Local Innovation to Sustain Health for All

POST CONFERENCE REPORT 2019

31 July 2019

Held at

Dr Miriam Makeba Auditorium
Muckleneuck Campus
Unisa
Pretoria
South Africa

Report prepared by:
MT Mamahlodi

Published by The Tshwane District Health Research Committee and Unisa Press
University of South Africa
P O Box 392, 0003 University of South Africa

Authors who participated in this conference agreed to the following terms:

1. Authors retain the copyright of their work while allowing the conference to place this unpublished work under a Creative Commons Attribution License, which allows others to freely access, use, and share the work, with an acknowledgement of the work's authorship and its initial presentation at this conference.

2. Authors are able to waive the terms of the CC license and enter into separate, additional contractual arrangements for the non-exclusive distribution and subsequent publication of this work (e.g., publish a revised version in a journal, post it to an institutional repository or publish it in a book), with an acknowledgement of its initial presentation at this conference.

3. Also, authors are encouraged to post and share their work online (e.g., in institutional repositories or on their website) at any point before and after the conference.

4. Authors certify that the manuscript is their original work, and if it contains copyrighted material (textual or illustrative) they have obtained the unrestricted permission of the copyright owner (and can provide evidence of this) and the material is clearly identified and acknowledged within the text. Authors also warrant that the manuscript does not, to the best of their knowledge, contain anything which is libellous, illegal, or infringes anyone's copyright or other rights.

Readers are advised that the points of view expressed, and practices recommended within this work are those of the individual authors, and do not necessarily represent the official position or policies of any law enforcement agency or academic institution.

UNISA university of south africa PRESS

Conference Proceedings
https://booksup.co.za/index.php/unisapress/catalog/book/8
Local Innovation to Sustain Health for All 2019 | #8 | 67 pages

https://doi.org/10.25159/8
ISBN 978-1-77615-084-7 (Online)

Opening Statement

Over the years, health research findings have become an increasingly important tool in informing policies in public health and clinical practice. Consequently, ensuring appropriate use of limited resources and the development of quality health services through evidence-based practice.

The National Health Act, National Health Research Policy, and other legislation guiding health research in South Africa are the foundation of research coordination in South Africa. It has become evident in Gauteng as in other provinces in South Africa that there is a need for a more specific and rationalised procedure for coordinating research in health. The aim of the Gauteng Department of Health (GDoH) Research Coordination Guidelines is to provide an enabling environment for conducting research that will contribute to the improvement of the health and service delivery. Additionally, one of the objectives of these guidelines is to assist in directing the research agenda especially in the areas of funding, coordination, archiving and capacity building in health research within the province.

National guidelines require provinces to establish Provincial Health Research Committees (PHRCs) and District Health Research Committees (DHRCs) through which research structures can liaise with the provincial and national Department of Health with regard to local research issues. This is to keep the department of health in collaboration with local institutions abreast with current research studies going on within the province. This procedure and the PHRCs and DHRCs should not be perceived as just another hurdle to cross before research can be conducted, but it should be perceived as a key to contributing positively to the quality of research conducted within the GDoH domain thus contributing to “Health for a better life” for the Gauteng community.

The Tshwane District Research Committee and Unisa Department of Health studies organized a research conference that was held on 31 July 2019 at Dr Miriam Makeba Hall, Unisa. The research committee, presenters and participants comprised local members from academic institutions (Unisa, Sefako Makgatho University, University of Pretoria Faculty of Health Sciences, and Tshwane University of Technology, district health services, and private health institutions within the City of Tshwane.

The theme of the conference this year was “Local Innovation to Sustain Health for All”. This has created a platform wherein researchers are able to share their research findings with the health professionals; to ensure implementation of those findings.

Welcome Message from the Chairperson TRDC committee

The Tshwane District Research Committee organised a research conference that was held on 31 July 2019 at University of South Africa (Unisa) Pretoria. The conference theme was “Local Innovation to Sustain Health for All”. The City of Tshwane has proven to be a leader in academic excellence and scientific research and development. Some 90% of all research and development in South Africa is conducted here by institutions such as Armscor, the Medical Research Council, and the Council for Scientific and Industrial Research, the Human Sciences Research Council and educational institutions such as the University of South Africa, Sefako Makgatho Health Sciences University and Tshwane University of Technology. The Tshwane District Health Service provides comprehensive primary health care services, which include sexually transmitted infections, interventions targeting the youth, women’s health, non-communicable diseases, tuberculosis services, notifiable medical conditions and health promotion etc. On annual basis, the Tshwane district office organizes an event, which its main objectives include:

- Promoting research within district;
- Building research capacity amongst health workers within districts;
- Identifying district specific research priorities and

Ensuring that researchers have access to the National Health Research Database (NHRD) to register their researches on the National Database. The Tshwane Research Conference 2019 received many abstracts and manuscripts in the fields of Public Health, Health Studies, Health Systems, Communicable, Non-communicable and Mother and Child. The conference creates a platform for networking, collaborations, exhibition, communication networking, peer support and supervision and above all learning for both seniors and juniors in the field of research. We are therefore grateful that this year we will be engaging in conference proceedings for the future. Hope to see more delegates in the coming years.

Yours faithfully,

Mpho Moshime-Shabangu

Acting Chairperson: Tshwane Research Committee.

Peer Review Process

Participants whose abstracts have been selected for oral presentation were requested to submit a manuscript and abstract for consideration to be included in the official conference proceedings. Submissions were peer-reviewed by members of the Tshwane District Research Committee. Reviewers used a blind system to focus on quality of the submissions. All papers were peer-reviewed by at least two reviewers. In cases where reviewers did not agree on their assessment of a particular submission, a third review was obtained, and in exceptional cases, a fourth review. The reviewers' comments were then sent to the respective authors to make the necessary improvements. The authors had to write a letter indicating how they have addressed all the corrections and submit it back to the editors. The editors made sure all the corrections were done. Of the 21 abstracts sent by the authors for oral presentations, 76% (16) were accepted for the day of the conference and were spontaneously envisioned to be added into the official conference proceedings. Of the 16 envisioned for review, 12(75%) were uploaded into active Unisa Press Conference Proceedings and were subjected to peer review process. Two (13%) of the sixteen papers were not presented on the day of the conference. 24% (5) of the abstracts and manuscripts were rejected because of the following reasons:

- Not related to the conference theme
- Authors not followed submission guidelines correctly
- Reviewers recommendations

The final decision of acceptance for inclusion in the Conference Proceedings lied with the Tshwane District Research Committee Members.

List of Reviewers

The organising committee of TDRC 2019 would like to immensely thank the following reviewers who meticulously reviewed the conference papers. Their efforts are well appreciated and acknowledged. All the papers were reviewed based on the classification of the following niche areas (Health Systems, Communicable Diseases, Mother & Child and Non-Communicable Diseases).

1. Mr. KG Chuma. Department of Health Studies, University of South Africa
2. Ms. M Huma. Department of Public Health, Sefako Makgatho Health Sciences University.
3. Ms. G Julies. City of Tshwane Municipal Services
4. Ms. P Lesolang. City of Tshwane Municipal Services

5. Mr. P Maesela. Mamelodi Hospital
6. Dr. G Malapela. SG Lourens Nursing School
7. Mr. MT Mamahlodi. Department of Health Studies, University of South Africa
8. Mr. M Mogale. Department Of Public Health, Sefako Makgatho Health Sciences University.
9. Mrs. SM Moloko. Department of Nursing, Sefako Makgatho Health Sciences University.
10. Dr. M Moshime-Shabang.Tshwane Health District Research (EPI-CDC cluster)
11. Prof JV Ndimande. Dr George Mukhari Hospital
12. Mrs. L Nkoane. Department of Health Studies, University of South Africa
13. Dr E Oosthuizen. Gauteng Department of Health
14. Prof T Ramukumba. Adelaide Tambo School of Nursing Science, Tshwane University of Technology, South Africa.
15. Dr L Razwiedani. Department of Internal Medicine, Sefako Makgatho Health Sciences University.
16. Prof PR Risenga. Department of Health Studies, University of South Africa
17. Dr S Shamu. FPD, University of Pretoria
18. Mr. PI Silwimba. Gauteng Department of Health
19. Dr Jane Tellie. Department of Health Studies, University of South Africa
20. Mrs. A Thobakgale. Gauteng Department of Health
21. Dr S Zuma. Department of Health Studies, University of South Africa

Acknowledgements

Tshwane District Research Conference organising committee in collaboration with Unisa Department of Health Studies would like to thank the panellists, partners and sponsors for this year’s successful conference.

Panellists:

Conference Tracks	Panellists
Communicable Diseases	Ms S Moloko/ Mr MT Mamahlodi
Health Systems	Dr L Razwiedani/ Mr P Maesela
Mother & Child	Mr P Silwimba/Ms M Huma
Non-Communicable Diseases	Dr M Moshime-Shabangu/Mr M Mogale

Local Organising Committee

1. Mr MT Mamahlodi, University of South Africa Department of Health Studies
2. Dr E Oosthuisen, Gauteng Department of Health, South Africa
3. Dr M Moshime-Shabangu, Gauteng Department of Health, South Africa
4. Ms G Julies, Gauteng Department of Health, South Africa
5. Prof T Ramukumba, Tshwane University of Technology, South Africa
6. Mrs SM Moloko, Sefako Makgatho Health Sciences University, South Africa
7. Mr P Maesela, Gauteng Department of Health, South Africa
8. Mr M Mogale, Sefako Makgatho University, South Africa
9. Prof JV Ndimande, Dr George Mukhari Hospital, South Africa
10. Ms M Huma, Sefako Makgatho University, South Africa
11. Dr L Razwiedani, Sefako Makgatho University, South Africa
12. Dr RG Malapela, SG Lourens Nursing School, South Africa
13. Mrs A Thobakgale, Gauteng Department of Health, South Africa
14. Mrs P Lesolang, City of Tshwane Metro, Local Municipality Health, South Africa

Administrative Assistants

1. Mr T Mashabela, Gauteng Department of Health
2. Mrs L Mametse, Gauteng Department of Health
3. Mrs P Ramphahgo, University of South Africa

4. Mrs K Mothudi, University of South Africa
5. Mr S Mashinini, University of South Africa

Adjudicators

1. Dr M Moshime-Shabangu
2. Dr L Razwiedani
3. Dr DSK Habedi
4. Prof T Ramukumba
5. Mr MT Mamahlodi
6. Mrs M Huma
7. Dr RG Malapela

Partners and Sponsors:

University of South Africa

Tshwane University of Technology

Sefako Makgatho University

Mediotronics

Mecru Clinical Research Unit

Setshaba Research Centre

Liberty Holdings Limited

City of Tshwane

Gauteng Department of Health

Contents

Conference Papers

Transition of Adolescents with Intellectual Disabilities into Adulthood: Caregivers' Experiences

RG Malapela
University Of South Africa,
Department of Health Studies
gmalapela@gmail.com

GB Thupayagale-Tshweneagae
University Of South Africa,
Department of Health Studies

Abstract

To explore and describe the caregivers' experiences on the transition of adolescents with IDs into adulthood. To recommend a strategy for the transition of adolescents with intellectual disabilities into adulthood as informed by findings from the initial and second phase. The exploratory sequential mixed method for this study was in three phases. The initial phase used a qualitative descriptive and explorative research. Narratives, individual and focus group interviews were used for data collection. 29 participants i.e. parents, teachers, health care workers and occupational therapists. The study was conducted in Special Schools, Non-Governmental Organisations (NGOs), Care and Rehabilitation Centres situated in Tshwane Metropolitan Municipality of Gauteng Province in South Africa. Five themes emerged from the initial phase namely; Caring experiences; needs of intellectually disabled adolescents, emotions toward teaching intellectually disabled adolescents, factors influencing the transition into adulthood and recommendations to transit into adulthood. The decline of one of the NGOs to participate in this study provided limited information that might have been utilized to develop the transition strategy. Collaboration of various departments is necessary to facilitate transition possibilities for adolescents with intellectual disabilities into adulthood. Informed the nurses, nurse education, teachers, parents, policy-makers and other stakeholders in supporting transition possibilities for adolescents with intellectual disabilities into adulthood.

Keywords: Adolescents; caregivers; intellectual disability; transition
Introduction

Introduction

Transition remains a complex issue among adolescents with intellectual disabilities (IDs). According to Gauthier-Boudreault, Gallagher & Couture (2017: 66), there is little research on facilitators of the transition to adulthood. Previous studies indicated that caregivers were unable to clearly envision what the future holds for adolescents with IDs and the service system was not well prepared to anticipate future prospects (Betz, Nehring & Lobo, 2015: 362). In light of transitioning adolescents with IDs into

adulthood, Zhou, Roberts, Dhaliwali and Della (2016: 3113) alluded that this requires coordinated health care. In support of the transitioning, Ally, Boyd, Abells, Amaria, Hamdani, Loh, Niel, Sacks, Shea, Sullivan and Hennen (2018: 37) added that caregivers have a role in helping adolescents with IDs together with their families to navigate community-based support systems in their province. Given this responsibility and roles, often it becomes a challenge as many disability service systems such as Rehabilitation Centres and Special Schools lack the resources, guidance and information (Haver, 2017: 14).

Aim and objectives

To explore and describe the caregivers' experiences on the transition of adolescents with IDs into adulthood. To recommend a strategy for the transition of adolescents with intellectual disabilities into adulthood as informed by findings from the initial and second phase.

Methodology

The exploratory sequential mixed method for this study was in three phases.

Study design

The initial phase used a qualitative descriptive and explorative research. Narratives, individuals and focus group interviews were used for data collection.

Study subjects

29 participants i.e. parents, teachers, health care workers and occupational therapists.

