



## Factors inhibiting implementation of Integrated Management of Childhood Illnesses (IMCI) in primary health care (PHC) facilities in Mafikeng sub-district



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### ABSTRACT

**Background:** The main objective of the Integrated Management of Childhood Illnesses (IMCI) strategy was to reduce child mortality and morbidity, which are associated with major childhood illnesses. IMCI offers a comprehensive health programme that is directed at the development needs of children under five years of age. This strategy also focuses on good nutrition, health promotion, immunization and preventive measures, provides counselling services to mothers or care givers, and engenders an appropriate referral system for seriously ill children.

**Purpose:** The purpose of this study was to explore and describe factors inhibiting implementation of IMCI in primary health care (PHC) facilities in selected sub-district of North West Province, South Africa.

**Methods:** A qualitative, exploratory, descriptive-contextual framework was used. The target population of this study was professional nurses (PNs) working in community health centres (CHC) and primary health care (PHC) facilities. The sample size of the study included 15 participants as determined by data saturation reached by the 12th participant. The study included professional nurses trained in IMCI. Data was collected through in-depth individual semi-structured interviews, using an audio tape recorder and field notes, with data transcribed verbatim. Data was analysed using Atlas TI.

**Results:** Participants were professional nurses aged between 25 and 50 years. Themes emerging from the data included organizational and structural factors inhibiting IMCI implementation; education, training and awareness; the behaviour and attitude of nurses towards IMCI implementation; and caregiver related factors affecting IMCI implementation.

**Conclusion:** The study revealed that professional nurses need effective support, mentoring and supervision throughout IMCI implementation by the Mother, Child and Women Health (MCWH) coordinators. Caregivers and mothers need to know the importance of providing a comprehensive child history to professional nurses and therefore they need to be encouraged to disclose all relevant information during the IMCI process.

### 1. Introduction

Integrated Management of Childhood Illness (IMCI) is a strategy that was started in 1992 by the World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF). The main objective for formulating this IMCI strategy was to reduce child mortality and morbidity which are associated with major childhood illnesses. IMCI offers a comprehensive health programme that is directed at the development needs of children less than five years of age. This strategy also focuses on good nutrition, health promotion, immunization and preventive measures, provides counselling services

to mothers or care givers, and engenders an appropriate referral system for seriously ill children (Horwood, Voce, Vermaak, & Rollins, 2009, p. 2).

Child mortality is a worldwide concern, with more than 10 million children in low and middle income countries dying before their fifth birthday. This high mortality rate is largely due to the following conditions: malaria, pneumonia, diarrhoea, measles, malnutrition and HIV/AIDS (United Nation International Children's Emergency Fund, 2010). The Millennium Development Goals (MDGs) were developed to improve life and MDG 4 aimed at reducing the global child mortality rate by two-thirds by 2015 (Way, 2015). The South African National

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Department of Health adopted a strategy of reaching MDG 4 by introducing IMCI, which aims alleviate this problem (UNICEF, 2010).

IMCI was introduced in Kenya in 1996 and the first training towards the full implementation was in 2001 in four major districts. Mullei, Wafula, and Goodman (2008, p. 69) in their survey of IMCI showed that there is a low level of IMCI implementation at the facility level in Kenya. IMCI was also adopted and introduced in Botswana in 1997, where health authorities trained primary health care nurses, doctors and pharmacists. At the end of this training, the participants were given booklets listing all the steps to be followed when managing sick children (Nkosi et al., 2012, p. 92). Health authorities further identified that primary health care nurses implemented some of the IMCI guidelines but assessment portions were incomplete and some children who needed urgent referrals had not been referred (Nkosi et al., 2012, p. 100).

In 1997, IMCI was introduced in South Africa. The mission of the Department of Health is that health care services should be accessible, affordable, and available, and there should be equity in the provision of health care services. The IMCI strategy addresses the mission statement of the Department of Health that focuses on the provision of service to children. Vhurumu and Davhana-Maselesele (2009, p. 69) also identified that this strategy is cost effective when it is fully and correctly implemented. Horwood, Vermaak, et al. (2009, p. 5) identified that IMCI could improve quality of care for sick children and only an incomplete implementation of IMCI strategy fails to achieve the maximum benefits recognised through child survival. However, Vhurumu and Davhana-Maselesele (2009, p. 69) identified that professional nurses were not adequately equipped to follow this framework.

