	
	Tied a warm pad around the cheeks	
	Other WESTERN CAPE	
	(Specify)	
31 To whom today?	n did you take the child for this problem before comin	ng here
	Went to the doctor	= 1
	Consulted the pharmacist	= 2
	Talked to someone else (neighbour, relative, friend	1) = 3
	No one	= 4
	Other	= 5
	(Specify)	

32 Why to someone else and not the dentist?	(code)
(Explain)	
33 When did you first become aware that your child was having the current dental problems?	Days)
(specify)	
34 How long ago did you decide to come to the dentist for this problem? Today = 1 Yesterday = 2 This week = 3 This month = 4 More than a month ago = 5 Other = 6	
35 Why was there this time lapse? (# 33)	(Code)
36 Why have you come specifically today?	(code)
Explain	
37 Has your child ever complained of another toothache before? Yes = 1 $No = 2$	

5. Impact

38 How did this problem affect you, the parent?
Yes = 1 No = 2
did it affect your sleep at night
did you miss work
did you loose part of your income
Concern and worry (felt pain) for child
Restricted activity (could not go out / lost opportunity)
Mouth smells
other
(Specify)
39 Did you have to take time off work to bring the child today? Yes = 1 No = 2 40 Please indicate which of the following are reasons for your not coming here sooner. Yes = 1 No = 2
Dentist is unfriendly
Dentist not available for emergencies
Have to wait too long for an appointment
Dentist hurts me and I hate dentists
The long queues put me off
The dental nurses have bad attitudes
Finances (clinic fees, taxi fares, etc.)

(code)

OTHER COMMENTS.

Parent (code)



Self

I thank you for your co-operation

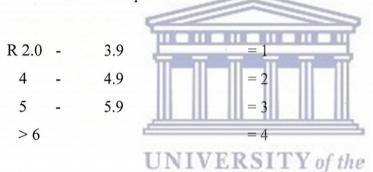
Appendix D

EXPANSION OF OPEN-ENDED QUESTIONS

13 Distance between home and clinic in kilometres

$$1.1 - 3.0 = 2$$

15 Cost of Public Transport



24 Alternative to toothpaste STERN CAPE

There is always toothpaste = 1

Soap e.g. sunlight = 2

Water (warm or cold) = 3

Salt (with or without water) = 4

Other = 5.

Borrow from next-door neighbour

Does not clean TCP

Bicarbonate of soda Ash

Brushes only Glycerine

26 Re	ason for child's las	t dental visit		
Pa	ain		= 1	
Fı	ractured tooth	•	= 2	
Fo	or extraction		= 3	
O	ther		= 4	
30 Ty	pe of analgesic swa	illowed		
D	isprin		= 1	
Pa	anado		= 2	
Gı	randpa		= 3	
Ot	ther		= 4	
Di Pa Gi	isprin unado randpa iher	UNIVE	direct onto painful tooth = 1 = 2 = 3 = 4 Colgate + Panado Spirit on cotton wool	
Co Ru Wa	ner treatment given otton wool in ears ubbing medicine on ater her (minority) toothpaste	the cheek	= 1 = 2 = 3 = 4 Bambi on toothbrush	
	cloves + tooth	paste	warm bottle against cheeks	

32 R	eason for consulting other than dentist			
Ι	Did not consult	= 1		
(Clinic closed	= 2		
Ι	Didn't know what to do (wanted advice)	= 3		
N	No money	= 4		
F	Had signs (swollen, crying at night)	= 5		
(Other	= 6		
	Child lives far away	•		
	Limited time			
	Don't know/no reason			
	*			
35 R	eason for time lapse			
P	Pain not severe (was on and off)		= 1	
V	Waiting for form from school		= 2	
C	Clinic closed for the weekend		= 3	
	Did not want to disturb school (child busy)		= 4	
P	Parents at work (busy)		= 5	
V	Waiting for swelling to go down		= 6	
T	This is the earliest practical time	Y of the	= 7	
P	Parent did not think (take) it serious / Hoped	it would get better	= 8	
C	Clinic busy on a previous day (reached cut o	ff point for the day)	= 9	
T	reating with pills		= 10	
D	Oon't know / no reason / procrastination		= 11	
C	Child afraid / parent afraid		= 12	
C	Other		= 13	
	Did not know that young children cou	ald have extraction		
	Child not well / Parent not well			
	Had gone to a private dentist but was	too expensive (no mo	ney)	
	Had a pending appointment and there	fore waited for date		