Study setting

The study was conducted in Special Schools, Non-Governmental Organisations (NGOs), Care and Rehabilitation Centres situated in Tshwane Metropolitan Municipality of Gauteng Province in South Africa.

Results

Five themes emerged from the initial phase namely: Caring experiences; needs of intellectually disabled adolescents, emotions toward teaching intellectually disabled adolescents, factors influencing the transition into adulthood and recommendations to transit into adulthood.

Limitations

The decline of one of the NGOs to participate in this study provided limited information that might have been utilized to develop the transition strategy.

Conclusions and recommendations

Collaboration of various departments is necessary to facilitate the transition possibilities for adolescents with intellectual disabilities into adulthood. Findings of this study informed the nurses, clinical practice, nurse education, teachers, parents, policy-makers and other stakeholders in supporting transition possibilities for adolescents with intellectual disabilities into adulthood.

References

Ally, S., Boyd, K., Abells, D., Amaria, K., Hamdani,Y., Loh, A., Niel, U., Sacks, S., Shea, S., Sullivan, W. F., and Hennen, B. (2018). "Improving transition to adulthood for adolescents with intellectual and developmental disabilities." *Canadian Family Physician*, 64, (Suppl 2), 37-43.

Betz, C. L., Nehring, W. M., and Lobo, M. L. (2015). Transition needs of parents of adolescents and emerging adults with special health care needs and disabilities. *Journal of Family Nursing, Vo.21 (3), 362-412.*

Gauthier-Boudreault, C., Gallagher, F., and Couture, M. (2017). Specific needs of families of young adults with profound intellectual disability during and after transition to adulthood: What are we missing? *Res Dev Disabil, 66, 16-26*

Haver, C. E. (2017). *The experiences of parents of adolescents with disabilities during the transition to adulthood*. Master of Science in Occupational Therapy Dissertation, University of North Carolina at Chapel Hill.

Zhou, H., Roberts, P., Dhaliwal, S., and Della, P. (2016). Transitioning adolescent and young adults with chronic disease and/or disabilities from paediatric to adult care services – an integrative review. *Journal of Clinical Nursing, 25, 3113-3130.*

A Nursing Theory for Anticipatory Guidance of Adolescents to Resist Peer Pressure and Coercion to Sexual Activity: A Feedback

EO Mashia
City of Tshwane Municipality
Ward Based Outreach Functional Head
olg2904@gmail.com

NC van Wyk
University of Pretoria
Faculty of Health Sciences
Department of Nursing
neltjie.vanwyk@up.ac.za

R Leech
University of Pretoria
Faculty of Health Sciences
Department of Nursing
Ronell.leech@up.ac.za

Abstract

The aim of the study to explore and describe how peer pressure and coercion to sexual activity manifested among adolescents in Tshwane district. The objective was to develop a nursing theory for anticipatory guidance of adolescents to resist peer pressure and coercion to sexual activity. Conducted a qualitative research using constructivist grounded theory. Used concurrent data collection and constant comparative analysis to acquire new ideas needed to compare concepts for theory development. Initial sampling of ten adolescents and nine nurse participants followed by theoretical sampling of four registered nurses and Health Education Specialist. Research was conducted in six Tshwane clinics managed by either Municipality or District Health Department. Adolescents risk vulnerability occurs because of parental incapability and parenting inadequacies. Adolescents advocated to be supported at non-traditional health settings. Negative peer pressure plays a major role in adolescent health risk behaviours. Nurses and significant adults willing to help adolescents to counteract negative peer pressure and to acquire decision making skills. They were keen to become "substitute parents" and provide guidance in the absence of capable parents. Adolescents could benefit from anticipatory guidance.
Adolescents should be enabled to make informed choices by implementing guidance in settings where they meet for schooling, fun and play. Nurses should optimise their relationships with adolescents and deliver adolescent-friendly services. Use multimedia to enable supportive interaction with adolescents.

Keywords: Anticipatory guidance, peer pressure, coercion, sexual activity

Introduction

Adolescents engage in early sexual activities due to peer pressure and sexual coercion. Unsafe sexual risk behaviour practices among adolescents is worrisome. It nullifies all the advanced efforts to prevent unplanned pregnancies and sexually transmitted infections (Lansford, Dodge, Fontaine, Bates and Pettit, 2014: 1742), unsafe abortions and childbirth complications (Fantasia, 2011: 48; Van de Bongardt, De Graaf, Reitz and Dekovic', 2014: 388). Adolescents are prone to risk behaviours due to irresponsible decisions.

Aim and objectives

The aim was to explore and describe how peer pressure and coercion to sexual activity manifested among adolescents in Tshwane district. The objective was to develop a nursing theory for anticipatory guidance of adolescents to resist peer pressure and coercion sexual activity.

Methodology

Used grounded theory methodology. Conducted intensive interviews to collect data, which was simultaneously analysed (Wuest et al. 2010, 798). Findings from the initial data analysis guided subsequent data collection (Watling & Lingard, 2012: 855).

Study design

Applied qualitative research design following the Charmaz' Constructivist Grounded Theory (CGT) approach. In CGT, interpretive and reflective processes and actions are elaborated (Charmaz, 2014: 58), participants construct meanings and the researcher uses constant comparative methods to confirm the emerging data.

New ideas steer the study to the desirable direction. Rich data acquired through data collection and analysis through constant comparative analysis is key for comparing concepts for theory development (Lingard, Albert, Levinson, John and Eaton, 2008: 856).

Study subjects

In grounded theory studies, sampling is based on data collected, not the setting or people (Corbin and Strauss, 2008: 157). The first-round study subjects comprised of ten adolescent and nine nurse participants. The second round for theoretical sampling consisted of five health professionals working outside the clinic setting, i.e. a Health Education Specialist and registered nurses specialising in youth and adolescent development.

Ethical consideration

Researcher recognized the ethical principles of the Belmont Report. The researcher ensured that the adolescent and the nurse participants were treated fairly, harm was prevented, and their rights were protected (Polit and Beck, 2008: 170).

The Research Ethics Committee from University of Pretoria (Ref 365/2013) and the Gauteng Department of Health Research Committee (Project 20/2014) granted approval. The permissions to conduct the study in the clinics were obtained from the relevant Senior Clinic Management. Acquired informed consent from the parents, adolescents older than 18 years and informed assent of adolescents younger than 18 years.

Study setting

Research was conducted in six biggest and busiest clinics that provided a mix of population across all the socio-economic status of the four regions Tshwane clinics managed by either Municipality or District Health Department.

Findings

Peer pressure and lack of parental guidance increase adolescents' vulnerability to risk behaviours. Adolescents need anticipatory guidance to equip them with tailor-made information and decision-making skills to resist peer pressure. They could be guided to cultivate positive relationships and develop coping skills for self-relience. Nurses and significant adults in communities could bridge the parental shortcoming gap by improving communication to guide adolescents with responsible sexual behaviour. Nurse-adolescent interaction need to be optimised for nurses to facilitate the "parent substitute role" and platform for anticipatory guidance.

Limitations

The study was done in one district in Gauteng Province thus generalisation of the findings cannot be globalised.

Conclusions and recommendations

Peer pressure to sexual activity is still rife despite massive efforts to educate them about the adverse consequences of early sexual activity. Adolescents yearned for support from their parents to overcome risk behaviours (Dalmacio & Barroso, 2017: 2).

A change in nurses' attitudes is required to improve the adolescent-nurse relationships. Nurses enthusiastic to work with adolescents should be recruited. Adults should respect and not patronize adolescents. Adolescent-friendly zones fully equipped with digital and electronic media should be created in the clinics to attract adolescents.

Provide community-based health promotion initiatives for supporting adolescents (Lee, Yoke, Hung & Sobel, 2017: 2).

References

Charmaz, K. (2014). Constructing Grounded Theory, 2nd edn, London, UK: Sage Publication.

Corbin, J. and Strauss, A. (2008). Basics of Qualitative Research: Techniques and procedures for developing grounded theory, 3rd edn, Thousand Oaks, SA. Sage Publication.

Fantasia H.C. (2011). Influences of Social Norms and Context on Sexual Decision Making among Adolescent Women. Journal of Midwifery & Women's Health 56 (1): 48–53. http://doi:10.1111/j.1542-2011.2010.00014.x.

Flores, D. and Barroso, J. (2017). 21st Century Parent-Child Sex Communication in the United States: A Process Review. Journal of sex research. 54. 1-17. http://10.1080/00224499.2016.1267693.

Lansford, J.E., Dodge, K.A., Fontaine, R.G., Bates, J.E., and Pettit, G.S. (2014). Peer Rejection, Affiliation with Deviant Peers, Delinquency, and Risky Sexual Behavior. Journal of Youth and Adolescence: A Multidisciplinary Research Publication 43 (10): 1742–51. http://doi:10.1007/s10964-014-0175-y.

Lee R.L.T., Yuen Loke, A., Hung T.T.M. and Sobel H. (2017). A systematic review on identifying risk factor associated with early sexual debut and coerced sex among adolescents and young people in communities. Journal of Clinical Nursing (June 2017):1-24. https://doi-org.uplib.idm.oclc.org/10.1111/jocn.13933

Lingard, L., Albert, M., and Levinson, W. (2008). Qualitative Research: Grounded Theory, Mixed Methods, and Action Research. BMJ: British Medical Journal 337, no. 7667: 459-61. http://www.jstor.org.uplib.idm.oclc.org/stable/20510644.

Van de Bongardt, D., De Graaf, H., Reitz, E., and Dekovic', M. (2014). Parents as moderators of longitudinal associations between sexual peer norms and Dutch adolescents' sexual initiation and intention. Journal of Adolescent health 55(17 February 2014): 388–393. http://dx.doi.org.10.1016.jadohealth .

Identification of Gaps in Cultural Knowledge Related to Maternity Care amongst Midwives in Tshwane District Gauteng Province in South Africa

KM Skhosana
Faculty of Health Sciences, Department of Nursing Science, University Of Pretoria.

RN Ngunyulu
Faculty of Health Sciences, Department of Nursing Science, University Of Pretoria.

FM Mulaudzi
Faculty of Health Sciences, Department of Nursing Science, University Of Pretoria.

Abstract

The need for the provision of culturally competent and sensitive maternity care remains high in South Africa. In the clinical setting, midwives render care to women with diverse cultural beliefs, values, and norms, religious and cultural practices. Hence there is a need for midwives to have cultural knowledge, to render quality holistic culturally safe care. To identify the gaps in cultural knowledge related to maternity care amongst midwives in Tshwane District Gauteng Province of South Africa, with the intention to make recommendations to include components of cultural knowledge in the existing midwifery curriculum. Non-experimental, descriptive quantitative research was used to identify gaps in cultural knowledge related to maternity care amongst midwives. A survey tool was used to collect data. The survey included 103 respondents, rendering maternity care at the eight selected hospitals representing seven regions in Tshwane District. Quantitative data analysis was applied. Descriptive statistics was used to summarize and describe quantitative data, the use of frequency tables, graphs, percentages were applied using SAS ver9.4. The findings showed that there are gaps in cultural knowledge, as evidenced by 88.3% of midwives has inadequate cultural knowledge of indigenous practices used by women after conception. Between 90% and 95% of midwives have inadequate cultural knowledge regarding the following indigenous practices: protection or preserving pregnancy 91.3%, calculation of gestational age 93.2%, prevention of illness during pregnancy 92.2%, monitoring well-being of the foetus 94.2%, induction of labour 91.3%, prevention of childbirth before arrival at the clinic/hospital, 91.3%, and pain management during labour, management of abnormal foetal presentation 94%. Midwives ought to render holistic, unique and individualistic, culture-based care. Hence there is a need to mainstream indigenous knowledge, skills and practices in the existing midwifery curriculum to close the identified gaps.

Introduction

Midwives are rendering care that lacks some cultural knowledge that may improve the quality of care. Indigenous knowledge is used to describe the knowledge systems developed by a community as opposed to the scientific knowledge that is generally referred to as “modern knowledge” (Ajibade 2003 as cited by Ngunyulu 2014). According to Campinha-Bacote (2002), cultural knowledge is the process of seeking and obtaining a sound educational foundation about diverse cultural and ethnic groups, including their health-related beliefs, and cultural values. Midwives are expected to provide culturally congruent care, which entails cultural knowledge, cultural awareness, cultural sensitivity and cultural competence (Papadopaulos, Shea, Taylor, Pezzella & Foley 2016).

In South Africa, midwives attend to patients from multicultural and multiracial backgrounds, with diverse values, beliefs and norms, during the prenatal, antenatal, labour and postnatal period. The diverse environment needs midwives to be empowered with theoretical knowledge and practical skills in indigenous knowledge content to be able to render holistic quality culture-based care acceptable to the patient (Ngunyulu, Mulaudzi and Peu 2015). Currently, during consultations with patients, some documents are used during primary antenatal care for history taking. These do not include information on Indigenous Practices, those gaps in information lead to conflict between nurse and patient. In addition, some of the patients resort to Indigenous Practices, such as taking traditional medicine at home. However, when they come to the clinic, they do not reveal this to the midwives, which leads to severe adverse reaction and complications (Mogawane, Mothibi & Malema 2015).

Aim and objective

Aim of the study

The aim of the study was to identify gaps in cultural knowledge related to the maternity care amongst midwives in Tshwane District, Gauteng Province in South Africa. This was to make recommendations to mainstream indigenous knowledge, practices and skills in the existing midwifery curriculum.

Study objective

The objectives of this study were to determine the extent of the cultural knowledge possessed by midwives on antenatal, intrapartum and postnatal care.