Training and implementation of the IMCI strategy in North West Province started in 1998. The IMCI strategy is meant for first level facilities, which are primary health care (PHC) facilities. Generally, training for IMCI takes two weeks; it has a practical aspect and a flow chart to follow when attending to sick children. The updated IMCI guidelines include HIV/AIDS management for children. Even though IMCI training is offered to professional nurses and most newly qualified nurses receive training from their nursing education institutions, IMCI implementation is still a major challenge in North West Province (and other parts of South Africa).

In addition, there are also few research studies that have been done on the implementation of this IMCI initiative, particularly focusing on exploring the opinions of nurses regarding IMCI implementation in the North West province. This study therefore seeks to fill the gap in the evaluation of how IMCI has been implemented by exploring and describing factors inhibiting IMCI implementation in Mafikeng, which is in the Ngaka Modiri Molema district of the North West province in South Africa.

## 2. Problem statement

There is anecdotal evidence, based on the researcher's experience as a professional nurse and as clinical preceptor during student accompaniment, which has revealed that some children eventually die due to poor implementation of IMCI. Despite the training provided and the child booklet that PHC nurses refer to, nurses tend to diagnose rather than classify children according to the guideline, and furthermore, treatment is often wrongly prescribed. As far as IMCI is concerned, the researcher has observed omissions in the strategy such as the Oral Rehydration Corner. Some clinics do not have IMCI Chart booklets or these booklets are limited. When professional nurses attend to sick children, they only focus on the history provided by the mother or care giver, rather than applying all principles of IMCI as stipulated in the IMCI guidelines. The professional nurses focus on dealing with patients quickly and end up neglecting the IMCI guidelines. In South Africa it has been identified that there are several constraints inclusive of human resource shortages and poor service delivery of health services especially in the primary health care facilities, and this has a negative

impact with regard to the implementation of IMCI. (Pandya, Slemming, & Saloojee, 2017, p. 171). Moreover, issues such as capacity building, human resources and implementation in terms of IMCI are a problem (Fick, 2017, p. 209). Therefore, the researcher found it important to explore and describe factors inhibiting successful implementation of IMCI in a selected sub-district in the North West Province.

## 3. Purpose

The purpose of this study was to explore and describe factors inhibiting implementation of Integrated Management of Childhood Illnesses in PHC facilities in a selected sub-district of North West Province, South Africa and recommend strategies for effective implementation.

## 4. Research design and methods

A qualitative approach was used in this study to explore and describe factors inhibiting IMCI implementation. An explorative-descriptive and contextual design was used in this study. In exploratory research, the researcher moves from the unknown to the known while the descriptive researcher looks for in-depth details of professional nurses' opinions through individual in-depth semi structured interviews. The research setting for this study was primary health care (PHC) facilities and community health centres (CHC) in a selected sub-district of North West Province, South Africa.

### 4.1. Population and sampling

The population of this study included all professional nurses within the PHC and CHC facilities in a selected sub-district of North West province, South Africa. The target population was all professional nurses in the CHC and PHC facilities. The sample was chosen purposively as it consisted of professional nurses who are knowledgeable about IMCI and have characteristics related to the purpose of the study (Polit & Beck, 2012, p. 739). The study included professional nurses who are: registered with the South African Nursing Council (SANC), working in CHC or PHC facilities, and IMCI trained. The researcher went through a gatekeeper, the operational managers of the facilities. Participants were recruited through their Operational Manager who informed the professional nurses meeting the requirements about the study, and furthermore, provided the list of only those professional nurses who met the study inclusion criteria and who were willing to participate in the study with their contact numbers with which they were contacted. Appointments were made with all professional nurses working in CHC and PHC facilities who agreed to participate were interviewed after signing the informed consent form.

### 4.2. Data collection methods

Data was collected through individual in-depth semi-structured interviews. The English language was used during interviews because the participants were able to understand and speak in English by virtue of their academic qualifications. The researchers and participants also used Setswana where there was a need for better expression because the researcher sought in-depth information from the participants. The researchers did not have any personal relationship with the participants which may have influenced the participants to participate. To guard against coercion, participants were informed that their participation is voluntary and they have a right to refuse to answer or withdraw from the study anytime. Participants also signed a consent form voluntarily. The issue of confidentiality was addressed and the duration was outlined before the interview started.

