

# Evaluating patient satisfaction with primary care consultations in the Helderberg sub-district of South Africa.

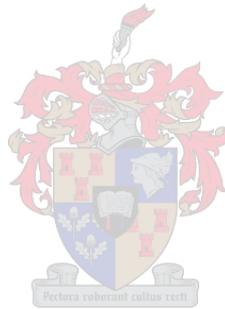
## Cover Page

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December 2017

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## Abstract

### Background

Effective primary care is vital for improving health outcomes. Patient-centred consultations are important and one way of assessing this is to evaluate patient satisfaction. The Medical Interview Satisfaction Scale (MISS) has not been used in South Africa.

### Aim

To test validity and reliability of the MISS and evaluate patient satisfaction with consultations.

### Setting

Primary care facilities in the Helderberg sub-district, South Africa

### Methods

The MISS tool was adapted and validated by a panel of experts. The internal consistency was evaluated on 150 consultations. The level of patient satisfaction on 23 items, in consultations by nurses and doctors, was measured. Respondents indicated agreement with each item on a scale (1=very strongly disagree, 7=very strongly agree).

### Results

The wording of the items were adapted and translated into Afrikaans and Xhosa. There was good overall internal consistency (Cronbach alpha 0.889), but not in all subscales. Patients were most satisfied with rapport (Median score 6.2 (IQR 5.3-5.9)) and understanding of their concerns, fears and beliefs (5.7 (IQR 5.1-6.3)). They were less satisfied with the ability to foster an acceptable management plan (5.5 (IQR 4.5-6.5)) and with accuracy of information (5.0 (IQR 4.2-5.8)). Scores for nurses and doctors were not significantly different.

### Conclusion

Further work is needed to improve the reliability of MISS subscales in the South African context and the best internal consistency was found with 21 items. Patients showed high levels of satisfaction with primary care consultations, although other studies suggest this may reflect low expectations rather than high quality consultations.

## Introduction

Effective primary health care (PHC) systems are vital for improving health outcomes and health equity.<sup>[1]</sup> The best way to improve health care in low and middle income countries is by strengthening PHC systems.<sup>[2]</sup> Effective primary care relies on competent and well-resourced generalist practitioners, who may also serve as gatekeepers to the rest of the health care system. A multi-professional team of generalists, including both nurses and doctors who share similar values and principles, is needed to make this a reality.<sup>[3]</sup>

Medical generalism is an approach to the delivery of health care that routinely applies a broad and holistic perspective to the patient's problems. It is a philosophy of practice which is in essence person- and not disease-centred; integrates biotechnical and biographical perspectives, and views health as a resource for living and not an end in itself.<sup>[4]</sup> It has been described as expertise in whole person medicine.<sup>[5]</sup> These generalists should be able to deliver clinical care within a system that is characterised by the core dimensions of effective primary care: accessibility, continuity, coordination, comprehensiveness, quality and efficiency.<sup>[6]</sup>

Generalist care is offered through the provision of personal, holistic, lifelong, comprehensive care to individuals within their family and community context.<sup>[7]</sup> The primary care consultation is therefore at the heart of such generalism and both clinical and communication competencies are required. Person-centredness implies understanding the illness experience from the perspective of the patient along with their goals, concerns, beliefs and expectations, and places people at the forefront of their health and care. Understanding the patient's perspective is therefore a key issue in the holistic management of patients. This leads to improved patient health outcomes, more effective practice, enhanced patient satisfaction, better decision making, adherence and reduced risk of errors.<sup>[8]</sup>

In South Africa, clinical nurse practitioners (CNP) are the most common primary care provider as 80% of primary care consultations in the public sector are conducted by nurses.<sup>[9]</sup> The ability of the CNP to function as an effective generalist is therefore vital to the healthcare system of South Africa. However, there is some concern that they may not have an approach to care and communication skills consistent with such generalism.<sup>[10]</sup> There is evidence that practitioners (doctors and nurses) do not demonstrate a person-centred approach to the consultation and lack many of the skills required of a medical generalist.<sup>[10]</sup> Mental and social problems are poorly recognised in primary care consultations despite them being major contributors to the burden of disease.<sup>[11]</sup> There is also evidence of poor risk-reduction behaviour and preventative care <sup>[12]</sup> and poorer patient satisfaction, loss of trust, unmet needs and inadequacy of essential services<sup>[13]</sup> Poor service delivery leads to poor patient satisfaction and higher morbidity rates. This raises the question as to whether primary care providers, particularly CNPs, are able to function as generalists in our primary care system.