Methodology

The methodology describes the study design, study setting, study population and sampling, pilot study, data collection, data analysis and ethical considerations**.**

Study design

In the study, non-experimental, descriptive quantitative survey research design was used in the identification of gaps in indigenous knowledge related to maternity care amongst midwives. A survey tool with structured questionnaires was used for data collection from midwives at eight hospitals (two Academic Hospitals; one tertiary hospital and all five District Hospitals) in Tshwane District. In descriptive studies, information is collected without changing the environment or manipulation to uncover new facts and meaning. A sample of 150 questionnaires was sent to hospitals to ensure that the study is representative of the selected population. Descriptive statistics was used to summarise and describe quantitative data (Polit & Beck 2017).

Study respondents

The study respondents were midwives that work at maternity care of the eight selected hospitals.

Study setting

Tshwane District has seven regions with midwives in hospitals, community health centres and Primary Health Care clinics. The study was conducted on eight hospitals. The researcher took 150 questionnaires to eight selected hospitals. There were only 110 who participated in the study 40 didn't participate. The hospitals were given numbers, for example, hospital 1 to 8 and a unique number on the questionnaires. The pilot study was done two months before the real study, ten (10) respondents participated and the results were not included in the final results of the study. (Polit & Beck 2017). A convenient sampling method was used to select respondents. The researcher preferred this method of sampling as it does not compromise individuals known to the researcher and is inclusive of all available midwives. The sample size of midwives were 110 because seven (7) did not sign the respondent leaflet and informed consent, thus were excluded from the study. The survey was conducted on all 103 midwives. To ensure a representative sample, the researcher delivered copies of self-administered structured questionnaires and informed consent to midwives at different targeted hospitals to those that were available on the day of the scheduled visit. To those that were not on duty, survey tools were given to the unit manager to hand them over to the midwives that were willing to participate in the study. The researcher arranged for collection after completion (Polit & Beck, 2017) Quantitative studies need a large sample, for representation, statistical power, generalisation, reliability and validity (Polit & Beck, 2017). The data collected resulted to a response rate of 73.3%, it was analysed using SAS VER9.4 consisting of frequency tables, percentages and graphs. (Polit & Beck, 2017).

Findings

The findings showed that there are gaps in cultural knowledge, as evidenced by 88.3% of midwives has inadequate cultural knowledge of indigenous practices used by

women after conception. Between 90 and 95% of midwives have inadequate cultural knowledge regarding the following indigenous practices: protection or preserving pregnancy 91.3%, calculation of gestational age 93.2%, prevention of illness during pregnancy 92.2%, monitoring well-being of the foetus 94.2%, induction of labour 91.3%, prevention of childbirth before arrival at the clinic/hospital, 91.3%, and pain management during labour, management of abnormal foetal presentation 94%.There are gaps identified, midwives are having limited cultural knowledge that could be due to training of midwives the emphasis is on modern trends than culture based. The approach limits the midwife's exposure to cultural knowledge skills and practices.

Limitations

The focus of the study was in eight hospitals rendering maternity care, representing seven regions, where pregnant woman are referred to for further management in Tshwane District. The findings may not be generalized to other districts in Gauteng because each district has unique characteristics. However, the study has generated knowledge on the identification of gaps in cultural knowledge related to maternity care among midwives in Tshwane District, which may be generalised beyond the study's setting and contribute to the body of evidence.

Recommendations

The results of the study revealed that there is a need for change in the way the midwives render care to close the gaps that were identified related to maternity care. There are few things that needed for change to achieve expected goals with midwives, nursing education, Department of Health, South African Nursing Council and researchers.

Midwives

The midwives need to change their mind-set and their attitude to understand their culture so that they can understand the culture of the patients under their care. To have cultural knowledge, to be able to render holistic quality

Nursing education

The South African Nursing Education ought to mainstream Indigenous Knowledge into the midwifery curriculum and at the nursing education entry point to close the identified gaps.

Department of Health

The Department of Health should inform policymakers to recognize Indigenous Knowledge in the Nursing Curriculum to close the identified gaps.

South African Nursing Council (SANC)

The council ought to include Indigenous Knowledge in the Nursing Curriculum, the scope of practice, competence, rules and regulations, ethics and nursing practice. This is to empower midwives and close the identified gaps.

Researchers

The researchers should conduct more research on indigenous knowledge to improve the nursing profession.

Conclusion

The findings of the study reveal that there is a need to mainstream indigenous knowledge in the midwifery curriculum due to the identified gaps. Midwives are reluctant to engage in indigenous knowledge or the rituals and Indigenous Practices. There should be more research conducted on indigenous knowledge in South Africa just like in other countries to improve cultural knowledge. The research may improve the quality of care rendered by midwives and achieve holistic, culturally competent care.

Table 1.1 Protection or preservation of pregnancy:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Prayer/informing ancestors	24	23.3	23.3	23.3
	Prayer/informing ancestors & Drinking herbal medicine	17	16.5	16.5	39.8
	Prayer/informing ancestors & Drinking holy water or oils	7	6.8	6.8	46.6
	Prayer/informing ancestors & Other	1	1.0	1.0	47.6
	Drinking herbal medicine	27	26.2	26.2	73.8
	Drinking herbal medicine & Drinking holy water or oils	7	6.8	6.8	80.6
	Drinking herbal medicine & Other	1	1.0	1.0	81.6
	Drinking holy water or oils	9	8.7	8.7	90.3
	Drinking holy water or oils & Other	1	1.0	1.0	91.3
	Other	9	8.7	8.7	100.0
	Total	103	100.0	100.0	

References

Campinha-Bacote, Josepha. "The process of cultural competence in the delivery of healthcare services: A model of care." *Journal of transcultural nursing* 13, no. 3 (2002): 181-184. https://doi.org/10.1177/10459602013003003

Mogawane, Mamagoro A., Tebogo M. Mothiba, and Rambelani N. Malema. "Indigenous practices of pregnant women at Dilokong hospital in Limpopo province, South Africa." *curationis* 38, no. 2 (2015): 1-8. https://doi.org/10.4102/curationis.v38i2.1553

Ngunyulu, Roinah N., Fhumulani M. Mulaudzi, and Mmapheko D. Peu. "Comparison between indigenous and Western postnatal care practices in Mopani District, Limpopo Province, South Africa." *Curationis* 38, no. 1 (2015): 1-9. https://doi.org/10.4102/curationis .v38i1.1252

Ngunyulu, Roinah Nkhensani. "The experiences of postnatal patients regarding postnatal care in Mopani District, Limpopo Province, South Africa." *African Journal for Physical Health Education, Recreation and Dance* 20, no. Issue-22 (2014): 685-697.

Papadopoulos, Irena, Sue Shea, Georgina Taylor, Alfonso Pezzella, and Laura Foley. "Developing tools to promote culturally competent compassion, courage, and intercultural communication in healthcare." *Journal of Compassionate Health Care* 3, no. 1 (2016): 2. https://doi.org/10.1186/s40639-016-0019-6

Polit, Denise F., and Cheryl Tatano Beck. *Nursing research: Generating and assessing evidence for nursing practice*. Lippincott Williams & Wilkins, 2017.

Feeding Practices of HIV Exposed Children on Prevention of Mother-to-Child Transmission Programme from Birth to 18 Months at the City of Tshwane, South Africa: A Cross Sectional Study

SM Moloko
Department of Nursing Science,
Sefako Makgatho Health Science University, South Africa

Abstract

Breastfeeding is common source of postnatal mother-to-child transmission of HIV. To reduce the transmission rate, prevention of mother-to-child transmission (PMTCT) recommended exclusive breastfeeding for the first six months, alternatively replacement feeding in the form of formula milk can be given. The objective of the study was to describe the feeding practices of HIV exposed children from birth to 18 months of age at the City of Tshwane, South Africa. A quantitative cross sectional retrospective descriptive study was conducted among sixty HIV positive mothers with children aged 18 months at the two City of Tshwane health facilitates. Data was collected using a self-administered questionnaire and analysed using the SAS/JMP version 10 statistical software package. The findings of the study revealed no significant difference in percentages between mothers practiced exclusive breastfeeding (55%) and mothers practiced exclusive formula feeding (45.0%) from birth to 6 weeks. At 6 months more children (57.6%) were on formula feeding than breastfeeding (40.7%). Almost all the mothers (53.5%) who decided to breastfeed did so for less than a year. Mixed feeding before six months was practiced by 43.3% of mother. The sample size in the study was small. Not all mothers adhered to the recommended feeding practices from the PMTCT guidelines. Continuous counselling and education to HIV positive mothers, partners and the community about the importance of exclusive breastfeeding and exclusive formula feeding with the emphasis on dangers of mixed feeding should be strongly emphasised.

Keywords: exclusive breastfeeding; exclusive formula feeding; mixed feeding; replacement feeding

Introduction

Mother-to-child transmission (MTCT) of human immunodeficiency virus (HIV) is the main source of HIV transition in children under five years. It can occur either in utero, at birth or during breastfeeding (Agrawal 2013, 354; Costa da Rosa et al 2014, 523).

In South Africa, the prevalence of HIV in pregnant women attending public health services is estimated at 30% (Burton, Giddy, and Stinson 2015, 5). As a measure to reduce MTCT of HIV, Prevention of Mother-to-Child Transmission (PMTCT) programme was initiated in 2002 using single dose of Nevirapine therapy to mothers. In 2008 the PMTCT programme was expanded to dual therapy consisting of Nevirapine and Zudovudine therapy to HIV positive mothers during pregnancy and breastfeeding period (Burton, Giddy, and Stinson 2015, 8).

In 2015 the programme was further expanded by initiating all HIV positive pregnant and breastfeeding mothers to lifelong antiretroviral (ART) treatment and Nivarapine prophylaxis to the HIV exposed infant for the minimum duration of six weeks (National Department of Health 2015, 15-61). In all the years, PMTCT interventions included safe infant feeding practices as a measure to prevent post-natal transmission of HIV (Burton, Giddy, and Stinson 2015, 10; National Department of Health 2015, 98). In the absence of effective PMTCT measures, it is estimated that 30% of HIV exposed infant will be infected with HIV (Burton, Giddy, and Stinson 2015, 5).

The risk of HIV transmission through breastfeeding is greater in mothers who did not receive antiretroviral treatment (ART) and those with advanced HIV disease (Ciaranello et al. 2014, 2). Without any interventions, about 10% to 40% of HIV exposed infants will be infected with HIV through breast milk. Hence a complete avoidance of breastfeeding would eliminate post-natal transmission through breastmilk (Ciaranello et al. 2014, 2; Ikeako et al. 2015, 62; Olatona et al. 2014,64). However breastfeeding is recommended because it facilitates growth and development of the infant, maximising intake of nutrients. Furthermore, breastfeeding has been found to significantly improve child survival by protecting against diarrheal diseases, pneumonia and other potentially fatal diseases thereby decreasing child mortality rate (Ciaranello et al. 2014, 2; Setegn, Haile, and Biadgilign 2015, 88).

The duration of breastfeeding was found to be associated with MTCT of HIV. The longer the child is breastfed the greater the risk of HIV transmission through breastmilk (Ngwende et al. 2013, 6). Consequently, it is recommended that HIV positive mothers should not breastfeeding their children beyond 12 months (National Department of Health 2015, 98; Sint et al. 2013, S171; WHO, and UNICEF 2016, 12).

As a measure to facilitate safe infant feeding practices, all HIV positive mothers are expected to receive at least four sessions of infant feeding counselling during the antenatal visits and continuously advised on adherence to either exclusive breastfeeding or exclusive formula feeding in the first six months of the infant's life. At these sessions mixed feeding should be discouraged and mothers be alerted about the risk. After delivery, mothers will then choose the suitable and affordable feeding option for their infants (National Department of Health 2015, 98).

Exclusive breastfeeding for the first six months by the mother on ART is considered the best feeding option for children born to HIV-positive mothers because it reduces the risk of postnatal HIV transmission (Agrawal 2013, 353; National Department of Health 2015, 98; WHO, and UNICEF 2016,12). Despite the benefits, the rate of exclusive breastfeeding is estimated at 35% globally and 30% in Sub-Saharan Africa, while in South Africa is estimated at 33.6% (Department of Health 2016, 31; Omwenga, Murithinjiru, and Nyabera 2016, 128).

Replacement feeding in the form of formula milk can be given to the HIV-exposed child only if conditions for replacement feeding are met. The mother should be able to access safe water and sanitation; be able to prepare the formula hygienically and correctly; and provide sufficient and appropriate formula for the infant's age (Department of Health 2015, 99; Tembo et al. 2015, 124). Consequently HIV positive mothers who do not want to breastfeed their children should practice exclusive replacement feeding in the first six months of infant's life (Agrawal 2013, 355; Department of Health 2015, 99).

Mixed feeding in the first six months of an infant's life is discouraged because it damages the infant's intestinal mucosa exposing and making them susceptible to HIV infection (Chaponda, Goon, and Hoque 2017, 2; Ngwende et al. 2013, 5). A study in South Africa found that mixed feeding by giving breast milk with other feeds in the first three months increased the risk of HIV transmission, while exclusive breastfeeding was associated with lower transmission of HIV. (Agrawal 2013, 354).

The success of the PMTCT program in eliminating post-natal HIV transmission is depended upon mother's adherence to recommended feeding practices. However, the present adherence to the PMTCT recommended child feeding practices by HIV infected mothers in Tshwane district, South Africa is not well known. The purpose of the study was to describe feeding practices of HIV exposed children on PMTCT from birth to 18 months at the City of Tshwane, South Africa. Findings may contribute to decisions about further analysis of this problem and eventually to the improvement of the implementation of the PMTCT programme.