Did not know about this clinic

36 Why have you come specifically today?

Pain worse	= 1
Did not sleep last night	= 2
This is the earliest practical/Have the time	= 3
Want to prevent further breakdown	= 4
Have someone to accompany child	= 5
Have got money	= 6
Other	= 7

Got letter from school

Got up early

Put mind to it

No reason

Convenient (child on school holiday / other siblings are also being seen)

The child is now ready



ICQNOELO E

IXHOSA CONSENT FORM

Mzali Obekekileyo,

Mzali ndicela uncedo Iwakho, apha ndenza uphando ngezizathu, ezithi zibe nokuchaphazeka ukuhambela kwabatwana kuqqirha wamazinyo. Oluphando ndulwenzayo lunxulumene, nezifundo zam zobuqqirha wamazinyo kwicandelo labatwana.

Ngoko ke ndidwelise imibuzo emifutshane, malunga nokuhambela komntwana wakho kuqqirha wamazinyo. Ngokuzithoba okukhulu ndicela ukuba, undiphendulele le mibuzo idweliswe kweliphepha elilandelayo. Nangona kufuneka ubhale igama lakho, apha kulencwadi. Ndiyakuthembisa yonke into oyibhalileyo, kwakunye negama lakho iyakuba yimfihlelo. Ukuphendula lemibuzo akuyiku chaphazela unyango lomntwana wakho.

Ndovuyiswa yintsebenz	ziswano yak	IVERSIT	CAPE	
Igama lomntwana:	WE	SIERN	CAFE	
Igama lomzali:				
Indawo		umhla	inyanga	1999.
Isignature yomzali				

IMIBUZO

UMHLA WONYANGO			D	D	M	M	Y	Y
1 IINKCUKACHA								
1 IINKCUKACHA					Г			
Guguletu	100 - 199							
Mitchells Plain	200 - 299							
2 UMHLA WOKUZALW	/A KOMNTWAN	JA .	D	D	M	M	Y	Y
Iminyaka (iinyanga)						I	Ī	
3 Ubuni bomntwana	Nkwenkwe =1 1	Ntombazana	=2	4				
4 Ingaba umzali ungu man	na, utata, ubhuti, us	sisi womntw	ana	okai	nye		· [_
isizalwane?	WESTER	RN CA	P	E				
Mama = 1 Tata	a = 2 Isizalwa						L	
5 Ingaba umzali							Г	
Utshatile		= 1					L	
Udivosile		= 2						
Ungumhle	olo	= 3						
Ungumhlo	olokazi	= 4						
Zange ats	hate	= 5						
Enye into		= 6						
	(Cacisa)							

6 Ingaba unayo	imoto?						
	Ewe $= 1$		Hayi	= 2			
7 Ingaba uhlala			• •				
	Endlini yakl Uyarenta Etyotyombe Separate ent	ni			= 1 = 2 = 3 = 4	•	
	Shared acco Indlu engaph Enye				= 5 = 6 = 7		
8 Ingaba unayo	ifoni?						
	Ewe	= 1	Hayi		= 2		
9 Ulwimi oluthe	ethwayo ekha	ya	11 101	101			
	1 = Isingesi 2 = IsiXhosa 3 = I Afrikaa 4 = Olunye	ans	(Cacisa)	Ī			
OZ INVELINID			VER		Y of the		
02. IMFUND	O NENGE	MEG	MAL	N	CAPE		
10 Ingaba umzal	li uyeke kwel	iphi iba	nga esik	olweni	i (a) Umam	a	a
					(b) Utata		b
	Akazange ay Waphela kw Phakathi kw Ibanga leshu Imfundo eph	ibanga l e banga mi	lesihlanu lesi 6 no		= 1 = 2 = 3 = 4 = 5		
	Enye				= 6		
11 Ingaba abaza	li baya phang	gela?				(a) umama	
E	we = 1		Hayi =	= 2		(b) Utata	