Data collection was done by the researcher in a setting selected by the participants. The interview sessions took between 30 min and an hour depending on the openness of each participant. Questions asked

did not lead the participants towards specific nor pre-set notions: “How do you view implementation of IMCI in this facility?” and “What are the challenges in implementation IMCI in your facility?”. The researchers also used observations and field notes to record all observations regarding the participants’ behaviours and activities during the interview (Creswell, 2009, p. 181). An audio tape was used to record the interview and participants were made aware of its use. They also gave consent to have their views recorded. The interviews were collected during working hours from 15 professional nurses in a quiet room on the days that they were free and comfortable to be interviewed. Most participants preferred Wednesday wherein both shifts are at work, thus when there are more staff members to avoid interference with the workflow in the facilities. The sample size of the study included 15 participants as determined by data saturation that was reached by the 12th participant. The study was conducted in August -September 2016.

#### 4.3. Data analysis

Data analysis was initiated through organizing and preparing data by listening to the audio tape, transcribing interviews verbatim, typing field notes, coding and arranging data into different themes. This process was achieved with the use of ATLAS.ti software. ATLAS.ti helped to explore the complex phenomena hidden in the data collected. The basic data collection steps of notice-collect-think (NCT) were followed (Friese, 2012, p. 228), where the researchers initially noticed recurrent motifs in the transcribed data while coding, then apportioned codes related to each theme. There are two phases of data analysis; the descriptive and conceptual levels of analysis.

#### 4.4. Trustworthiness

The researcher sought to enhance the trustworthiness of this study through credibility, dependability and confirmability. Dependability was attained by means of having an independent co-coder, a description of the study and methods used in the study. Different sources for collecting data were used such as tape recorders and field notes, and this helped to achieve confirmability. The researcher also ensured prolonged engagement with the participants by spending an extended time interacting with them in their working environment, and also went back to clarify some issues with participants to ensure credibility.

#### 5. Ethical considerations

The study was presented and approved at the Department of Nursing Science, School and Faculty Research Committee and ethical clearance was obtained from the Ethics Committee of the University (NWU-00145-15-A9). Then permission to conduct this study was issued from the Department of Health. The principles of ethics were adhered to. For instance, in this study, the participants were made aware of the audio tape and its use. Limits were placed on others’ access to confidential information; the audio tape was kept under lock and key. Only the researcher and the supervisor had access to it. Participants’ views are anonymous and respondents’ names are not divulged in this report; codes were used instead. The interviews were conducted in a private room and the participants were assured that whatever was discussed was kept confidential.

#### 6. Findings and discussion

Participants included in this study were professional nurses (n = 15) from nine research sites, and these were aged between 25 and 45 years. The majority of the participants were females (n = 13) and two males working in primary health care facilities and trained in IMCI. Participants’ level of qualifications ranged from a diploma (8) to a bachelor’s degree (seven inclusive of a Master’s degree) in nursing. Their nursing experience ranged from two years to thirty years. They

**Table 1**  
Themes and subthemes regarding factors inhibiting implementation of IMCI.

Themes	Sub-themes
3.3.1 Organizational and structural factors inhibiting IMCI implementation	<ol style="list-style-type: none"> <li>1. Time pressure factor</li> <li>2. Inadequate human resources</li> <li>3. Inadequate material resources</li> <li>4. Poor referral system</li> <li>5. Work related factors</li> </ol>
3.3.2 Education, training and awareness	<ol style="list-style-type: none"> <li>1. Inadequate training/in-service training</li> <li>2. Lack of education</li> <li>3. Lack of updates on IMCI among nurses</li> </ol>
3.3.3 Behaviour and attitude of nurses towards IMCI implementation	<ol style="list-style-type: none"> <li>1. Behavioural factors</li> <li>2. Attitudinal factors</li> </ol>
3.3.4 Caregiver-related factors affecting IMCI implementation	<ul style="list-style-type: none"> <li>Inability to provide adequate information</li> <li>Inaccessibility of facilities</li> <li>Uncooperative patients or clients</li> <li>Lack of caregiver awareness</li> </ul>

are all Setswana-speaking but interviews were conducted in English which they understand as it is one of the official languages in South Africa.