Methodology

The study adopted a quantitative cross sectional retrospective descriptive design. Data was collected in two Primary Health Clinics (PHC) in the City of Tshwane Metropolitan Municipality, South Africa. One clinic is situated at the city centre of Tshwane and the other clinic is situated in one of the biggest townships in Tshwane. The two clinics were offering full package of PHC including immunisations, family planning, integrated management of childhood illnesses (IMCI), Tuberculosis (TB), HIV counselling and testing (HCT), PMTCT, antenatal and postnatal, curative and chronic care, and emergency care.

Study population consisted of HIV positive mothers with children aged 18 months. A non-probability convenience sampling was used to select sixty HIV positive mothers with children aged 18 months. Thirty mothers were recruited from each facility. Mothers were recruited while bringing their children for child health services like Integrated Management of Childhood Illnesses (IMCI), Expanded Programme on Immunization (EPI) and PMTCT. Only biological mothers who tested HIV positive prior or while pregnant with the current child were included in the study.

Data was collected from the mothers using a self-administered structured questionnaire. Data was analysed using the SAS/JMP version 10 statistical software package. The analysis included descriptive statistics, such as frequency of distribution. The presence or absence of relationships among variables and statistical differences was established using the Chi-square.

Validity and reliability

Face and content validity of the instruments was ensured by reviewing literature relevant to the research topic. As a measure of ensuring instrument reliability, the questionnaire was pretested on five respondents not included in the main study.

Ethical considerations

The study was approved by Tshwane Research Committee and the University of South Africa Research Ethics Committee: Department of Health Studies. Permission to conduct the study was sought from the facility managers of the two clinics. Participation was voluntary and all respondents signed an informed consent. Questionnaires and data collection forms were completed anonymously.

Results

Sixty mothers completed the questionnaires. Table 1, shows the distribution of the 60 mothers according to their socio-demographic characteristics. Majority (66.6%; n=40) of mothers were aged between 26 and 35 years, with the mean age of 30 years. All mothers had completed at least primary education, while majority (57.6%; n=35) of them were single and unemployed.

Of the 57.6% (n=35) mothers that were unemployed with one student included, 31.4% (n=11) received financial support from their husbands; 25.7% (n=9) from their partners; 20.0% (n=7) from their parents; 5.7% (n=2) from their siblings, and 17.1% (n=6) received financial support from social grand. Minority (5.0%; n=3) of mothers had four or more living children; 15.0% (n=9) had three living children, 56.7% (n=34) had two living children; and 23.3% (n=14) had one living child.

Table 1: Socio-demographic Characteristics of the mothers.

Socio-demographic Characteristics	**Category**	**N**	**%**
Age in years	18-20	2	3.3%
	21-25	9	15%
	26-30	20	33.3%
	31-35	20	33.3%
	36 and above	9	15%
Marital status	Single	40	66.7%
	Married	19	31.7%
	Widowed	1	1.7%
Highest educational Level	Primary	0	0%
	Secondary (grade 8-10)	12	20%
	Secondary (grade 11-12)	37	61.7%
	Tertiary	11	18.3%
Employment status	Unemployed	34	55.9%
	Self-employed	5	8.5%
	Permanently employed	20	33.9%
	Other (student)	1	1.7%

Majority of mothers (98.3%; n=59) received feeding advice from the nurse at the clinic; while 1.7% (n=1) did not receive advice. According to mothers, 55.0% (n=33) of the children were exclusively breastfed from birth to six weeks while 45.0% (n=27) were exclusively formula fed. Table 2 reveals that 42.86% (n=9) of mothers receiving financial support from husband exclusively breastfed their children at 6 weeks of age compared to 28.6% (n=6), 4.7% (n=1), 9.5% (n=2) and 14.3% (n=3) who received financial support from partners, parents, siblings and others, respectively. It seems like unemployed mothers receiving financial support from husbands/partners were more likely to only breastfeed from birth to 6 weeks (at Chi-square value χ^2=10.027, *df*=4, *p*-value=0.040).

Table 2: Association between unemployed respondents' source of financial support and feeding practice from birth to 6 weeks (n=35)

Unemployed respondents' source of financial support	Feeding practice			
	Only breast milk		Only formula milk	
	N	%	N	%
Husband	9	42.9	2	14.3
Partner	6	28.6	3	21.4
Parents	1	4.8	6	42.9
Siblings	2	9.5	0	0.00
Other	3	14.3	3	21.4

At the age between six weeks and six months, more (57.6%; n=34) children were reported to have been exclusively formula fed, 40.7% (n=24) exclusively breastfed, while only one (1.7%) was on both formula and breastfeeding. Twenty-seven per cent (9 out of 33) of respondents who were exclusively breastfeeding at 6 weeks, were giving formula at 6 months. Although the majority of mothers have reported that their children were either exclusively breastfed (40.7%) or exclusive formula fed (57.6%) prior to six months of age. When asked the age at which they started giving their children water and other food (porridge or cereals), 56.7% (n=34) reported started giving their children water to drink after six months; 26.7% (n=16) started before six months, and 16.7% (n=10) started before six weeks of age. Regarding giving children porridge or cereals, 6.8% (n=4) started before six weeks; 27.1% (n=16) started before six months, and 66.6% (n=39) started after six months of age. Therefore 43.3% (n=26) of mothers did not practice either exclusive breastfeeding or exclusive formula feeding before six months of age.

It appeared that mothers with two children were more likely (63.6%, n=22) to provide only formula milk, while mothers (66.7%, n=6) with three children were more likely to only breastfeed from six weeks to six months of age (at chi-square value χ^2=22.72, *df*=6, *p*-value=0.0009). (Table 3).

Table 3: Association between respondents' number of children alive and feeding practice from 6 weeks to 6 months (N=60)

Respondents' number of children alive	Feeding practice from 6 weeks to 6 months					
	Only breast milk		Only formula milk		Both	
	N	%	n	%	N	%
>=4 children	0	0.0	2	66.7	1	33.3

3 children	6	66.7	3	33.3	0	0.0
2 children	12	36.4	22	63.6	0	0.0
1 child	6	42.9	8	57.1	0	0.0

The duration of breastfeeding ranged from zero to 18 months and were as follows: 45% (n=27) of children were never breastfed, 6.9% (n=4) breastfed for six weeks; 32.8% (n=19) breastfed for more than six weeks but less than six months; 8.6% (n=5) breastfed for more than six months but less than nine months; 5.2% (n=3) breastfed for more than nine months but less than 12 months; 1.7 (n=1) breastfed for more than 12 months but less than 15 months, and 1.7% (n=1) breastfed for 18 months. The majority (53.5%; n=31) of children who were breastfed were only breastfed for less than 12 months.

Discussions

Most mothers in this study were aged between 18 and 35 years, with most of them being single, unemployed had at least secondary level of education. Similarly, studies conducted in Nigeria, Kenya and Sudan found that the majority of HIV positive mothers were aged 35 years and younger. However the majority of HIV positive mothers in Kenya and Sudan were married and had primary schooling as the highest education (Ikeako et al. 2015, 64; Lasuba 2016,57; Omwenga, Murithinjiru, and Nyabera 2016, 130). Consistent with the findings in Nigeria, the study found that majority of HIV positive had one to two children (Onubogu et al. 2015, 182).

Almost all mothers (98.3%) received feeding counselling from the nurse at the clinic. The finding is consistent with past studies conducted in Nigeria, Ethiopia and Sudan where 95.5%, 99.1% and 94% of HIV positive mothers reported to have received infant feeding counselling from the health care provider respectively (Lasuba 2016, 57; Mirutse, Desta, and Amare 2014, 923; Olatona et al. 2014, 65). These findings were low as compared 100% found in South East Nigeria, where all mothers reported to have received counselling on infant feeding and adherence during health education given at every antenatal care visits (Lawani et al. 2014, 378). Infant feeding counselling is one of the predictors for infant feeding behaviours and critical because it has been found to contribute significantly in to good infant feeding practices among HIV positive mothers (Olatona et al. 2014, 66; Williams et al. 2016, 120). Counselling on infant feeding should be done at every antenatal visit while infant feeding support should be provided at postnatal visits (National Department of Health 2015, 87).

The results of the study did not find any significance difference in percentages between mothers practiced exclusive breastfeeding (55%) and mothers practiced exclusive formula feeding (45.0%) from birth to 6 weeks. In contrast, studies in Ethiopia and Zambia reported high rate of exclusive breastfeeding of 71.3% and 96% respectively in children less than two months (Setegn et al. 2012, 3; Tembo et al.

2015, 125). On the contrary the studies in Nigeria reported high rate (59.3% & 73%) of exclusive formula feeding (Ikeako et al. 2015, 64; Onubogu et al. 2015, 182). Lack of significance difference in percentages between exclusive breastfeeding and exclusive formula feeding in this study may reflect the mother's level of knowledge regarding the benefits and the risk of different feeding practices. From the study, it seemed like unemployed mothers practiced exclusive breastfeeding from birth to six weeks possibly because they could not afford formula milk. Consistent with studies in Africa, mother's economic status was found to be a determinant to the specific feeding practice. In addition, family members, community, and health care providers were found to be significantly associated with mothers' adherence to specific feeding practices (Ikeako et al. 2015,64; Omwenga, Murithinjiru, and Nyabera 2016, 132; Onubogu 2015, 184).

At the age between six weeks and six months more children (57.6%) were on exclusive formula feeding than exclusive breastfeeding (40.7%) compared to at 6 weeks. The proportion of mothers practicing exclusive formula feeding at six months in this study was lower than 73.5% found in Nigeria (Olatona et al. 2014,65). The change in the feeding pattern as the children grow was also reported in Ethopia, where children in the age group of less than 2 months were found to be 2.7 times more likely to be breastfeed exclusively as compared to those aged 4 to 5 months (Setegn et al. 2012, 4). The practice of mixed feeding before six months (27.1%) was very evident in this study and higher than 16%, 8% and 4% found in Tanzania, Nigeria, and Sudan respectively (Lasuba 2016, 57; Olatona et al. 2014, 65; Williams et al. 2016, 4). The mothers did not practice exclusive breastfeeding or exclusive formula feeding before six months as recommended in the PMTCT guidelines.

Almost all the mothers (93.9%; n=31) who decided to breastfeed did so for less than a year. The findings in the study are inconsistent with the study in Ethiopia which found that 45.5% of children had stopped breastfeeding before the age of 12 months, while in Tanzania only 5% of children stopped breastfeeding before 12 months (Setegn, Haile, and Biadgilign 2015,89; Petraro et al. 2011, 5). The duration of breastfeeding in the study was shorter than Ethiopia and Zambian which was probably influenced by mother's educational level and ability to understand recommendation of the PMTCT programme. Mothers breastfed their children for a shorter duration possibly as a measure to reduce the chances of HIV transmission to their children. The duration of breastfeeding was regarded as a determinant for postnatal HIV transmission. Literature further acknowledged that the risk of MTCT of HIV continues as long as the child is exposed to HIV infected milk (Agrawal 2013,354). Hence not breastfeeding beyond 12 months will reduces the risk of postnatal MTCT of HIV, while it does not negatively affect the nutritional status of the children since nutritional status of children older than 12 months could be maintained with normal family diet and cow's milk can be given as a milk substituted (WHO, and UNICEF 2016, 12).

Limitations

The sample size in the study was small. Although the researcher explained to the mothers the importance of giving the correct information and also indicating that the information given not be linked to their identity or even affect their health care in any way, self-report bias and some misinterpretations could not be excluded because self-administered questionnaires were used. Lack of reliability testing was a drawback in this study.

Conclusions

The study was designed to determine the feeding practices of HIV exposed children on PMTCT programme from birth to 18 months and revealed no significant difference in proportions of mothers' exclusively breastfeeding and exclusively formula feeding. It is evident from the findings that nurses followed the recommendations from The PMTCT programme with regard to infant feeding counselling. Despite the fact that all mothers received feeding counselling, the practice of mixed feeding was high as compared to other studies. It is concluded from the study that not all mothers adhered to the recommended feeding practices from the PMTCT guidelines.

Recommendations

Continuous health education and counselling to all HIV positive mothers and partners about the importance of exclusive breastfeeding and exclusive formula feeding in the first six months of the children's life is vital. During the health education and counselling, the dangers of mixed feeding should be strongly emphasised. The same educational messages should be given to the community at large. The government should design measures to reduce HIV stigma among communities as it was found to be one of the factors influencing mothers' adherence to the recommended feeding practices.

References

Agrawal, VK. 2013. "Infant Feeding Options Designed to Prevent." *Indian Journal of Clinical Practice* 24 (4): 353–56.

Burton, Rosie, Janet Giddy, and Kathryn Stinson. 2015. "Prevention of Mother-to-Child Transmission in South Africa: An Ever-Changing Landscape." *Obstetric Medicine* 8 (1): 5–12. https://doi.org/10.1177/1753495X15570994.

Chaponda, Armelia, Daniel T. Goon, and Muhammad E. Hoque. 2017. "Infant Feeding Practices among HIV-Positive Mothers at Tembisa Hospital, South Africa." *African Journal of Primary Health Care and Family Medicine* 9 (1): 1–6. https://doi.org/10.4102/phcfm.v9i1.1278.

Ciaranello, Andrea L., Valeriane Leroy, Asinath Rusibamayila, Kenneth A. Freedberg, Roger Shapiro, Barbara Engelsmann, Shahin Lockman, Kathleen A. Kelly, François Dabis, and Rochelle P. Walensky. 2014. "Individualizing the WHO HIV and Infant Feeding Guidelines: Optimal Breastfeeding Duration to Maximize Infant HIV-Free Survival." *Aids* 28 (SUPPL. 3): 1–21. https://doi.org/10.1097/QAD.0000000000000337.