12. Ingaba umvuzo weveki wendlu ye	onke?	
(Isingeniso sendhlu yonke ngo	eveki ungakanani?)	
V		
	ıyaku = 1	
R126 – 250	= 2	
R251 – 500	= 3	
R501 - 1000	= 4	
R1001 -	= 5	
12 In caba ildinik ilmda kanadanani	alsh 0	
13 Ingaba iklinik ikude kangakanani	eknaya?	
		(code)
	Km	
14 Usebenzisa ntoni ukuza eklinik?		
Imoto yakho	=1	
Taxi	= 2	
Bus	= 3	
Train	= 4	
Uhamba ngenyawo	= 5	
Enye	= 6	
(Cacisa)	<u> </u>	
TINIT	VERSITY of the	
15 Ukuba ngaba uhamba nge taxi, bu	s, train, ingaba yimalini?	
WES	TERN CAPE	
(ukuza umzali & umntwana)		(code)
16 Ingaba wagqibela nini ukuya kugq	ıirha wamazinyo?	
Emva kwenyanga ezi 6		
Kwenyanga ezi 12	= 2	
Kweminyaka emi 2	= 3	
Okanye zange uye	= 4	
17 Ingoho wayayala ataai uluba	vavilo?	
17 Ingaba wawuyele ntoni, ukuba wa	•	
,	= 1	
	= 2	
Enve into	= 3	

18 Ingaba une medical aid?		_
Ewe = 1 Hayi	= 2	_
3 Oral care		
19 Ingaba umntwana wakho uyawahlamba	amazinyo?	
Ewe $= 1$ Hayi	= 2	_
20 Ingaba uwahlamba kangaphi ngemini?		
Kanye	= 1	
Kabini Ngaphezulu kwa 2	= 2. = 3	
Akawahlambi qho	= 4	
akawahlambi	= 5	
21 Ngubani ohlamba amazinyo omntwana		
Ngumzali		
Ngumntwana Bobabini	= 2	
Omnye umntu	= 4	
(Cacisa)		
22 Ingaba unebrushi yakhe? UNIVEI	RSITV of the	7
Yedwa Uyabolekisana	RN CAPE =2	
Akanayo	= 3	
		_
23 Ingaba ikhona iColgate ekhaya?		
Lonke ixesha	= 1	_
Ngamanye amaxesha Zanke ibekho	= 2 = 3	
Zanke lockilo		
24 usebenzesa ntoni?		7
	Chaza (code)	

4 Dental visits.	
25 Ingaba umntw	vana umsa kangakanani kugqirha wamazinyo?
K. K. X. Z.	lanye kwiinyanga ezintandathu = 1 lanye kwiinyanga ezilishumi elinambini = 2 lanye kwiinyanga ezilishumi elinesibhozo = 3 lanye kwiminyaka emibini = 4 la kunemfuneko (nje ngeenhlungu) = 5 lange ndimse = 6 lanye into = 7
26 Ingaba umntw kwakho	vana wawumsele ntoni kugqirha wamazinyo, ukugqibela
Ca	acisa(code
	wana wakho uva inthlungu ngoku? we = 1
EV	we $= 1$ Hayi $= 2$
Izo Izo Ku Ku Ku En	amhlanje = 1 olo ebusuku = 2 olo emini = 3 wiintsuku ezimbini ezigqithileyo = 4 uleveki = 5 ulenyanga = 6 wiinyanga ezigqithileyo = 7 nye = 8
29 Uhlobo lweent	
Ev	·
Ing Zip Ziv Ziv Kul	vaqhubekeka gaba intlungu azimlalisi ebusuku sheliswa ziipilisi zeentlungu vuswa bubushushu vuswa kukubanda buhlungu xa esitya