One way of evaluating the quality of generalism is by feedback from patients on their satisfaction with the consultation and the practitioner.<sup>[14]</sup> Patient satisfaction is also an important predictor of

quality of care and has been linked to a decrease in specific markers of the burden of disease in a community, increased accuracy of diagnosis,<sup>[15]</sup> improved control of chronic disease,<sup>[16]</sup> better self-rated health and physical function,<sup>[17]</sup> decreased morbidity<sup>[18-19]</sup> and disability.<sup>[20]</sup> It also predicts whether patients will attend follow-up appointments<sup>[21-23]</sup> or adhere to treatment.<sup>[24-26]</sup>

The level of patient satisfaction with the primary care consultation, therefore, is one of the key areas that predicts these important outcomes. The different aspects of patient satisfaction in the consultation can be evaluated separately and linked with different competencies, which have been described in previous studies,<sup>[27]</sup> such as the ability to reassure and recognise underlying fears and beliefs, the ability to communicate accurate information, the ability to form a therapeutic relationship and the ability to evoke patient trust in the management plan. These categories has been widely researched and adapted for different populations internationally.<sup>[28-29]</sup>

Nurses can be effective generalists and internationally nurses have obtained higher levels of patient satisfaction compared to doctors<sup>[30-31]</sup>, but these studies were limited to high income countries, where the nurse is not necessarily the main primary care provider and the gatekeeper to the health system.<sup>[32-36]</sup> Evidence from middle-income countries is limited<sup>[37]</sup> and lower levels of patient satisfaction with the consultation have been reported in countries such as Brazil<sup>[38]</sup>, Jordan<sup>[39]</sup>, Mozambique<sup>[40]</sup>, Uganda<sup>[41]</sup> and India<sup>[42]</sup> compared to high-income countries such as the USA<sup>[43]</sup>, France<sup>[44]</sup> and Australia<sup>[45]</sup>. There have not yet been any studies on patient satisfaction with consultations in the primary care system of the Western Cape.

## **Aim and objectives**

The aim of the study was to test the validity and reliability of the Medical Interview Satisfaction Scale (MISS-21)<sup>[28]</sup> and to evaluate the level of patient satisfaction with primary care consultations within the Helderberg sub-district, Western Cape, South Africa. Specific objectives included:

1. To evaluate the validity of the MISS-21 and adapt it to the South African context
2. To evaluate the internal consistency of the MISS-21
3. To measure patient satisfaction with primary care consultations
4. To compare the levels of patient satisfaction with nurse- versus doctor-led consultations.

## **Methods**

### **Study design**

Adaptation and validation was performed by an expert panel. The MISS was then used in a descriptive survey that evaluated the internal consistency and determined levels of patient satisfaction with the consultation.

## Setting

The study was performed in the primary care facilities of the Helderberg sub-district of South Africa. There were ten primary care clinics or community health centres (CHC) within the area, each with differing numbers of CNPs and doctors. The sub-district employed 35 CNPs and 5 permanent doctors. Each primary care provider consulted between 20-40 patients per day. Of these ten facilities, four were nurse-led with no doctors and six had both nurses and doctors. Doctors attended on specific days of the week. The CNPs provided first contact care (75% of consultations) and referred more complicated patients to the doctor.