Ikeako, L C, H U Ezegwui, M I Nwafor, E Nwogu-Ikojo, T C Okeke, and Roberto Manfredi. 2015. "Infant Feeding Practices among HIV-Positive Women in Enugu, Nigeria." *British Journal of Medicine & Medical Research Anguilla* 8 (123): 61–68. https://doi.org/10.9734/BJMMR/2015/16980.

Lasuba, Anthony Yousepha. 2016. "Moland KM, de Paoli MM, Sellen DW, et Al. Breastfeeding and HIV, Experience from a Decade of Preventions of Postnatal HIV Transmission in Sub Saharan Africa. Int Breastfeed J. 2010;5:10." *South Sudan Medical Journal* 9 (3): 56–59.

Lawani, Lucky O., Azubuike K. Onyebuchi, Chukwuemeka A. Iyoke, Robinson C. Onoh, and Peter O. Nkwo. 2014. "The Challenges of Adherence to Infant Feeding Choices in Prevention of Mother-to-Child Transmission of HIV Infections in South East Nigeria." *Patient Preference and Adherence* 8: 377–81. https://doi.org/10.2147/PPA.S61796.

Mirutse, Meskel, Alem Desta, and Hagos Amare. 2014. "Infant Feeding Practice of HIV Positive Mothers and Its Determinants in Public Health Institutions in Central Zone, Tigray Region, Northern Ethiopia." *International Journal of Pharma Science and Research* 5 (12): 919–26.

Ngwende, Stella, Notion T. Gombe, Stanley Midzi, Mufuta Tshimanga, Gerald Shambira, and Addmore Chadambuka. 2013. "Factors Associated with HIV Infection among Children Born to Mothers on the Prevention of Mother to Child Transmission Programme at Chitungwiza Hospital, Zimbabwe, 2008." *BMC Public Health* 13 (1). https://doi.org/10.1186/1471-2458-13-1181.

Olatona, F A, O N Ginigeme, A A Roberts, E O Amu, Olatona FA, Ginigeme ON, Roberts AA, and Amu EO. 2014. "Infant Feeding Practices in the First Six Months of Life among HIV Positive Mothers Attending Teaching Hospitals in Lagos , Nigeria." *Niger J Paed* 41 (1): 64–69. https://doi.org/10.4314/njp.v41i1.

Omwenga, Joshua Mose, Jeremy Murithinjiru, and Hamson Omae Nyabera. 2016. "Determinants of Infant Feeding Practices Among Hiv-Positive Mothers Attending Comprehensive Care Clinic At Ahero Sub-County Hospital , Kenya." *International Journal of Novel Research in Healthcare and Nursing* 3 (3): 127–35.

Onubogu, Chinyere U., E. F. Ugochukwu, I. Egbuonu, and I. N. Onyeka. 2015. "Adherence to Infant-Feeding Choices by HIV-Infected Mothers at a Nigerian Tertiary Hospital: The Pre-'Rapid Advice' Experience." *South African Journal of Clinical Nutrition* 28 (4): 180–86. https://doi.org/10.1080/16070658.2015.11734558.

Petraro, Paul, Christopher Duggan, Gernard Msamanga, Karen E. Peterson, Donna Spiegelman, and Wafaie Fawzi. 2011. "Predictors of Breastfeeding Cessation among HIV-Infected Women in Dar Es Salaam, Tanzania." *Maternal and Child Nutrition* 7 (3): 273–83. https://doi.org/10.1111/j.1740-8709.2009.00236.x.

Setegn, Tesfaye, Tefera Belachew, Mulusew Gerbaba, Kebede Deribe, Amare Deribew, and Sibhatu Biadgilign. 2012. "Factors Associated with Exclusive Breastfeeding Practices among Mothers in Goba District , South East Ethiopia : A Cross-Sectional Study." *International Breastfeeding Journal* 7 (17): 1–8.

Setegn, Tesfaye, Demewoz Haile, and Sibhatu Biadgilign. 2015. "Adherence to WHO Breastfeeding Guidelines among HIV Positive Mothers in Southern Ethiopia: Implication for Intervention." *Pediatric Health, Medicine and Therapeutics* 6: 87–92. https://doi.org/10.2147/PHMT.S82356.

South Africa National Department of Health. 2016. *Annual Report 2015-2016*.

South African National Department of Health. 2015. National Consolidated Guidelines for the Prevention of Mother-To-Child Transmission of HIV (PMTCT) and the Managment of HIV in Children, Adolescents and Adults. DEPARTMENT OF HEALTH SOUTH AFRICA.

Tembo, C, MC Ngoma, M Maimbolwa, and A Akakandelwa. 2015. "Exclusive Breast Feeding Practice in Zambia." *Medical Journal of Zambia* 42 (3): 124–29.

Williams, Anne M., Caroline Chantry, Eveline L. Geubbels, Astha K. Ramaiya, Aloisia I. Shemdoe, Daniel J. Tancredi, and Sera L. Young. 2016. "Breastfeeding and Complementary Feeding Practices among HIV-Exposed Infants in Coastal Tanzania." *Journal of Human Lactation* 32 (1): 112–22. https://doi.org/10.1177/0890334415618412.

World Health Organization (WHO), UNICEF. 2016. "Guideline: Updates on HIV and Infant Feeding: Duration of Breastfeeding, and Support from Health Services to Improve Feeding Practices among Mothers Living with HIV." *Who Publications*.

Experiences of Professional Nurses Performing HIV Counselling and Testing at Primary Health Care Clinics in the Rural Eastern Cape

AN Madolo
Walter Sisulu University,
Faculty of Health Sciences,
Department of Nursing
amadolo@wsu.ac.za

J Strumpher
Nelson Mandela University,
South Africa

E Ricks
Nelson Mandela University,
South Africa

Abstract

HIV counselling and testing (HCT) is a counselling programme that caters for individuals who want to check their HIV status. The research objectives were to explore and describe how professional nurses experience the provision of HCT services to patients attending PHC clinics in the rural Eastern Cape. To determine how well professional nurses cope emotionally with being involved with HCT on a long–term basis. The study was conducted at clinics that do HCT at King Sabatha Dalindyebo (KSD) and Sarah Baartman District in the Eastern Cape. The study subjects consisted of all professional nurses performing HCT in PHC clinics A qualitative, explorative, descriptive and contextual design was used. Data was collected using semi structured interviews. Data analysis was conducted simultaneously with data collection. Findings revealed that nurses were feeling overwhelmed by the number of HCT they were required to perform. They experienced stress, frustration and despair. This paper advocates that all professionals working with HCT, such as PHC nurses, should be made aware of the emotional impact they can experience doing HCT daily and being exposed to stress may affect emotional and mental health of individuals. A similar study could focus on developing a programme for health services other than rural health services to assist them to cope better with HCT.

Keywords: Experiences, HIV counselling and testing, Primary Healthcare clinics, Professional nurses

Introduction

HIV/AIDS is a worldwide disease that has claimed more than 35 million lives. Globally, there were approximately 36.7 million people with HIV at the end of 2016, with 1,5 million people becoming newly infected in 2016 (CDC,2018). In mid-2017,

20.9 million people living with HIV globally were receiving ART. HIV continues to be a major global public health issue in 2017 an estimated 36.9 million were living with HIV including 1.8 million children with a global HIV prevalence of 0.8% among adults. Around 25% of these same people do not know that they have the virus (UNAIDS, 2017).

The Department of Health (DOH) provides an HIV counselling and testing (HCT) service to patients so that they may know their HIV status and adapt their behaviours and lifestyles (NDoH, 2017). As part of the service, the nurse will suggest to clients that they undertake a blood test to determine their HIV status. When a patient is found to be HIV-positive, both the client and the nurse may find the situation emotionally challenging. When the test done in a rural primary healthcare (PHC) there is a very good chance that the professional nurse imparting the news knows the client on a personal as well as a professional level. For this reason, the impact of HIV/AIDS may affect personnel who are directly involved with HCT.

Research Aim and Objective

The aim of this paper is to describe the experiences of professional nurses involved in the performance of HCT in rural primary healthcare clinics in the Eastern Cape.

Research Objectives

To explore and describe how professional nurses experience the provision of HCT services to patients attending PHC clinics in the rural Eastern Cape.

Methodology

The research study was developed using a qualitative, explorative, descriptive, and contextual design. The research methods comprised a description of the target population, sampling technique, and methods of data gathering as well as how the data was analysed (Brink, van der Walt, and van Rensburg, 2018).

Findings

Two themes and 14 subthemes emerged after data analysis. Theme 1 highlighted that participants felt that implementing the Department of Health's policy for HCT in rural clinics caused them to feel overwhelmed with responsibility due to the large numbers of patients needing care and counselling. The participants expressed various experiences such as the provision of HCT as being time consuming and demanding, ethical dilemmas, lack of resources, knowledge and support from management as adding to the feeling of being overwhelmed.

In theme 2, registered nurses described a range of emotions they experienced in being involved with HCT. The registered nurses were trying to cope with situations

regarding their work as well as stressful working conditions. The emotions experienced by the participants included stress, sadness, despair, and frustration.

Limitations

The results of this study cannot be generalised to all rural clinics in South Africa because a qualitative study was conducted using only two districts in the Eastern Cape. The qualitative study means that the information given only reflects on the participants working in these district municipalities.

Conclusions and Recommendations

The conclusion that was drawn from the study was that HCT is emotionally overwhelming for the registered nurses. The client demands affect the emotional status of the nurse leading to emotional discomfort. The recommendations include the fact that all professionals working with HCT, such as primary health care nurses should be made aware of the emotional impact they can experience doing HCT every day and being exposed to stress may affect emotional and mental health of individuals. Workshops on emotional and mental health should be made available to health professionals working with HCT to make them aware of the discomfort they are likely to encounter.

References

Brink, H., van der Walt, C. and Van Rensburg, G. (2018). Fundamentals of research methodology for healthcare professionals. 4th edition. Cape Town. South Africa. Juta

Centre for Disease Control (CDC). 2018. About HIV/AIDS. HIV basics [Online] Centres for Disease Control and prevention. [Online] Available at https://www.cdc.gov/hiv/basics/whatishiv.httlm.accessed 04.07.2019.

National Department of Health. (2017). South African HIV Self –Testing policy and guidance considerations. A supplement to the National HIV Testing Services policy 2016. https://sahiv.org/files/self% 20 testing. Guidelines-2017 WEB.pdf. accessed 04.07.2019.

UNAIDS, 2018. Global HIV statistics. https://www.hiv.gov/hiv-basics/overview/data and trends/global-statistics. Accessed 04.07.2019.

UNAIDS. 2017. HIV/AIDS in South Africa [Online] Available at https://.avert.org/professionals/hiv-aroundworld/sub-saharan-africa/south-africa. Accessed 04.07.2019.

Knowledge of HIV/AIDS and Sexual Behaviour among Young Women Aged 18 to 24 Years in Tshwane Sub District of Gauteng Province

JK Kwenje
Department of Public Health, Sefako Makgatho Health Science University

MN Mogale
Department of Public Health, Sefako Makgatho Health Science University

M Huma
Department of Public Health, Sefako Makgatho Health Science University

Aim and Objective

To determine the level of knowledge of HIV/AIDS, STI's as well as the sexual behaviour among young women aged 18–24 years in Tshwane.

Methodology

Study design

A quantitative cross-sectional survey was conducted in Tshwane youth-friendly health facilities. Self-administered questionnaires were completed by 400 young women.

Study subject

Young women aged 18 to 24 years.

Place of study (setting)

The study was conducted in primary health care facilities that offer youth-friendly services in Tshwane.

Findings

High knowledge scores for HIV/AIDS, STI's and sexual behaviour were noted. Majority had poor practices and misconceptions about prevention and transmission methods of HIV/AIDS. Despite high knowledge on STI's there were some self-reported incidences. Consequently, young people engaged in risky sexual practices such as early sexual debut at 10-12 years of age and inconsistent condom use.

Limitations

Only respondents who were willing to fill the questionnaire could participate, with no guarantee that the participants unwilling to participate had similar levels of HIV/AIDS knowledge.

Conclusions

The findings suggest that there is high accurate knowledge on HIV/AIDS and STI's transmission and prevention, but there are still gaps and misconceptions identified in some areas of HIV/AIDS and STI's that still need improvement.

Recommendations

There is a need to improve the sexual health education and prevention programmes in schools and in health care facilities to breach some of the knowledge gaps and correcting the misconceptions that were identified.

Correct knowledge of HIV and STIs does not translate to safer sex practices among in and out of school youth in Gauteng

K Kwenje
Sefako Makgatho Health Science University,
School of Public Health
kkmapens@gmail.com

M Huma
Sefako Makgatho Health Science University
School of Public Health

Abstract

Human Immunodeficiency Virus (HIV) including Sexually transmitted infections (STI's), and risky sexual behaviour affect sexually active young people. Correct knowledge of HIV and STIs does not translate to safer sex practices among youth. The aim of the study is to determine the relationship between knowledge of HIV, STIs and safe sex among youth. In a quantitative cross-sectional survey, a total sample of 400 young women aged 18-24 years old from four health care facilities rendering youth-friendly services in Tshwane District, Gauteng province were recruited to take part in the study. The self-administered questionnaire was designed to measure the levels of HIV, STIs knowledge and the safe sex practices. They indicated high knowledge scores for HIV/AIDS was (90%) of the participants while the lowest response rate indicated 10%, while 97% of the participants demonstrated high knowledge on transmission and prevention of HIV. Despite high knowledge on STI's, some of the participants self-reported to have had STIs. Consequently, young people engaged in risky sexual practices such as early sexual debut at 10-12 years of age and inconsistent condom use. The main source of HIV information was schools. The findings suggest strong evidence that there is a need to improve the sexual health education and prevention programmes in schools and in health care facilities through the young friendly services to breach some of the knowledge gaps and correcting the misconceptions that were identified.