]
ļ
le)

35 Kutheni k	ugqithe ixesha elingaka? (#33)	(Code)
36 Kutheni uz	ze namhlanje nje? Cacisa	(code)
37 Ingaba um ngaphambili?	twana wakho wake wakhalaza ngezinyo eliqaqambayo Ewe = 1 Hayi = 2	
5. Impact		
38 Ingaba len	gxaki ikuchaphazele njani wena mzali?	
	Ewe = 1 Hayi = 2 Ikhe ayakulalisa Ukhe awaphangela Ukhe walashekelwa ngumvuzo wakho Enye (Cacisa)	
39 Ingaba aw	uphangelanga, ngenxa, yokuba kufuneku uzise umntwana eklinik Ewe = 1 Hayi = 2	
40 Zintoni iziz	zathu ezibangele ukuba kubengona uza namhlanje eklinik.	
	Ewe $= 1$ Hayi $= 2$	
	Ugqirha wamazinyo akanabubele Ugqirha wamazinyo akafumaneki ngokungxamisekileyo Kufuneka ulinde ithuba elide ukuze ubonane nogqirha Ugqirha wamazinyo undivisa ubuhlungu yaye andibathandi sogqirha bamazinyo Imigca emide eya kugqirha iyandityhafisa Abongikazi bakhohlakele Ixabiso lixhomile	

ENYE INTO.

Umzali

(code)

Self



(code)

Ndiyabulela ngenxaxheba oyithathileyo.

TOESTEMMINGS VORM

Liewe Ouer/Voog

Ek onderneem 'n tandheelkundige opname op faktore wat die tand-heelkundige bywoning van kinders soos u s'n sal of kan beinvloed.

Dit is deel van my opleiding in my meestersgraad in kinderdarts.

Ek het 'n vraestel opgestel wat 'n klein bietjie van u tyd sal neem terwyl u wag om gesien te word. Dit sal geensins inbraak maak op u tyd soos gerenl volgens afspraak.

Ek wil u graag nader vir u toestemming en samewerking in hierdie opname. Die studie sluit in vrae aangaande u kind se besoek vandag, en vorige ondervinding.

Sal u asseblief hierdie brief teken (toestemmingsbrief) wat ek sal hou in my verslag. Ek stel u in kennis dat alhoewel ek u naam op hierdie vorm het, die studie self anoniem en vertroulik is. Die inligting sal alleenlik gebruik word vir my studies.

As u nie wil deel neem in die onderhoud nie, bedank ek u dat u tot dusver gelees het en verseker u dat dit nie teen u of u kind gehou sal word nie.

Ek dank u vir u sam	newerking e	en hulp.			
Ek dank u vir u sam	L.	INIV	EKSI.	Y of the	
U kind se naam:				CAPE	
	V	V E S I	EKN	CALE	
U naam:					
Geteken te			op	hierdie dag	1999.
			r		1,,,,
Geteken	•				
JCICKCII					

VRAELYS

DATUM VAN ONDERS	OEK	DI	M	M	Y	Y
1 PERSOONLIKE INL	IGTING					
1 IDENTIFIKASIE K	KODE			Т	T	
Guguletu Mitchells Plain	100 - 199 200 - 299					
2 GEBOORTEDATUM	VAN UKIND	D T	M	M	Y	Y
Ouderdom <i>(maande)</i>						
3 Kind se geslag	Manlik =1 Vrou					
4 Persoon teenwoordig: Is	s u die kind se vader, r	noeder of voog	?		Г	
Moeder $= 1$	Vader = 2	Vo	og = 3			
5 U Huwelikstatus						
Weduwee	delik vervreemd e/Wewenaar am-nie getroud	= 1 = 2 = 3 = 4				
Enkel oue Ander	_	= 5 = 6				