The following themes emerged: organizational and structural factors inhibiting IMCI implementation; education, training and awareness; the behaviour and attitude of nurses towards IMCI implementation; and caregiver-related factors affecting IMCI implementation (Table 1).

##### 6.1. Theme 1: Organizational and structural factors inhibiting IMCI implementation

Nurses revealed that they experienced organizational and structural factors that inhibited IMCI implementation. These were grouped into five sub-themes that emerged, namely: time pressure factor, lack of human resources and material resources, work-related factors and poor referral system.

###### 6.1.1. Time pressure factor

Difficulties in implementing IMCI were verbalized and often indicated to be related to time. Implementation of IMCI was seen to be time consuming and nurses felt that there was not enough time to implement IMCI. Nurses highlighted that they felt pressure to implement IMCI given the short time that they have and the number of patients they are supposed to see per day. Primary health care facilities have a relatively large number of patients seeking health care services and these high numbers result in long patient queues and all need to be assisted within the prescribed waiting time which further increases pressure on the nurses. This was evident in the following direct comments from participants:

*“When implementing IMCI one needs to page through the chart booklet, assess the child holistically and it is time consuming.”*

*“The facility is also packed and we still have a lot of recording which takes time because we record on the forms and road to health card.”*  
**Participant 4, Female, 28**

Maleshane (2012, p. 25) indicates that to manage a child comprehensively, a professional nurse requires enough time since they are also recording patient history in different records. It was also clearly elaborated by Adekanye and Odetola (2014, p. 33) that professional nurses find it difficult to implement IMCI as it requires a lot of time.

###### 6.1.2. Lack of human resources

Nurses indicated that there is a huge shortage of workforce, thus professional nurses in the PHC facilities find it difficult to implement

IMCI because this increases the nurse-patient ratio. In many cases a professional nurse is alone in the facility and left with an operational manager who is just there doing the facility administration, so all the clinical work has to be dealt with by the only available professional nurses. This creates an unfavourable condition for the nurses and consequently there is poor implementation of IMCI. This was evidenced when a nurse verbalized that:

*"You will be alone in the clinic because it's only you a professional nurse and the manager; and the manager will be doing administration work. Hence you are going to spend a lot of time helping a patient and as our clinic is so busy sometimes we do fail to implement IMCI because of shortage of staff."* **Participant 2, Male, 30**

According to [Titaley et al. \(2014, p. 164\)](#) and [Pradhan, Slemming, and Saloojee \(2018, p. 176\)](#) this shortage of staff is a challenge and it leads to increased workload. Furthermore, [Mugela, Mutale, Kalesha, and Sinyinza \(2010, p. 6\)](#) concur that shortage of staff in PHC facilities is a challenge that also contributes to sick children not receiving quality care. [Kiplagat, Musto, Mwizamholya, and Morona \(2014, p. 6\)](#) highlights that a shortage of nurses contributes to IMCI not being fully implemented due to the large number of children who need to be assessed. This shortage of staff leads professional nurses who are always in the facilities to become over burdened with the workload to the extent that they only focus on pushing numbers or rather just routinely serving the patients. Nurses indicated that:

*"Due to the shortage of nurses we experience we end up feeling exhausted and not needing anything but we just want to knock off and go rest."* **Participant 1, Female, 39**

#### 6.1.3. Lack of material resources

Many health care facilities are facing challenges regarding a shortage of material resources that makes IMCI implementation difficult to achieve. Shortage of material resources, such as shortage of consulting rooms, shortage of medication, unavailability and shortage of chart booklets, and lack of computers and internet access were clearly identified by nurses to be militating against proper IMCI implementation. There is also a lack of proper recording forms and reports on IMCI because the present recording and reporting documentation seems not to cater for IMCI. Nurses felt that there is no point in assessing a child when they know that the facility's medication is out stock. This has a negative impact on the community that has also lost confidence in the health care system because they do not receive the full services they need. It was clearly indicated by a nurse that:

*"We face a challenge of unavailability of medication whereby the nurses become lazy to carry out the assessment of the child knowing that the medication is out of stock."* **Participant 3, Female 45**

In small clinics, professional nurses cannot provide privacy to sick children and it is also a challenge pertaining to issues of HIV counselling and testing of children with HIV-related symptoms ([Vhuromu & Davhana-Maselesele, 2009, p. 64](#)). It is also clear in the patients' right charter that a patient has a right to privacy and confidentiality and this is also one of the national core standards. According to the Department of Health national core standards (2011, p. 26), in the clinical support services domain, the required medication should be available in all health care facilities. This domain further stipulates that there ought to be reliable delivery of medicine and assurance that stock levels are optimal.

#### 6.1.4. Poor referral system

Referral system of children from PHC/CHC to hospital was revealed as one of the factors affecting IMCI implementation. Nurses indicated that they even go to the extent of using their own cars to take children to the hospital because they would have requested an ambulance and then waited in vain. As a result, children wait for a long time to be

taken to hospital because the ambulance service is unreliable. This challenge demoralizes nurses and affects the correct implementation of IMCI as their efforts end up not benefiting the child. This was said by one of the nurses:

*"One other challenge is that the transport for the children delays and you are waiting with a seriously ill child. Sometimes we end up sacrificing [to drive] our cars taking them to the hospital. This in turn makes us demoralized and not to follow IMCI guidelines correctly with regard to implementation of IMCI, but send the child and the care giver straight to the hospital without any delays."* **Participant 10, Female 41**

[Horwood, Voce, et al. \(2009, p. 6\)](#) indicate that an ambulance service is a challenge when it comes to referrals of patients from PHC/CHCs to hospitals. Delays in referrals contribute heavily towards the high mortality of children less than five years. According to the South African National Core Standards [SANCS] (2011, p. 19) it is clear and recommended that when a patient needs to be referred to the next level of care, the necessary support must be provided and there should not be any form of delay in the process.

#### 6.1.5. Work-related factors

Nurses who work in a 24-hour health care centre also highlighted their work conditions and long working hours. Nurses end up working overtime due to their increased workload and this can inhibit the proper implementation of IMCI, as nurses work incessantly until they knock off. A nurse verbalized that:

*"The knockoff time is a challenge whereby instead of knocking off at 16h00 you will be knocking off at 19h00 still finishing (sic) [dealing with] patients and these prevent us from implementing IMCI correctly."* **Participant 1, Female 39**

Sometimes nurses do not really avoid implementing IMCI: they observe the number of patients remaining in the queues and start thinking about knockoff time, hence they resort to pushing or helping the patients faster in order to finish before the knockoff time. However, in the process of doing this, it is the quality of health care provided that is negatively affected. A nurse verbalized that:

*"Ok, other challenges are that we tend to look at the line and forgetting the quality of work, you will be the only nurse versus your workload here. I have to do ANC (antenatal clinic), IMCI etc., so we tend not to implement it due to timeframe so you will be saying if I start with IMCI, what time am I going to finish with the next patient."* **Participant 3, Female 45**

It is indicated by [Kiplagat et al. \(2014, p. 10\)](#) that on site mentoring and supportive supervision needs strengthening in many districts in South Africa as this is important in IMCI implementation. Professional nurses lack support from supervisors and other stakeholders and this contributes to them experiencing burnout ([Vhuromu & Davhana-Maselesele, 2009, p. 66](#)). In view of the working conditions, professional nurses find themselves under high emotional strain, low levels of job satisfaction and stressful working environments that have a potential to lead to burnout. It was also indicated by [Makhado and Davhana-Maselesele \(2016, p. 7\)](#) that nurses experience high workload and this subjects them to job-related stress as they feel emotionally exhausted with less personal accomplishment at the end of the day. Lack of support by programme coordinators was also identified as inhibiting the implementation of IMCI. This was said to increase nurses' work-related stress among those not supported. Nurses mentioned their difficulty and that they were not coping at all. They stated that the workload is ever-increasing with many programmes that finally have the effect of them not implementing IMCI.