Introduction

The transmission of human immunodeficiency (HIV) is one of the biggest challenges in the public health care system and is currently a significant threat in Africa and around the world (UNAIDS, 2016). HIV/AIDS continues to be a major global health challenge affecting approximately 36.7 million people worldwide, with approximately 2.6 million people newly infected with Human Immunodeficiency Virus (HIV). (UNAIDS, 2016). South Africa has a generalised and a maturing HIV/AIDS epidemic, with the highest number of people (7.1 million) living with HIV in the world

(UNAIDS, 2016). According to the UNAIDS, (2006) report on the global AIDS epidemic, 50% of people living with HIV were infected during adolescence and young adulthood. Sexually transmitted infections remain a public health burden with over one million males and females who were treated for new STI episodes in 2014 globally (World Health Organization, 2013). The prevalence of STIs in South Africa is higher when compared to other African countries accounting for 11 million cases being treated annually. According to WHO (2013), STIs are markers of unprotected sex and contribute to the transmission of HIV (WHO, 2013).

Although efforts have been made to increase awareness of HIV/AIDS and STI's, risky sexual behaviour among young people continues to be documented in studies conducted in South Africa (Shisana et al., 2014, Dellar et al., 2015; Menna et al., 2015;). Out of school youth is particularly vulnerable to HIV and STI infection because of the physical, psychological, social and economic attributes of adolescence and that are at risk due to the high levels of risky sexual behaviour, the attitudes, expectations and limitations of the society they grow up in (Oladepo and Fayemi, 2011). Among young people, the age group 15-24 years is the one that is most affected; and adolescent girls and young women are the most vulnerable to HIV and have up to eight times more infection than their male peers (Shisana et al., 2014, Dellar et al.,2015; Menna et al., 2015;). Therefore, there is a need to focus research establishing the level of knowledge about HIV/AIDS, sexual behaviour and STI's among young women. This will enable young women to make responsible decisions concerning HIV before they reach adulthood.

Methods

Ethics

Ethical approval was obtained from the School of Health Care Sciences Research Committee (SHCSRC) (Reference number SMUREC/H/167/2016: PG) and the Sefako Makgatho Health Sciences University research ethics committee (SMUREC), and a formal permission to conduct the study was obtained from Tshwane District Health Research Committee (PROJECT NUMBER 51/2016). Furthermore, all the clinics that participated in the study provided approval prior. Participation in the study was voluntary and anonymous.

Study Design

The study employed a cross-sectional survey using a quantitative approach to determine the level of knowledge about HIV/AIDS, STI's and sexual behaviour among young women aged 18-24 years in Tshwane Sub-district, Gauteng. Data collection was carried out over a period of five and half months from mid-April to September 2017.

Setting, Sampling and Population

The convenience sampling was used to select the targeted population of (n=400) young women aged 18-24 years who are making use of youth-friendly service centres. All the users of the youth-friendly services were approached as they enter the facility in Tshwane District, Gauteng.

Data collection tool

The questionnaire was adopted based on the previous questionnaire used by Mlingo (2012), Madiba and Mokgatle (2015) and modified according to the objectives of this study amongst a similar population and setting. It was developed in English and translated in Setswana to ensure that participants can respond to the questions in the language they understand. The multiple choices with closed-ended questions about HIV/AIDS, STIs knowledge were used to determine participant's knowledge on HIV/AIDS and STIs, and lastly sexual risk behaviour. All completed questionnaires were stored away in a locked cabinet. Cross checking of the questionnaire for completeness was done by the researcher before the participants left the interview room.

Data Analysis

Raw data was captured using the Microsoft excel spreadsheet (Microsoft Office 2007) and imported into STATA software version 13 (STATA) for analysis and to calculate the proportions and the significance levels. Data was coded, cleaned, checked for quality and validated. Descriptive statistics were computed for frequency distributions to analyze and interpret the mean, median, standard deviations, ratio variables and the demographic characteristics. Univariate analysis was performed where variables are analysed separately.

The 2x2 table was used in a bivariate and logistic regression analysis were used to determine associations between the socio-demographic characteristics of the participants as independent variables while knowledge of HIV/AIDS, STI's and sexual behaviour will be dependent variables. The results were reported using the odd ratio and Confidence interval (CI) was set at 95%, and the p-value was set at 0.05% and was considered as statistically significant.

Results

Demographic Characteristics of participants

The demographic characteristics of the girls and young women aged 18-24 years are presented below. These include characteristics such as age, marital status, religion, educational level, employment status. A total of 400 girls and young women from the four clinics were recruited to participate in the study. The mean age among the participants was 20.8 years (SD = 1.86), with a minimum age of 18 years and maximum age of 24 years. For marital status 95% (n=378) of the participants were

single and 1.5% married; this is the same for the divorced. More than half of the participants 56% (n= 222) were students. Unemployment rate was very high with 35% (n=139) reporting to be unemployed at the time of the study. Reportedly, majority 94.3% (n=377) of the participants were Christians.

Table 1: Socio-Demographic Characteristics of the Participants (n=400)

Source of information

Variable	**N (%)**
Age	
18–19 yrs	109 (27.46)
20–21 yrs	139 (35.01)
22–23 yrs	149 (37.53)
Marital Status	
Single	378 (95)
Married	6 (1.5)
Divorced	6 (1.5)
Living together	10 (2.5)
Religion	
Christian	377 (94.3)
Moslem	1 (0.3)
Hindu	5 (1.3)
Other	17 (4.3)
Educational level	
Primary	6 (1.5)
Secondary	21 (5)
High School	158 (39.5)
College	132 (33)
University	53 (13)
Employment Status	
Student	222 (56)
Employed	35 (8.8)
Unemployed	139 (35)
Self employed	3 (0.8)
Missing	1 (0.3)

The entire participants 100% (n=400) had heard of HIV/AIDS as presented in table: 4.3. The school 55% (n=219) was the most frequently mentioned source of information. Clinic 43% (n=170) and media 13% (n=50) were also common source of information.

Table 2: Source of information

Source of information	N (%)
School	219 (55)
Clinic	170 (43)
Media	50 (13)
Church	1 (1.25)

Knowledge of HIV

The results suggest that the highest score obtained on knowledge was (90%) of the participants while the lowest response rate indicated 10%. Although all the participants heard about HIV/AIDS, when asked the meaning of common HIV and AIDS concepts 67% (N = 269) knew the meaning of HIV, while 30.8% (n = 123) did not know that HIV means Human Acquired Virus. Of the participants 35% (n = 138) knew the meaning of AIDS, while 63.5% (n = 254) did not know that AIDS means Acquired Immunodeficiency syndrome.

Table 3: Response to HIV knowledge (n =400)

Variable	Correct	Incorrect
HIV is the virus that cause AIDS (True)	92(n=368)	5.8(n=23)
There is no cure for HIV currently (True)	79(n=317)	16.8(n=67)
Having STI's can increase a person's risk of getting HIV (True)	87(n=348)	9.5(n=38)
A healthy-looking person can have HIV (True)	90(n=361)	7.0(n=28)
Having multiple partners increases risk of getting HIV (True)	90(n=360)	5.3(n=21)
Meaning of HIV	67(n=269)	30.8(n=123)
Meaning of AIDS	35(n=138)	63.5(n=254)

Knowledge about transmission mode

The proportion of respondents who provided correct answers to the questions on a mode of transmission is presented in Table 3. The study showed high total score of 97% on the modes of transmission. Although the results are high, the transmission of mother to child showed scored below 80%.

Table 4: Responses to HIV transmission mode (n = 400)

Knowledge about modes of transmission	Correct	Incorrect	Missing
Pregnant HIV positive women can transmit HIV to her baby (True)	72.8(n=291)	24.0(n=291)	3.3(n-13
Mother HIV positive can infect the child through breastfeeding (True)	76.3(n=305)	19.5(n=78)	4.3(n=17)
HIV can be transmitted by sexual intercourse (True)	90.5(n=363)	6.5(n=26)	2.8(n=11)
HIV can be transmitted by sharing needles and syringes (True)	89.0(n=365)	8.5(n=34)	2.5(n=10)
HIV can be transmitted by transfusion (True)	85.8(n=343)	10.8(n=43)	3.5(n=14)
HIV can be transmitted by drinking from same glass of HIV positive person (False)	88.8(n=355)	9.3(n=37)	2.0(n=8)
HIV can be transmitted by sharing toilet with HIV positive person (False)	89.5(n=358)	6.0(n=24)	4.3(n=17)

STIs knowledge

The findings of this study indicated that knowledge about STI's was high, of the participants 70% (n=280). Knew the common STI's, while 75 % (n=299) knew that STI's increases the risk of HIV transmission; however, 84% (n=337) knew that STI's can be prevented. 27% (n=108) of the participants self-reported to have had STI's.

Table 5: STIs Knowledge (n =400)

Variable	Yes	No	Don't know
STI's increase HIV risk	74.8(n=299)	7.0(n=28)	15.5(n=62)
Any common STI's	70.0(n=280)	17.8(n=71)	8.0(n=32)
STI's preventable	84.3(n=337)	4.3(n=17)	8.3(n=33)
Ever had STI's	27.0(n=108)	67.0(n=268)	3.3(n=13)

Sexual behaviour of youth

The study results cover indicates the likelihood of the participants contracting HIV and other sexually transmitted infections because of some of the sexually risky behaviour which were identified in this study. The results suggest that off the participants 74.5% (n=298) had already engaged in a sexual relationship, while 94.8% (n=379) have never had sexual intercourse, whilst 3.3% (n=13) reported to have not

engaged in sexual intercourse. 87% (n=348) reported that they do discuss sex matters with their partners; about 93% (n=372) knew that unprotected sex increases the risk of HIV/AIDS, of the responded 82% (n=329) knew that young women are at risk of HIV/AIDS.

Table 6: Sexual Behaviour (n = 400)

Variable	**Yes**	**No**	**Don't know**	**Missing**
Engaged in sexual relationship	74.5(n=298)	20.3(n=81)	3.8(n=15)	1.5(n=6)
Ever have sexual intercourse	94.8(n=379)	3.3(n=13)		2(n=8)
Discuss sex matters with partner	87(n=348)	7.3(n=29)	2.8(n=11)	3(n=12)
Unprotected sex increase risk of HIV/AIDS	93(n=372)	2.5(n=10)	2(n=8)	2.5(10)
Are Young women at risk of HIV/AIDS	82.3(n=329)	7.8(n=31)	7.5(n=30)	2.5(n=10)

Condom use

The results indicated that condom was inconsistently used, despite high knowledge of different use of them. Of the respondents, 78.5% (n=314) reported having used the condom first time they had sex, whilst 17.8% (n=70) reported to have not used it. About 82% (n = 328) reported to have ever used condoms during sex, 13% (n = 53) did not use them. Of the respondents 52% (n = 208) reported to have used the condoms during their last sex engagement, 44% (N = 174) did not use them. 81% (n=324) reported that they could propose condom use with their partners.

Table 7: Difference use of condoms (n = 400).

Variable	**Yes**	**No**	**Don't know**	**Missing**
Used condom the first time had sex	78.5(n=314)	17.5(n=70)	1(n=4)	3(n=12)
Ever used condom during sexual intercourse	82(n=328)	13.3(n=53)	1.8(n=7)	3(n=12)
Did use condom last sexual act	52(n=208)	43.5(n=174)	1(n=4)	3.5(n=14)
Can young women propose condom use to their partners	81(n=324)	9(n=36)	7(n=28)	3(n=12)

Discussion

The results indicated high knowledge scores for HIV/AIDS, STI's and sexual behaviour, although most young people had poor practices towards HIV/AIDS and that there were misconceptions about prevention and transmission methods of HIV. Despite high knowledge on STI's, of the participants self-reported to have had STIs. Consequently, young people engaged in risky sexual practices. The results of the study were comparable to other studies which reported similar results (Mlingo., et al., 2012; Oljira et al., 2013; Oppong and Oti-Boadi, 2013, Mulu et al.,2014, Madiba and Mokgatle, 2015).

Knowledge about HIV/AIDS

The results of this study indicated that the knowledge scores of 90% which is high. The high knowledge in this current study is similar to other studies conducted among high school and university students in Nigeria, Zimbabwe and South Africa that observed high levels of knowledge attributed to the HIV/AIDS campaigns and educational programmes that were implemented over the years (Durojaiye, 2011; Mlingo, 2012, Madiba and Mokgatle, 2015). In South Africa, high levels of HIV knowledge could be attributed to, amongst others, the life orientation curriculum, which has been compulsory course in Grades 8 to 12 since 1999. This study results had found that participants in high schools were more likely to have high knowledge scores compared to other institutions like colleges and universities. These findings are encouraging for the educational programmes for high schools in South Africa, because HIV knowledge among young people increases with age and level of education (George, 2006, Mulu et al., 2014).

The study indicated a high level of awareness of HIV/AIDS among the participants as 100% had heard of HIV/AIDS which is comparable with the other survey conducted by Mlingo (2012), where all of their participants have heard of HIV/AIDS, but still had lack of knowledge, however there was inconsistent level of HIV knowledge among the young women as they were knowledgeable about various mode of HIV transmission and prevention measures but they had low level of knowledge on whether there is currently cure of HIV/AIDS as reflected by 16.8% of the participants who did not know of HIV/AIDS cure. Based on findings that of the participants who did not know of HIV/AIDS cure, this is the area that requires attention so that young people can be provided with more information and education about the prevention interventions as well as the modes of HIV transmission (Mulu et al., 2014).