The Helderberg sub-district population is approximately 222 817 people <sup>[46]</sup> and the population is a mixture of Coloured (35%), Black African (34%) and White (29%). The majority of the population are either Afrikaans, English or Xhosa speaking, 51% are aged 20 years and older and have completed Grade 12 or higher, and 80% of the working age population (aged 15 to 64 years) are employed. Overall 44% of households have a monthly income of R3 200 (\$245) or less, 85% of households live in formal dwellings, 94% of households have access to piped water in their dwelling or inside their yard, 95% of households have access to a flush toilet connected to the public sewer system, and 97% of households use electricity for lighting in their dwelling.<sup>[37]</sup>

The Helderberg district has observed an increase of 48% in the population in the past 10 years, causing much strain on the healthcare system with a need for healthcare system improvement and optimisation of service delivery.

## Validation of the MISS tool

The MISS-21 tool is widely accepted as the most reliable tool for determination of patient satisfaction with the consultation and has been used in different settings worldwide. <sup>[28]</sup> It is a 21-item questionnaire that evaluates patient satisfaction using different sub-scales to highlight the different aspects of patient satisfaction (Table 1). Items were grouped as the ability to reassure and recognise underlying fears and beliefs (distress relief), the ability to communicate accurate information (communication comfort), the ability to form a therapeutic relationship (rapport) and the ability to evoke patient trust in the management plan (compliance intent). Respondents were asked to indicate their level of agreement with each item on a seven point Likert scale (1=very strongly disagree, 2=strongly disagree, 3=disagree, 4=unsure, 5=agree, 6=strongly agree, 7=very strongly agree).

**Table 1: Existing MISS-21 questions and subscales** <sup>[28]</sup>

Question	Subscale
The doctor told me just what my trouble is.	DR
After talking with the doctor, I know just how serious my illness is.	DR
The doctor told me all I wanted to know about my illness.	DR
I am not really certain about how to follow the doctor's advice.	CC

Question	Subscale
After talking with the doctor, I have a good idea of how long it will be before I am well again.	DR
The doctor seemed interested in me as a person.	R
The doctor seemed warm and friendly to me.	R
The doctor seemed to take my problems seriously.	R
I felt embarrassed while talking with the doctor.	CC
I felt free to talk to this doctor about private matters.	R
The doctor gave me a chance to say what was really on my mind.	R
I really felt understood by my doctor.	R
The doctor did not allow me to say everything I had wanted about my problems.	CC
The doctor did not really understand my main reason for coming.	CC
This is a doctor I would trust with my life.	R
The doctor seemed to know what (s)he was doing.	R
The doctor has relieved my worries about my illness.	DR
The doctor seemed to know just what to do for my problem.	DR
I expect that it will be easy for me to follow the doctor's advice.	CI
It may be difficult for me to do exactly what the doctor told me to do.	CI
I'm not sure the doctor's treatment will be worth the trouble it will take.	CI

In order to validate the tool for the South African context, a panel of experts was selected by the researcher, consisting of four local clinicians (two clinical nurse practitioners and two family physicians) and four experts on the medical consultation and the relevant communication skills (four faculty members of the University of Stellenbosch who provide training on the medical consultation). The panel then systematically appraised:

- The content of the tool – are all important aspects of patient satisfaction included for the South African context?
- The construct of the tool – is the tool constructed in such a way that respondents will provide useful information about these key aspects of patient satisfaction in our context?

The tool was circulated to the panel electronically and they were asked to comment on the content and construct of each item or to suggest additional items. Feedback from the panel was analysed

and a revised version of the tool was circulated for a second round of comment. All panel members agreed on the final version.

The MISS was then translated and back translated by the Stellenbosch University Language Centre into Afrikaans and Xhosa. The adapted MISS tool was piloted in each language with two patients to ensure that it was understandable.

## Use of the MISS questionnaire

### *Sampling strategy*

A sample size calculation was performed using the known standard deviation of the MISS-21 score of 0.74 and with the intention to have a 95% confidence interval of 0.1. Using these criteria a sample size of 148 participants was calculated by the Biostatistics Unit at Stellenbosch University. All of the six healthcare facilities that employed both doctors and CNPs in the Helderberg area was included in the study. Data was collected on the days when the doctors were also consulting patients in the facility. Systematic random sampling was done by asking every third patient to complete the MISS. This was done at each facility until 25 participants were included and in total a sample of 150 participants was obtained.