## 6.2. Theme 2: Education, training and awareness

Professional growth and development are essential components of

professional nurses in terms of health care skills and knowledge. Continuous nursing education, training and awareness are of paramount importance as guidelines keep on changing to suit the needs of children less than five years of age. For professional nurses to render quality health care, in-service training on IMCI updates and continuous education needs to be in place. Mothers and caregivers also need to be provided with awareness around many issues regarding primary health care services in order to heighten awareness of possible manifestations of specific diseases.

#### 6.2.1. Education and training factors

Lack of training among professional nurses was identified as affecting the implementation of IMCI. The participants expressed that there is little if any in-service training for professional nurses who are working in the PHC/CHC which really affects the implementation of IMCI as practising nurses have a problem in properly implementing IMCI. One nurse stated that:

*“Most of nurses are not IMCI trained in this facility. Some of them find it difficult using and reading the chart booklet. This affects the provision of IMCI in this facility.” Participant 11, Female 25*

Another nurse added:

*“Those nurses who are not trained in IMCI, they’ve got a problem of implementing IMCI.” Participant 2, Male 30*

According to Horwood, Voce, et al. (2009, p. 3) professional nurses who are trained indicated that IMCI training is interesting, informative and empowering and training improves their knowledge and skills. This was further emphasized by Adekanye and Odetola (2014, p. 33) stating that since some of the professional nurses were not sent for IMCI training they did not see the need to implement IMCI. Kiplagat et al. (2014, p. 6) further highlight that there is no provision of refresher courses rendered for IMCI especially for those with more than five years training.

#### 6.2.2. Lack of education

Nurses detailed that most of them still lack skills and knowledge on how to assess and classify a child using the IMCI approach. Some professional nurses are not exposed to clinical practice on IMCI in PHC facilities. Nurses felt that there is a strong need for IMCI clinical learning and education; and the need to increase the knowledge of nurses so that they can implement the guidelines without difficulties. Clinical exposure is also vital as the majority of nurses are said to be theoretically knowledgeable but lacking in practical exposure. This is evident from a nurse who voiced the following:

*“We are having a serious problem about implementation of IMCI, first and foremost the problem is that not all of us are trained, that is the first problem. There are professional nurses who are having the theoretical part of IMCI but they are not exposed to clinic set up.” Participant 2, Male, 30*

#### 6.2.3. Caregiver awareness

Nurses attested to the fact that there is not enough health education provided to caregivers and mothers in the community and this has a negative impact on the implementation of IMCI. They further felt that nurses need to provide proper health education that assists caregivers to care for the children at home so as to decrease the influx at clinics, with children coming in for conditions that could be dealt with at home. A long-serving nurse indicated the following:

*“We (nurses) are failing to implement IMCI by not educating the mothers or caregivers on health matters.” Participant 7, Female 44 years*

Another nurse emphasized that:

*“If we can just try health educating them and enforcing health education*

*provided on the chart booklet, it will be the best way of also reducing the influx in the facility due to conditions that will need home remedies.” Participant 8, Male 34*

Chopra, Patel, Cloete, Saunders, and Peterson (2005, p. 400) indicate that there is little or no counselling or attempts at improving the understanding of caregivers. This was also supported by Prosper, Macha, and Borghi (2009, p. 34), who note that that caregiver counselling is poor, especially on feeding and follow up.

#### 6.2.4. Lack of update on IMCI among nurses

It was clearly verbalized that nurses felt that they do not get updates with regard to IMCI implementation. It is possible for nurses to come across a new chart booklet in the facility without even knowing that there was a new chart booklet that they should be using. Some receive the information that there is a new chart booklet but they have never seen it and it is not even available in their facility. Furthermore, the contents of the new chart booklets suggest that nurses are not themselves updated. They find out for themselves when they go through the chart booklet; one nurse voiced that:

*“MCHW (Maternal Child and Women’s Health) coordinator will just come and drop the chart booklets and then you will see what to do with the booklets and that’s it. And you will find that, hey! There is initiation of ART in this booklet. You will find it for yourself, no one will tell you” Participant 13, Female 27*

Another nurse indicated the following:

*“There are new changes on the guidelines; however people had been trained long time ago so things are changing now and again. I’ve seen they’ve brought a new chart booklet, the new chart booklet for 2014 or so... the new one but we have been trained with the old one so what is added in [this] new one we don’t know.” Participant 2, Male, 30*

### 6.3. Theme 3: Behaviour and attitude of nurses towards IMCI implementation

The nature in which professional nurses conduct themselves when rendering IMCI services is vital. It should be ethically and professionally sound. Attitudes and behaviours impact on the caregiver or mother who brings the child for IMCI. However, this happens to be a two-way process; nurse attitudes and behaviours towards the mother and caregiver, and vice versa. Furthermore, the attitudes of nurses play an important part in their behaviour, and attitude can either be negative or positive. However, in most cases there are factors in a workplace that trigger negative or positive behaviour and attitudes.