The results also reflected some confusion about the differences between HIV/AIDS, for example, of the participant's knowledge about the meaning of HIV /AIDS were low, this finding was affirmed by studies conducted by Mlingo (2012), Asante et al.,(2013); Madiba and Mokgatle (2015) which reported that not all the respondents could answer this question correctly. However, if the HIV/AIDS programme had been fully effective, all the participants should have known these basic concepts of

HIV/AIDS. 7% were of view that one can determine HIV status by simply looking at a person; while19.5% did not know that a pregnant woman can transmit HIV to her baby. These findings were comparable to studies conducted in Bahamas and Zimbabwe by Mlingo (2012) and Pinder-Butler et al., (2013) which reported that of the respondents were not sure if a healthy-looking HIV infected person could transmit the HIV infection to others. This finding poses a concern as evidence have shown that people with HIV infection can remain asymptomatic for several months and years before developing to AIDS but still transmit the infection to others (Cichicki, 2017).

Off the participants who believed that the positive pregnant women could not infect their unborn baby, most of the respondents did not know these basic facts, and this is an indication of the shortcoming in the HIV/AIDS prevention programme. It might be also attributable to them not being exposed to the prevention of mother to child transmission (PMTCT) programme and this is an area that requires attention. This finding was affirmed by the study conducted in Zimbabwe (Musozvingoza, 2012).

The findings of this study indicated good awareness about the mode of transmission and prevention among young women and girls, for example, almost the participants were aware of the link between high risk behaviour such as having multiple sexual partners increases HIV. Consistent with other studies, participants were knowledgeable that multiple sexual partnerships are a risky behaviour which can lead them to contract HIV and STIs (Zuma et al., 2010, Mulu et al., 2013).

Sex was mentioned by almost all of the participants as the most common method of HIV transmission, this finding was comparable with finding of the studies conducted by Lindasy (2001) and Pinder Butler et al., (2013) which reported that most of the participants indicated that unprotected sexual intercourse is the most common mode of transmission of HIV worldwide.

The results in this study reflect that some of the participants were not conversant with the blood transfusion regulation in South Africa as it is illustrated by not knowing transmission through blood transfusion, However this finding concurs with the result of the study by Mlingo (2012) which reported that of the learners were knowledgeable about transmission methods of HIV, however they seemed to lack knowledge about transmission through blood transfusion and traditional tattooing. This poses a concern because it indicates limited knowledge about cross infection.

The participants believed drinking from the same glass of the HIV positive person and sharing a toilet facility could transmit HIV, most answered correctly, the responses are a translation of high knowledge of transmission and prevention, these finding concurs with the studies done by Mlingo (2012); Christiane et al., (2013); Mulu et al., (2014), Madiba and Mokgatle (2015).

Knowledge and incidence of STI's

STI's including HIV can be controlled by reducing the risk of transmission by encouraging the young people to use condoms consistently and correctly and, reducing the rate of sexual partner change. The study results found that even though three times as many of the participants knew that STI's can be prevented, one third reported to have had STI's which can put them at risk of contracting HIV. Contrary with other studies participants knew that HIV/AIDS is linked to STI's. However, the striking finding was the poor knowledge regarding the common signs and symptoms of STI's and the risk of HIV infection which is associated with the acquisition of STI's. This is of concern as untreated STI's co-infections pose considerable health threats to people living with HIV and AIDS when they are immune compromised, as co-occurring STI's are reported to be more difficult to treat (Kalichman et al., 2011).Consistent with other studies which reported that despite the awareness about STI's and the other methods of HIV and STI's prevention, poor knowledge about STIs was documented Shiferaw et al., (2011), Pelzer and Matseke (2013); Rositch et al., (2013); Danielson et al., (2014).

Education is essential to assist young people to make informed decisions about their sexual health. Knowledge about the level of prevention method of STI's was high for other factors and this finding indicated that there are still gaps as reflected by 25.8% of the respondents who did not know any common STI's. Therefore, this is risky as they will not seek medical attention and will spread the infection.

Sexual behaviour

The study findings indicated that most of the participants were engaged in a sexual relationship and reported to have had sexual intercourse with their respective sexual partners. The study also found that young people are exposed to risky sexual behaviour as shown by 2% of young women who had early sexual debut between the ages of 10 to 12. These results concur with the results reported by Fenni and Laas (2014), of that sexual debut occurred from the age of 12 years in the study they conducted. The results of this study are encouraging as illustrated by delay sexual debut which occurred late between the ages of 16 to 18 years for the example used. This can be the effectiveness of the awareness campaigns and the life orientation programmes introduced in South African schools.

The study found that there was high level of condom use as identified in different uses of it, inconsistent condom was highlighted. The same was highlighted by Mlingo (2012); Peltzer and Matseke (2013); Nyembezi et al., (2014) who also found inconsistent condom use with a transactional partner. The study results are encouraging as the participants indicated to be able to propose condom use with their partners, it is an indication that the awareness programmes, prevention programmes and the educational programmes are effective and plays a major role in the

dissemination of prevention interventions. In addition, this is sign that the young women are taking responsibility of their health.

This study finding indicates that the respondents were still engaging in risky sexual behaviour as demonstrated by inconsistent use of condoms during their sexual encounter. Similarly, Vujovic et al., (2014) in the study among adolescents in South Africa reported that of the participants did not know how to use both male and female condoms, and also highlighted that it was embarrassing for them to collect condoms at the clinics as they did not wanted that their peers should know that they were sexually active, this actions will lead them to engage in risky sexual behaviour. Failure to use condoms among young women exposes them to unplanned pregnancies and the risks of contracting STI's and HIV infections. This finding shows the importance of condom awareness campaigns to communicate the condom demonstration and use.

Limitations of the study

Only respondents who were willing to fill the questionnaire could participate in this study. There can be no guarantee that the participants unwilling to fill in the questionnaire had similar levels of HIV/AIDS knowledge. As convenience sample was used, whereby 400 agreed to participate. Convenience sampling is prone to self-selection; therefore, the result could not be generalised to the whole population. Some of the variables had missing values which make the analysis not appropriately responded too. The other limitation was the measurement of continuous condom use pattern, for example, inconsistent and correct condom use. There was potential for participants to give socially desirable responses, even though medical jargons were not used. Therefore, future studies should be conducted in different areas whereby different races should be included.

Conclusion

In conclusion the findings suggest that there is high accurate knowledge on HIV/AIDS and STI's transmission and prevention, but there are still gaps and misconceptions identified in some areas of HIV/AIDS and STI's that still need improvement. There is a need to improve the sexual health education and prevention programmes in schools and in health care facilities through the young friendly services to breach some of the knowledge gaps and correcting the misconceptions that were identified. Based on the high knowledge indicated by learners who are still in schools, therefore the schools remain the best option place to implement the specific and focused educational programmes to empower the young people with information and safe sexual behaviour to prevent HIV/AIDS and STI's transmissions at an early age. Although the school HIV and AIDS programme had achieved some form of successes, its impact could be improved. This study finding will assist to inform the development of the appropriate health education and prevention interventions.

Recommendations

In line with the findings from this study, the following recommendations are made:

Since the source of information for most of the participants was from schools, school-based programmes should be sustained, improved and expanded. The school programme should also emphasise the basic meaning of HIV and AIDS and should ensure that the respondents know the correct HIV/AIDS and STI's transmission and prevention modes. Promotion of abstinence and delayed sexual activity to be highlighted in the HIV/AIDS programmes. Educational programme and interventions must not focus on only the content of what is discussed but also the process of how it is discussed.

The clinics being the second most popular source of information in this study, the national HIV/AIDS programmes should focus on combination prevention interventions with the aim of assisting the young women to be able to make informed decisions regarding their sexual health. Youth friendly services centres should be established in all health care facilities and the existing once to be strengthened to enable the young people to access services. Youth health programme to be peer lead so that it gives young people opportunities to explore with their peers, also encouragement and strengthening of parent–child communication as one of the strategies can assist to prevent or reduce risky sexual behaviour among adolescents. It is imported to empower these girls and young women with proper information so that they can protect themselves and their sexual partners. However, further studies to ascertain this are warranted.

Promotion of combination of HIV prevention interventions to be strengthened which includes biomedical intervention addressing the condom strategies such as condom distribution and demonstration on the how to use female and male condoms; and behavioural and structural interventions which can address the behavioural changes for young women. If HIV and STI's prevention information is targeted at young people who adopt preventive sexual behaviour, there is likelihood of lowering HIV/AIDS and STI's rates up to adulthood. They should be encouraged to delay sexual debut, avoiding sexual relations between young women and elder men, and having multiple sexual partners.

Further assessment is needed, perhaps utilizing a mix method of qualitative and quantitative methods, which may provide additional information about the behaviour patterns of young women, which can allow for the development of appropriate prevention interventions. The periodic national survey to be conducted to assess the effectiveness of the educational and health prevention interventions, as is done by Human Science Research council (HSRC) every 3-4 years.

References

Asante, K. O., Boafo, I. M., & Nyamekye, M. (2014). Identifying gender differences in ghanaian university students' sexual practices, attitudes and knowledge regarding hiv. *Journal of Psychology*, *5*(1), 9-18.

Cichocki, M. (2017). Living with HIV: a patient's guide. McFarland.

Christiane, N. A., Roger, Z. M., & Masika, J. (2014). HIV/AIDS prevalence, knowledge, attitudes and related behaviours among young people in Libreville, Gabon. *IOSR Journal of Humanities and Social Science*, *19*(1), 59-65.

Danielson, C. K., Walsh, K., McCauley, J., Ruggiero, K. J., Brown, J. L., Sales, J. M., & DiClemente, R. J. (2014). HIV-related sexual risk behaviour among African American adolescent girls. *Journal of Women's Health*, *23*(5), 413-419.

Dellar, R. C., Dlamini, S., & Karim, Q. A. (2015). Adolescent girls and young women: key populations for HIV epidemic control. *Journal of the International AIDS Society*, *18*(2S1).

Durojaiye, O. C. (2011). Knowledge, attitude and practice of HIV/AIDS: Behavior change among tertiary education students in Lagos, Nigeria. *Annals of Tropical Medicine and Public Health*, *4*(1), 18.

Fennie, T., & Laas, A. (2014). HIV/AIDS-related knowledge, attitudes and risky sexual behaviour among a sample of South African university students. *Gender and Behaviour*, *12*(1), 6035-6044.

Kalichman, S. C., Pellowski, J., & Turner, C. (2011). Prevalence of sexually transmitted co-infections in people living with HIV/AIDS: a systematic review with implications for using HIV treatments for prevention. *Sexually Transmitted Infections*, *87*(3), 183-190.

Lindsay, E. 2001: Fact sheets of HIV/AIDS for nurses and midwives. Supplement to the *Africa Journal of Nursing and Midwifery* 3(1), 1-10.

Madiba, S., & Mokgatle, M. (2015). HIV/AIDS-related knowledge and attitudes towards learners infected with HIV among high school learners in Gauteng and North West Provinces in South Africa: perspectives of HIV and AIDS across populations. *African Journal for Physical Health Education, Recreation and Dance*, *21*(Supplement 2), 136-150.

Menna, T., Ali, A., & Worku, A. (2015). The effects of peer education intervention on HIV/AIDS-related sexual behaviours of secondary school students in Addis Ababa, Ethiopia: a quasi-experimental study. *Reproductive Health*, *12*(1), 84.

Mlingo, M., Ehlers, V. J., & Roos, J. (2012). HIV and AIDS knowledge and sexual behaviours amongst secondary school learners in Harare, Zimbabwe. *Health SA Gesondheid (Online)*, *17*(1), 1-9.

Mulu, W., Abera, B., & Yimer, M. (2014). Knowledge, attitude and practices on HIV/AIDS among students of Bahir Dar University. *Science Journal Public Health*, *2*(2), 78-86.

Musizvingoza, R. (2016). Risky sexual behaviour among youth: A case of Mufakose, Harare.

Nyembezi, A., Ruiter, R. A., van den Borne, B., Sifunda, S., Funani, I., & Reddy, P. (2014). Correlates of consistent condom use among recently initiated and traditionally circumcised men in the rural areas of the Eastern Cape Province, South Africa. *BMC Public Health*, *14*(1), 668.

Oladepo, O., & Fayemi, M. M. (2011). Perceptions about sexual abstinence and knowledge of HIV/AIDS prevention among in-school adolescents in a western Nigerian city. *BMC Public Health*, *11*(1), 304.

Oljira, L., Berhane, Y., & Worku, A. (2013). Assessment of comprehensive HIV/AIDS knowledge level among in-school adolescents in eastern Ethiopia. *Journal of the International AIDS Society*, *16*(1-5).

Oppong, A. K., & Oti-Boadi, M. (2013). HIV/AIDS knowledge among undergraduate university students: implications for health education programs in Ghana. *African Health Sciences*, *13*(2), 270-277.

Otokpa, A. O., Lawoyin, T. O., & Asuzu, M. C. (2015). Knowledge on HIV/AIDS and Sexual Risk Behaviour among Pregnant Women in Gwagwalada Area Council of Abuja, Nigeria. *World Journal of Preventive Medicine*, *3*(3), 73-83.

Peltzer, K., & Matseke, G. (2013). Determinants of HIV testing among young people aged 18–24 years in South Africa. *African Health Sciences*, *13*(4), 1012-1020.

Pinder-Butler, S., Frankson, M. A., Hanna-Mahase, C., & Roberts, R. (2013). HIV/AIDS knowledge and sexual behaviour among junior high school students in New Providence, Bahamas. *West Indian Medical Journal.*, *62*(4), 318-322.

Ramjee, G., & Daniels, B. (2013). Women and HIV in sub-Saharan Africa. *AIDS research and therapy*, *10*(1), 30.