### *Data collection*

Data was collected with the help of a research assistant, fluent in all three official languages of the Western Cape. The questionnaires were completed in a separate room while the patient waited for their medication at the pharmacy. The questionnaire was self-administered in literate patients and administered by the research assistant in semi-literate or illiterate patients. Each questionnaire took approximately 5 minutes to complete. Children were excluded from the study due to ethical concerns.

### *Data analysis*

Data was captured in an Excel spreadsheet and checked for errors or omissions. Some questions were reverse coded to ensure numbering was consistently in the same direction. Data was then analysed using the Statistical Package for Social Sciences Version 24.1. Data analysis was done with the help of the Biostatistics Unit of the University of Stellenbosch.

Cronbach's alpha was calculated for internal consistency overall and using the different subscales suggested in the original tool as well as with the addition of any new questions. Cronbach alpha was interpreted as excellent ( $>0.9$ ), good ( $>0.8$  to  $0.9$ ), acceptable ( $>0.7$  to  $0.8$ ), questionable ( $>0.6$  to  $0.7$ ), and poor ( $>0.5$  to  $0.6$ ).

The 7-point Likert scale resulted in categorical data. The categories were re-coded into three categories for reporting: agree (points 5-7), unsure (4), disagree (points 1-3). The 7 point scale was also used to calculate median scores and interquartile ranges for the tool as a whole and for each of the subscales. Median scores for doctors and nurses were then compared using a non-parametric Mann Whitney test for independent samples.

## Ethical considerations

The research was approved by the Health Research Ethics Committee at Stellenbosch University [S15/10/259]. Permission was obtained from the Department of Health of the Western Cape. NHRD [WC\_2016RP27\_292].

## Results

The MISS was modified and validated by the whole panel of experts who also approved the final version (Table 2). The word “doctor” was changed to “health worker” as primary care consultations could be with nurses or doctors. Some of the questions (questions 1-5; 12-13) were rephrased in order to make the English simpler. Some of the questions were stated in absolute terms as the words “exactly” or “all” were thought to direct answers to the extremes of the Likert scale. These terms were replaced with softer terms. Two extra questions were thought necessary for the local context. The questions were “I would like to be seen by this health worker again”, which was aligned with the rapport sub-scale, and “The health worker understood my language”, which was aligned with the Communication Comfort sub-scale. The pilot study phase did not suggest any further amendments to the MISS.

**Table 2: Changes made to the content and construction of the MISS**

Question	Original MISS 21	Modified MISS	Subscale
1	The doctor told me just what my trouble is.	The health worker told me what my trouble is.	DR
2	After talking with the doctor, I know just how serious my illness is.	After talking with the health worker, I know how serious my illness is.	DR
3	The doctor told me all I wanted to know about my illness.	The health worker told me what I wanted to know about my illness.	DR
4	I am not really certain about how to follow the doctor's advice.	I am not sure about how to follow the health worker's advice.	CC
5	After talking with the doctor, I have a good idea of how long it will be before I am well again.	After talking with the health worker, I have a good idea of how soon I will recover.	DR
6	The doctor seemed interested in me as a person.	The health worker seemed interested in me as a person.	R
7	The doctor seemed warm and friendly to me.	The health worker seemed warm and friendly to me.	R

Question	Original MISS 21	Modified MISS	Subscale
8	The doctor seemed to take my problems seriously.	The health worker seemed to take my problems seriously.	R
9	I felt embarrassed while talking with the doctor.	I felt embarrassed while talking with the health worker.	CC
10	I felt free to talk to this doctor about private matters.	I felt free to talk to this health worker about private matters.	R
11	The doctor gave me a chance to say what was really on my mind.	The health worker gave me a chance to say what was really on my mind.	R
12	I really felt understood by my doctor.	I felt that the health worker understood me.	R
13	The doctor did not allow me to say everything I had wanted about my problems.	The health worker did not let me to say what I had wanted to about my problems.	CC
14	The doctor did not really understand my main reason for coming.	The health worker did not really understand my main reason for coming.	CC
15	This is a doctor I would trust with my life.	This is a health worker I would trust with my life.	R
16	The doctor seemed to know what (s)he was doing.	The health worker seemed to know what (s)he was doing.	R
17	The doctor has relieved my worries about my illness.	The health worker has relieved my worries about my illness.	DR
18	The doctor seemed to know just what to do for my problem.	The health worker seemed to know what to do for my problem.	DR
19	I expect that it will be easy for me to follow the doctor's advice.	I expect that it will be easy for me to follow the health worker's advice.	CI
20	It may be difficult for me to do exactly what the doctor told me to do.	It may be difficult for me to do what the health worker told me to do.	CI
21	I'm not sure the doctor's treatment will be worth the trouble it will take.	I'm not sure the health worker's treatment will be worth the trouble it will take.	CI