6 E	Besit u `n gesinsmotor?	
	Ja = 1 Nee = 2	
7 T	Γipe woonplek ·	
	Besit eie huis = 1 Gehuurde woning = 2 Informeel = 3 Aparte ingang = 4 Gedeelde woonplek = 5 Uit huis woonplek = 6 Ander = 7 (Spesifiseer)	
8 H	Het u 'n telefoon? Ja = 1 Nee = 2	
9	Huistaal 1 = Engels 2 = Xhosa 3 = Afrikaans 4 = Ander (Spesifiseer)	
	(opesitiscer)	

12. OPVOEDING & INKOMSTE.

Ander

1	Wat is die hoogste vlak van opvoeding vir (a)	Moeder	Γ
	(b)	Vader	r
	Geen formele opvoeding	= 1	L
	Prim∆re skool tot en met STD V	= 2	
	Standerd VI - IX	= 3	
	Matric of Ekwivalent	= 4	
	Post Matric kwalifikasies	= 5	

11 Is beide ouers werksaam?	(a) moeder (b) Vader
Ja = 1 Nee = 2	(b) vader
12 Watter een van die volgende veerteenwoordig u we die beste?	eeklikse inkomste
R 0 - 125 R126 - 250 = 1 R251 - 500 = 1 R501 - 1000 = 1	2 3 4
13 Hoe ver is u huis van die kliniek?	(kode)
Km 14 Hoe het u hier vandag na die kliniek gekom?	
Eie vervoer = 1 Taxi = 2 Bus = 3 Trein = 4 Gestap = 5 Ander = 6 (Spesifiseer)	
15 Indien u met publieke vervoer gekom het, wat het di (enkel fooi vir ouer en kind)	it u gekos? (kode)
16 Hoe gereeld besoek u (die ouer) die tandarts?	
Elke 6 maande = 1 12 maande = 2 2 jaar = 3 nek wanneer nodig = 4	3

17 Waarom het u gegaan?	
Vir pyn = 1 Roetine ondersoek = 2 Ander = 3	
18 Behoort u aan 'n mediesefonds?	
$Ja = 1 \qquad Nee = 2$	
3 Mondeling sorg	
19 Borsel u kind hom/haar tande?	
$Ja = 1 \qquad Nee = 2$	
20 Hoe gereeld per dag word u kind se tande sko	ongemaak?
Een keer per dag = 1 Twee keer per dag = 2 Meer as een keer per dag = 3 Nie-gereeld (nie daagliks) = 4 Nooit = 5	TY of the
WESTERN	CAPE
21 Wie maak die kind se tande skoon?	CALL
Ouer = 1 Kind = 2 Beide = 3 Ander (Spesifiseer) = 4	
22 Het u kind sy/haar eie tandeborsel?	· · · · · · · · · · · · · · · · · · ·
Sy eie $= 1$ Deel een $= 2$ Besit nie een $= 3$	

23 Is daar tand	depaste in die huis?		
	Altyd	= 1	
	Somtyds	= 2	
	Nooit	= 3	
24 Wat gebrui	ik die kind as daar nie tandepa	asta in die huis is nie?	
	Spesifiseer		(kode)
4 Tandarts b	esoeke.		
25 Hoe gereel	d neem u u kind na 'n tandart	s?	
	Een keer in 6 maande	= 1	
	Een keer in 12 maande	= 2	
	Een keer in 18 maande	= 3	
	Een keer in 2 jaar	= 4	
	Wanneer nodig (vir.pyn)	= 5	
	Nooit vantevore	= 6	
	Ander	= 7	
	THE REPORT OF		
26 Wat was di het?		er die laaste keer na tandarts geneem	(kode)
	Verduidelik		
	UNIVER	RSITY of the	
27 Ondervind	u kind pyn op die oomblik?	RN CAPE	
	Ja	=1	
	Nee	= 2	
28 Wanner he	t hierdie pyn of probleem onts	staan'?	
	Vandag	= 1	
	Verlede nag	= 2	
	Gister	= 3	
	Twee dae gelede	= 4	
	Hierdie week	= 5	
	Hierdie maand	= 6	
	Meer as 'n maand gelede	= 7	
	Ander	= 8	