Lack of interest towards IMCI implementation was identified as pervasive among nurses and it was evident that they had poor confidence with regard to assessing, classifying and treating a child. Given this they end up shifting responsibility, and projecting signs of laziness. For instance, some nurses would not even bother, if the chart booklet is not on their table, to go and look for it. They will just do what they think is right for the child at that point. Some do not use the chart booklet even if it is on their table. Ignorance was also revealed by nurses, as it was shown that some nurses will not even monitor the weight of a child. This was indicated by one of the nurses:

*“Some nurses likes shifting responsibility or maybe they are not having that self-confidence of treating children according to guideline of IMCI, which I think is straight and forward.” Participant 9, Female 36*

Another added that:

*“Sometimes we overlook other things, we don’t go according to the steps of IMCI. Maybe I will be concentrating only to the problem the baby was brought for in the clinic that specific day. To be honest I have never seen any nurse who is very serious with IMCI.” Participant 15, Female 40*

Another nurse reported that:

*“Most of the nurses are lazy to even follow the chart booklet if it is not in their consulting room. They won’t even refer to the chart booklet when treating the child. So regardless of the chart booklet nurses are just lazy and this impact negatively on the IMCI implementation.” Participant 12, Female 29*

The implementation of IMCI has been reported to be influenced by behavioural and attitudinal factors. Mugela et al. (2010, p. 6) states that professional nurses lose confidence in implementing IMCI when they are referring to the chart booklet because caregivers perceive them as incompetent. Furthermore, when professional nurses have a positive attitude to IMCI, this could motivate them to implement IMCI well, regardless of the situations they face in PHC/CHC facilities. The attitude of professional nurse improves post training (Kiplagat et al., 2014, p. 7). Some non-trained professionals displays a negative attitude towards those who are IMCI trained, and thus when a sick child comes in to the facility they leave them for the trained professional nurse to deal with (Prosper et al., 2009, p. 46). Thus the availability of interest towards IMCI promotes better and proper IMCI implementation.

#### 6.4. Theme 4: Caregiver-related factors affecting IMCI implementation

There are also factors related to mothers or caregivers that have an impact on the implementation of IMCI in PHC/CHC facilities. These factors include the inability of caregivers to provide adequate information about the child’s illness. Inaccessible facilities are also inhibitive factors as patients are unable to reach facilities when a child is sick due to the distance they have to travel, and lastly, there are mothers or caregivers who are very un-cooperative during IMCI implementation.

##### 6.4.1. Inability to provide adequate information

Caregivers are often unable to provide nurses with a relevant or proper history of the child’s illness. However, on the other side of the coin, when mothers are requested to bring the child themselves for follow-up they do not come in. Other factors are connected to language barriers, especially looking at caregivers who are not local citizens and originate from neighbouring countries. A nurse indicated that:

*“Akere, according to the booklet we have to ask all those questions even if the child is not complaining about. The child is complaining of cough, you will ask how long? Is there TB contact at home? Then there will be a question on HIV/AIDS and there will be a problem there. She won’t want to answer that ever.” Participant 4, Female, 28*

Another nurse added that:

*“One other challenge is the cross border clients, the issue of language because here in our clinic we see clients from Malawi. We don’t know their language so communication is a problem.” Participant 10, Female 41*

Mugela et al. (2010, p. 3) highlight that it is a challenge when a caregiver has to give information about the sick child particularly on HIV related issues. Lack of HIV disclosure by HIV positive mothers to their caregivers militates against successful diagnosis because there is only a partial history of the patient.