Question	Original MISS 21	Modified MISS	Subscale
22		I would like to be seen by this health worker again.	R
23		The health worker understood my language.	CC

DR = Distress Relief subscale; CC = Communication Comfort subscale; R = Rapport subscale; CI = Compliance Intent subscale

The MISS-23 questionnaire was completed by 150 patients of whom 68 (45.3%) were seen by a doctor and 82 (54.7%) by a nurse. The overall Cronbach's alpha of 0.889 provided an acceptable level of reliability (Table 3). The rapport subscale had an excellent internal consistency and this was slightly higher with the additional question added in our context. The distress relief sub-scale had a good internal consistency. The communication comfort subscale was unreliable, but improved when the new question 23 was omitted, although still had poor internal consistency. The compliance intent sub-scale was unreliable, although it improved slightly when question 21 was omitted that might have been difficult for patients to understand.

**Table 3: Internal consistency of the subscales**

Subscale	Questions in subscale	Cronbach alpha
Rapport version1	6,7,8,10,11,12,15,16,22	0.928
Rapport version 2	6,7,8,10,11,12,15,16	0.917
Distress relief version 1	1,2,3,5,17,18	0.800
Communication comfort version 1	4,9,13,14,23	0.393
Communication comfort version 2	4,9,13,14	0.538
Compliance intent version 1	19,20,21	0.092
Compliance intent version 2	19,20	0.216
Total	1-23	0.889

Table 4 presents the level of agreement with each of the individual questions. Questions that were phrased in a negative direction, where patients should disagree to indicate a better consultation, are marked with an asterisk. The high level of agreement with question 21 was surprising and could indicate difficulty in interpreting a question that was phrased in the negative.

**Table 4: Patient satisfaction with the consultation per question (N=150)**

Question	Wording	Agree n (%)	Unsure n (%)	Disagree n (%)
1	The health worker told me what my trouble is	134 (89.3)	5 (3.3)	11 (7.3)
2	After talking with the health worker, I know how serious my illness is.	131 (87.3)	3 (2.0)	16 (10.7)
3	The health worker told me what I wanted to know about my illness.	119 (79.3)	9 (6.0)	22 (14.7)
4	I am not sure about how to follow the health worker's advice.*	35 (23.3)	10 (6.7)	105 (70.0)
5	After talking with the health worker, I have a good idea of how soon I will recover.	115 (76.7)	15 (10.0)	20 (13.3)
6	The health worker seemed interested in me as a person.	141 (94.0)	2 (1.3)	7 (4.7)
7	The health worker seemed warm and friendly to me.	137 (91.3)	3 (2.0)	10 (6.7)
8	The health worker seemed to take my problems seriously.	138 (92.0)	1 (0.7)	11 (7.3)
9	I felt embarrassed while talking with the health worker.*	27 (18.0)	1 (0.7)	122 (81.3)
10	I felt free to talk to this health worker about private matters.	136 (90.7)	4 (2.7)	10 (6.7)
11	The health worker gave me a chance to say what was really on my mind.	133 (88.7)	4 (2.7)	13 (8.7)
12	I felt that the health worker understood me.	138 (92.0)	4 (2.7)	8 (5.3)
13	The health worker did not let me to say what I had wanted to about my problems.*	34 (22.7)	8 (5.3)	108 (72.0)
14	The health worker did not really understand my main reason for coming.*	55 (36.7)	7 (4.7)	88 (58.7)