29 Soort pyn	•	
	Ja = 1 Nee = 2	
	Aanhoudend	
	Hou kind wakker saans	
	Pynstillers bring verligting	
	Hitte verhoog pyn	
	Koue verhoog pyn	
	Sensitief wanneer eet	
	Sensitief vir lekkers	
30 Hoe het u die tandpyn behandel?		
	$Ja = 1 \qquad Nee = 2$	
	Geen behandeling	
	'n pynpil om te sluk (Spesifiseer) fyngedruk op die aangetasde area (Spesifiseer) Beskikbare antibiotikums toegedien	
	Mediese salf van die apteek	
	Warm soutwater om mond te spoel	
	Het 'n warm doek om die wange gedraai	
e le	Ander	
	(Spesifiseer)	
31 Na wie het gekom het?	t u die kind vir hierdie probleem geneem voordat u na ons	
	Was by dokter Was by u apteker Het met iemand anders gepraat (buurman, familielid, vriend) Geen een Ander (Specificaer)	= 1 = 2 = 3 = 4 = 5

32 Waarom met iemand anders as die tandarts? (kode)
(Verduidelik)
33 Wanneer het u ontdek dat u kind tans probleme met sy tande ondervind? (Dae)
(spesifiseer)
34 Hoe lank gelede het u besluit om na die tandarts te kom vir hierdie probleem?
Vandag = 1 Gister = 2 Hierdie week = 3 Hierdie maand = 4 Meer as 'n maand gelede = 5 Ander = 6 (Spesifiseer) 35 Hoekom het u so lang gewag voordat u die kind na die tandarts gebring het? (# 33)
36 Waarom het u juis vandag gekom? (kode)
Verduidelik
37 Het u kind al ooit van 'n ander tandpyn gekla?
$Ja = 1 \qquad Nee = 2$

5. Impak

38 Hoe het hi	erdie probleem, u as ouer, geaffekteer?
	Ja = 1 Nee = 2
	Het dit u slaap geaffekteer saans
	Moet u van die werk af bly?
	Was daar van u salaris verhaal/afgetrek
	ander
	(Spesifiseer)
39 Moes u uit	t die werk bly om die kind vandag te bring?
	$Ja = 1 \qquad Nee = 2$
40 Dui asseb	lief aan die rede(s) waarom u nie gouer hierheen gekom het nie. Ja = 1 Nee = 2 Tandarts is onvriendelik Tandarts nie beskikbaar vir noodgevalle Moet te lank wag om 'n afspraak te kry Tandartse maak my seer en ek haat tandartse Die lang toue mense ontmoedig my Die verpleegsters het swak maniere Finansies (kliniekfooie, taxifooie, ens)

ANDER KOMMENTARE.

Ouer (kode)

U Self



Ek dank u vir u samewerking.

Appendix I: Miscellaneous Treatment given to children by parents during early management of dental pain.

Cotton wool in ears

Rubbing medication - cheeks

Paracetamol

Glycerine

Colgate + Panado

Spirit on cotton wool

Spices

Water

Appendix J: Other Reasons for Time Lapse.

- Did not know that young children could have extractions
- Child not well / Parent not well
- Had gone to a private dentist but was too expensive (no money)
- Had a pending appointment and therefore waited for that date

• Did not know about this clinic

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