##### 6.4.2. Inaccessibility of facilities

Nurses also revealed that caregivers or mothers are unable to come to the facilities due to distance and sometimes they do not have money for transport which is really a stumbling block for IMCI implementation. A nurse suggested that:

*“Children are brought by caregivers or mothers from very far community to this clinic and sometimes they cannot afford to be here because they do not have money for transport, hence we do not blame them but the IMCI*

*processes are affected.” Participant 4, Female, 28*

##### 6.4.3. Uncooperative clients

Nurses indicated that they deal with difficult patients or clients who do not understand the ways in which the PHC facilities run. For instance, even when a professional nurse is not supposed to give out antibiotics, a patient would demand them. Or, while they are in the queue they disturb the professional nurses by knocking on the door, demanding to be attended to first. It was further indicated that when a patient takes longer than expected in the consulting room, some clients think that the professional nurse is having a social conversation with that client and they make negative comments. This was elaborated upon by a nurse, saying that:

*“Our patients, their problem is they don’t want to wait on the line. When you busy with another patient maybe you taking more than the normal time because you dealing with something problematic for example, they will be shouting at you saying bad things about you: ‘that patient have been there for a long time.’ They will be knocking on the door saying ‘are you not done with that patient?’” Participant 13, Female 27*

Vhuromu and Davhana-Maselesele (2009, p. 66) also indicated that caregivers displays negative attitudes when a child is being assessed. This also affects the other patients sitting and waiting in the queue. Maleshane (2012, pp. 47, 48) indicates that patients when queuing accuse professional nurses of being slow and say nurses don’t know their work, so professional nurses tend to rather not implement IMCI to satisfy patients. Un-cooperative patients become a challenging barrier to IMCI implementation and this is true given that mothers or caregivers demand medication even when it is not recommended by IMCI strategy (Horwood, Voce, et al., 2009, p. 8).

## 7. Limitations of the study

The study was contextualized to one sub-district where data was collected. Therefore the findings of this study cannot be generalised but can be applied to other settings.

## 8. Conclusion

The study revealed several factors inhibiting IMCI implementation inclusive of organizational and structural factors inhibiting IMCI implementation; education, training and awareness; behaviour and attitude of nurses towards IMCI implementation; and caregiver related factors. The time taken to implement IMCI is often perceived to take too long and this places pressure on professional nurses with many other protocols or programmes to implement. Hence, professional nurses felt that they are under pressure. A lack of resources such as space, shortage of professional nurses, chart booklets and IMCI-recommended drugs also made it difficult for professional nurses to implement IMCI. It is imperative that the Department of Health and nursing managers consider these factors with regard to the effective implementation of IMCI. The researcher expects that the outcomes of this study might contribute to closing gaps in health care services and reduce the child mortality and morbidity rate. It is anticipated that this study could assist the government of South Africa to improve child health care services for under-five children.

## 9. Recommendations

For IMCI to be implemented properly, adequately and efficiently, the following aspects are recommended: adequate space for consultation, staffing to promote effective attendance of children timeously, and adequate availability of updated IMCI chart booklets and IMCI-recommended drugs at all times. Professional nurses requires effective support, mentoring and supervision throughout IMCI implementation

by MCHW managers and coordinators. Supportive supervision reduces work-related stress and stimulates positive attitude towards implementation of IMCI. It is imperative to ensure effective provision of capacity building opportunities for professional nurses with the aim to empower them to take ownership and accountability in the promotion of effective and efficient IMCI implementation. Thus, there is also a strong need for better education and training for professional nurses, both for those already trained in IMCI and those who are not yet trained. Furthermore, caregivers and mothers need to know the importance of providing a comprehensive child history to professional nurses and therefore they need to be encouraged to disclose all relevant information to the professional nurse during the IMCI process to aid proper IMCI implementation.

## 10. Ethical approval details

The study received ethical clearance from the North West University ethics committee (NWU-00145-15-A9) and permission to conduct study was granted by the North West Province Department of Health.

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## Declaration of Competing Interest

The authors have no conflict of interest to declare. This statement is to certify that all Authors have seen and approved the manuscript being submitted. We warrant that the article is the Authors' original work. We warrant that the manuscript has not received prior publication and it is not under consideration for publication elsewhere. On behalf of all Co-Authors, the corresponding Author shall bear full responsibility for the submission.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijans.2019.100161>.

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