15	This is a health worker I would trust with my life.	131 (87.3)	10 (6.7)	9 (6.0)
16	The health worker seemed to know what (s)he was doing.	139 (92.7)	6 (4.0)	5 (3.3)
17	The health worker has relieved my worries about my illness.	131 (87.3)	9 (6.0)	10 (6.7)
18	The health worker seemed to know what to do for my problem.	130 (86.7)	9 (6.0)	11 (7.3)
19	I expect that it will be easy for me to follow the health worker's advice.	127 (84.7)	4 (2.7)	19 (12.7)
20	It may be difficult for me to do what the health worker told me to do.*	22 (14.7)	10 (6.7)	118 (78.7)
21	I'm not sure the health worker's treatment will be worth the trouble it will take.*	90 (60.0)	16 (10.7)	44 (29.3)
22	I would like to be seen by this health worker again.	133 (88.7)	6 (4.0)	11 (7.3)
23	The health worker understood my language.	127 (84.7)	9 (6.0)	14 (9.3)

\* question was negatively phrased and was reverse coded in the analysis.

Table 5 presents the results for the total score and subscales and compares results for doctors and nurses. Overall the median scores suggested that patients "strongly agreed" with statements of satisfaction regarding their medical consultation. Patients were most satisfied with the degree of rapport in the consultation, followed by distress relief, compliance intent and communication comfort. The subscale scores all differed significantly from each other ( $p < 0.001$ ). There was no significant difference in satisfaction between consultations with nurses and doctors. The results for the subscales communication comfort and compliance intent should be interpreted in light of the low levels of internal consistency reported in Table 3 for these subscales.

**Table 5: Patient satisfaction score overall and by type of practitioner (N=150)**

Subscale	All Median (IQR)	Doctor Median (IQR)	Nurse Median (IQR)	p value
Total score	5.6 (5.3-5.9)	5.6 (5.3-6.0)	5.6 (5.3-5.9)	0.503
Rapport (version 1)	6.2 (5.6-6.7)	6.3 (5.6-6.7)	6.2 (5.6-6.7)	0.554
Distress relief (version 1)	5.7 (5.1-6.3)	5.8 (5.2-6.5)	5.6 (5.0-6.3)	0.531

Compliance intent (version 2)	5.5 (4.5-6.5)	5.5 (5.0-6.5)	5.5 (4.5-6.1)	0.339
Communication Comfort (version 2)	5.0 (4.2-5.8)	4.8 (4.3-5.5)	5.0 (4.0-5.8)	0.543

IQR= interquartile range

## Discussion

### Summary of key findings

The content and construct of the MISS-21 tool was validated for use in South Africa with adaptations to the phrasing, translation into local languages, and the addition of two questions. Overall the internal consistency of the adapted tool was good, but consistency varied considerably for the subscales. Use of the adapted tool in the South African context suggested that the subscales rapport and distress relief had good internal consistency, the subscale communication comfort was poor, while the subscale compliance intent was unreliable. Only one of the additional questions was retained. Overall the best reliability was obtained with the 21 questions shown in Table 6.

**Table 6: Final MISS items**

Question	Modified MISS	Subscale
1	The health worker told me what my trouble is.	DR
2	After talking with the health worker, I know how serious my illness is.	DR
3	The health worker told me what I wanted to know about my illness.	DR
4	I am not sure about how to follow the health worker's advice.	CC
5	After talking with the health worker, I have a good idea of how soon I will recover.	DR
6	The health worker seemed interested in me as a person.	R
7	The health worker seemed warm and friendly to me.	R
8	The health worker seemed to take my problems seriously.	R

Question	Modified MISS	Subscale
9	I felt embarrassed while talking with the health worker.	CC
10	I felt free to talk to this health worker about private matters.	R
11	The health worker gave me a chance to say what was really on my mind.	R
12	I felt that the health worker understood me.	R
13	The health worker did not let me to say what I had wanted to about my problems.	CC
14	The health worker did not really understand my main reason for coming.	CC
15	This is a health worker I would trust with my life.	R
16	The health worker seemed to know what (s)he was doing.	R
17	The health worker has relieved my worries about my illness.	DR
18	The health worker seemed to know what to do for my problem.	DR
19	I expect that it will be easy for me to follow the health worker's advice.	CI
20	It may be difficult for me to do what the health worker told me to do.	CI
21	I would like to be seen by this health worker again.	R

The results show that the overall level of patient satisfaction with primary care consultations was high, although there were significant differences between subscales. Patient were most satisfied with the rapport created in the therapeutic relationship and understanding of their concerns, fears and beliefs. They appeared slightly less satisfied with the ability to foster a mutually acceptable management plan and accuracy of information communicated. Nurses and doctors did not differ in patient satisfaction in all the different categories.

## Discussion of key findings

### *Validity of the MISS*

Other studies using the MISS in different settings revealed good internal consistency across all the subscales, although the levels for the compliance intent subscale were significantly lower in all the different settings, with Cronbach's alpha scores of  $<0.7$ .<sup>[28,29]</sup> Confirmatory factor analysis based on our data suggests that the subscales for communication comfort and compliance intent could be improved. In particular we identified question 21, which required a double negative response to express satisfaction, as potentially needing re-wording to be better understood by our patients. The less reliable sub-scales had only 2-4 items and consideration could be given to additional items. It may even be necessary to perform a more exploratory factor analysis to assess whether the subscales can be reformulated to be more reliable in our context.

### *Interpretation of the MISS*

Other research in similar primary care settings in Cape Town has shown that consultations with primary care providers are not patient-centred and lack fundamental skills such as greeting the patient, identifying the problems, exploring the psychosocial context and patient's perspective.<sup>[10]</sup> This discrepancy between high scores for patient satisfaction with the consultation and low observer scores for the actual content of the consultation could be due to patient expectations.<sup>[47]</sup> Low patient expectations may lead to high satisfaction in the consultation even when the quality of that consultation is low.<sup>[48]</sup> Patient expectations may be shaped by prior experience of the healthcare system as well as other government services in the public sector. Patients coming from low socio-economic circumstances with difficult access to health services may be satisfied with being able to see a health professional that day, regardless of the quality of that interaction.<sup>[49]</sup>

This study of patient satisfaction and previous studies of the observed quality of the consultation both agree that there were no substantial differences between primary care doctors and nurses in the public sector setting of Cape Town.

When measuring patient satisfaction one should also take into account the impact of other factors from the patient's experience of the health care service as a whole such as waiting times, cleanliness, interactions with other staff, provision of information on how to access care and opening times.<sup>[47]</sup> The level of satisfaction that a patient has prior to the consultation could influence the level of satisfaction measured afterwards with the MISS-21.

## Methodological strengths and weaknesses

The study was conducted in the setting in the clinic and some of the data collection was interrupted by patient flow and unforeseen distractions. This might have compromised the response rate and quality of information that was given on the questionnaire. The proportion of patients seen by the doctor was higher than expected because some of the patients seen by the nurse were already given medication in the consultation room and did not attend the pharmacy where the

questionnaire was administered. Nurses also saw more children who were excluded from the study.

## Recommendations

The need for further work to ensure internal consistency in all subscales of the MISS-21 in our context implies that the tool is not yet reliable enough for widespread use in South African primary care. The tool may also be a poor reflection of the actual quality of the consultation and could be reflecting low levels of patient expectations. The tool, therefore, cannot be used as a valid measure of the quality of consultations in our context.

## Conclusion

The content and construct of the MISS-21 was validated for the public sector primary care context in Cape Town, but did not show sufficient reliability in all of its sub-scales. Patient satisfaction was found to be high, particularly in terms of rapport and distress relief, but other studies have shown that the quality of local primary care consultations are poor. High patient satisfaction may, therefore, reflect low expectations rather than high quality of care. The MISS-21 tool should not be used in our context to measure the quality of consultations. There was no difference found in satisfaction of consultations between primary care doctors and nurses.

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