Shiferaw, Y., Alemu, A., Girma, A., Getahun, A., Kassa, A., Gashaw, A., & Gelaw, B. (2011). Assessment of knowledge, attitude and risk behaviours towards HIV/AIDS and other sexual transmitted infection among preparatory students of Gondar town, North West Ethiopia. *BMC Research Notes*, *4*(1), 505.

Shisana, O., Rehle, T., Simbayi, L. C., Zuma, K., Jooste, S., Zungu, N., & Onoya, D. (2014). South African national HIV prevalence, incidence and behaviour survey, 2012. Cape Town: HSRC Press.

UNAIDS. (2006). Report on the global Aids epidemic. Geneva: UNAIDS.

Vujovic, M., Struthers, H., Meyersfeld, S., Dlamini, K., & Mabizela, N. (2014). Addressing the sexual and reproductive health needs of young adolescents living with HIV in South Africa. *Children and Youth Services Review, 45*, 122-128.

WHO. (2013).The importance of renewed commitment to STI prevention and control in achieving Global and reproductive health: Avenue Appia 20, CH-1121 Geneva 27 Switzerland.Accessed January2015

Zuma, K., Setswe, G., Ketye, Y., Mzolo, T., Rehle, T. and Mbelle, N., 2010. Age at sexual debut: a determinant of multiple partnerships among South African youth. *African Journal of Reproductive Health*, *14*(2), 47-54.

The Extent of and Reasons for Patients Seeking Treatment at Multiple Local Authority Primary Health Care Clinics in the City of Tshwane

Y Harding
City of Tshwane Municipality Metropolitan,
Pharmaceutical Services

JC Meyer
Sefako Makgatho Health Sciences University,
School of Pharmacy

E Helberg
Sefako Makgatho Health Sciences University,
School of Pharmacy

Introduction

"Clinic-hopping" or patients visiting more than one health facility, whether on the same service level or moving between referral levels, is a well-known phenomenon and very little is published about it in the scientific literature.

"Clinic-hopping" happens internationally, nationally and even locally on a daily basis, yet it remains a topic which is hardly ever investigated or reported on. Patients' behaviour on why this is done, cost implications and the effect it has on already strained National Health Insurance (NHI) schemes internationally and drained health resources, could only be calculated and reported on, if a proper well-maintained central database is in place.

Healthcare providers are solely dependent on the integrity and honesty of the patient to tell them whether or not they are using more than one facility, and what medication they are taking. South Africa is currently faced with the problem that it does not have a central database where patients' visits to different public sector health facilities can be tracked. Currently patients can visit any public health facility being it at Primary Health Care (PHC) or hospital level without the one facility being aware of the other.

Objectives

The objectives of the study were to i) identify patients with multiple files at Local Authority Primary Health Care (LA PHC) clinics in the City of Tshwane Metropolitan, from the central database, RxStation™ currently in use, ii) to investigate the reasons for patients seeking treatment at multiple LA PHC clinics, and iii) to determine the costs of medicines or impact on medicine wastage, obtained in duplicate (or more) from more

than one facility, for patients who seek treatment at multiple LA PHC clinics in the City of Tshwane Metropolitan.

Method

Patients visiting more than one of the LA PHC clinics over the past 2 years, were identified through a two-part descriptive and quantitative study. Part 1 a retrospective review of information from the central database, RxStation™ used by 18 of the LA PHC clinics.

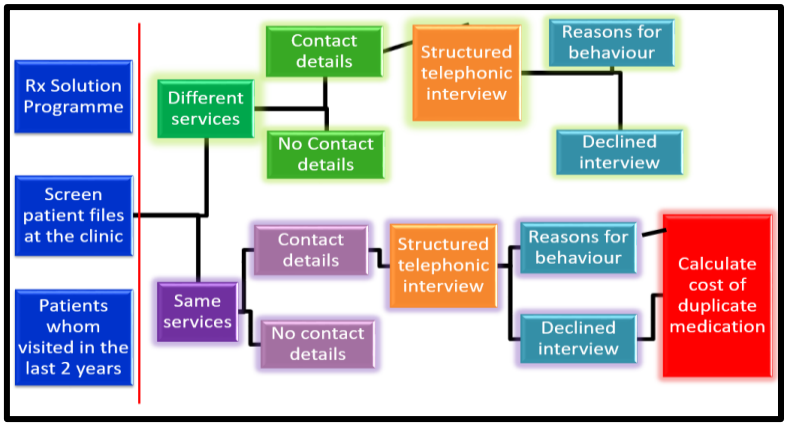

Figure 1: Study design

Part 2 of the study entailed obtaining and reviewing patients' files to obtain accurate information on which medicines were collected, when and at which LA PHC clinics. Patients were contacted and interviewed through a structured telephonic interview, to determine the reasons why they are seeking care at more than one LA PHC clinic. Patients' medicines collected in duplicate were quantified and the cost calculated according to the provincial pricelist received from Auckland Park Medicine Depot.

Results

Patients visiting more than one LA PHC clinic for different services accounted for 88.3% of patients identified, while 11.7% of patients did so for the same services. Of great concern it that a total of 45.3% of all patients identified could not be contacted due to incorrect or incomplete captured patient information. Reasons for patients "clinic-hopping" were: demographic reasons – 84.4%; stigmatisation – 44.3%, medicine availability – 33.3%; long waiting time – 23.6% and unfriendly staff – 9.8%. Patients "clinic-hopping" for the same services contributed to medicines wastage of R4 438.16 per month. Monetarily this does not sound like much but it adds up to an additional 67 patients' monthly medicines per PHC STGs conditions being collected and wasted on a monthly basis.

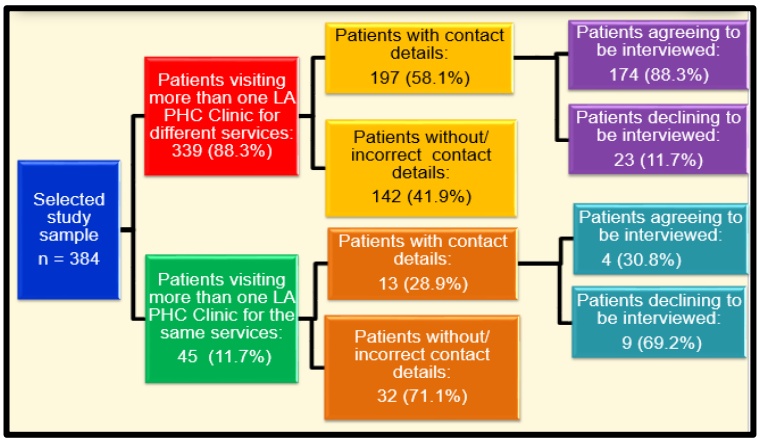

Figure 2: Study Process Results

Conclusion and recommendations

A well-maintained real-time central database will assist in preventing patients from "clinic-hopping" for inappropriate reasons. Such as system will potentially save South Africa millions especially with the current roll out of NHI. The quality and completeness of data captured needs to be addressed and corrected. Training and health education on stigmatisation, patient confidentiality and standard treatment guidelines (STGs) are needed for all healthcare professionals and patients.

Patient care will improve and health professionals will treat patients knowing they have real lifetime information available and ultimately more medicine will be available for patients due to the decrease in medicine wastage.

References

WHO (2017); The SDG Health Price Tag; Geneva; World health Organisation; 2017.

Gray, A, Vawda, Y; Health Policy and Legislation; South African Health Review; 2017; [online]. Available: http://www.hst.org.za/publications/south-african-health-review-2017 [Accessed 17 November 2017]

Jooste, N; CCMDD Electronic Systems: Best practices and data use innovation; Pretoria; Health Systems Trust; 2016.

Naidoo, S; The South African national health insurance: a revolution in health-care delivery!; Journal of Public Health; 2012; vol. 34(1); p149 – 150.

Performance Audit 2015/2016; Performance Audit of the management of pharmaceuticals at departments of health; National department of Health, South Africa; 2017.

Employee Health: A Cross Sectional Study on the Health of Healthcare Workers

C Whyte
University of Pretoria
Department of Public Health Medicine
Pretoria

D Basu
Steve Biko Academic Hospital
Pretoria

Abstract

Health workers are key to service delivery. Their health status and wellbeing is crucial in improving productivity and health outcomes. This research aimed to investigate employee health and wellness programs which cater for the needs of health workers. A total of 600 occupational health records were reviewed over a two-month period at two hospitals within Gauteng. Most healthcare workers were found to be at risk for diseases of lifestyle as evidenced by: high blood pressure readings, raised body mass index and low levels of physical activity. This study provides insight into workplace health and wellness programs, which look into the needs of health workers as employees. It is hoped that by caring for our caregivers, we can make an impact on worker morale, productivity and improve health outcomes.

Keywords: Employee health, wellness programs, health workers

Background

Health workers are key to service delivery within the health system. Their health status and wellbeing is crucial in improving productivity and health outcomes. The legal mandate under the Occupational Health and Safety Act requires medical surveillance procedures to protect the health and safety of employees by screening. This however excludes wellness programs which are a critical factor for increasing the productivity of staff members and is advocated by the International Labour Organization and the World Health Organization (ILO 2013, WHO 2010).

Aim and objectives

To investigate employee health and wellness programs which cater for the needs of health workers in two tertiary/ central hospitals within Gauteng Province.

Methodology

A cross sectional study was conducted using secondary data collected from 01 April 2019 until 30 June 2019 from two departments, namely Human Resources and Occupational Health and Safety services.

A stratified random sampling method was used to calculate the sample size based on the study population from two hospitals (n=6000). The required sample size was 600. Records were randomly chosen from the Occupational Health and Safety department and sick leave data was extracted from the Human Resource department. The variables for the study included demographic, clinical, occupational and social risk factors for health. The study was approved by the ethics committee of the University of Pretoria and hospital management.

Results

The median age of employees was 37 years (IQR 30-47). The majority of the staff members were between 31- 50 years of age (54%) and female (75%). Half of the staff members were nurses (290; 50%) and the other categories of staff included radiology (40; 7%), administration (34; 5.8%), allied health workers (37; 6.3%), doctors (61; 10.4%) and others (124; 21.5%). The median number of working experiences at their current place of employment was 4 years (IQR 2-11 years).

In terms of the clinical history 115 (19%) reported taking chronic medication which includes, diabetes (23; 20%), hypertension (42; 36.5%), hypocholesteraemia (2; 1.7%), cancer (9; 7.8%), asthma and allergies (9; 7.8%), mental disorders (9; 7.8%) and (HIV 21; 18.2%).

Selective screening tests were conducted, the results of which are described below:

Table 1: Screening tests conducted

Screening tests *	**N (%)**
Urine dipsticks (N=600)	
Leucocytes	18(3)
Blood	14(2.3)
Protein	7(1.2)
Glucose	1(0.2)
ketones	1(0.2)
BP (N=600)	
>140/90 mmhg	148(25)
HGT: random (N=204)	
6-8	28(13.7)
8-10	12(5.8)
>10	36(17.6)
BMI (N=551)	
25-30 kg/m^2	162(29.4)
30-35 kg/m^2	116(21.1)
>35 kg/m^2	119(21.6)
TB screening (N=600)	
Positive	24(4)

*staff members were screened only if consented

Self-reported risk factors for cardio-metabolic diseases are reported below:

Table 2: Cardio-metabolic risk factors

Risk Factors	**N (%)**
Smoking (N=600)	24(4)
Alcohol (N=600)	71(11.8)
Regular exercise	139(23.1)
Family History of cardiovascular disease and diabetes	104(17)

In addition, it is noted that 10% (63) had an occupational exposure to hazardous substances such radiation, asbestos, toxic drugs, chemicals, noise and dust. It was noted that 325 staff members had taken sick leave (median 2, IQR 0-15 days). The total number of sick leave days were 5164. There was a statistically significant association between obesity and staff members taking sick-leave (Chi-square test, $p<0.01$).

Conclusions and recommendations

This study found that 71% of staff members were overweight and obese, 4% smokers, 20% diabetic and 36.5% hypertensive, which are all important risk factors for cardio-metabolic diseases. Although a large proportion of staff members are overweight and obese, and there is a significant association between obesity and sick leave, only 33% were screened for diabetes. This suggests that all staff members should be regularly screened for diabetes and counselled for intake of healthy diets and regular physical activities. Interestingly, the study also found that the presence of 11 staff members whose BMI were less than 18 kg/ m^2, needs further investigations.

The main limitation of this study is its restricted scope due to secondary data and self-reported information on risk factors. However, this study was conducted as a baseline to develop an understanding of the Employee Health and Wellness Programs for Health Workers employed by the GDoH and to develop more comprehensives programs. The presence of risk factors for cardio-metabolic diseases (such as obesity) and their association with productivity (measured as sick leave), highlighted the importance of institutionalising employee wellness programme for health care workers. However, this study only explored a few factors. More detailed insight into workplace health and wellness programs are needed to address the burden of diseases amongst health workers. Smart technologies and interventions are required to enhance and support program advancement and development. Multi-sectoral collaborative efforts would be required for long term sustainability. It is hoped that by caring for our caregivers we are able to make an impact on worker morale, productivity and health outcomes.

References

International Labour Organization. May 2013 “Wellness for a global workforce.” Accessed July 2019. https://www.ilo.org/safework/areasofwork/workplace-health-promotion-and-well-being/lang--en/index.htm

World Health Organization. February 2010 “WHO Healthy Workplace Framework Model.” Accessed July 2019. https://www.academia.edu/32849778/WHO_Healthy_Workplace_Framework_and_Model_Background_and_Supporting_Literature_and_Practices.

An Innovative Response to the Challenges Related to Insulin Initiation and Titration for People with Uncontrolled Type 2 Diabetes in Primary Care Facilities in South Africa: The Tshwane Insulin Project (TIP)

P Ngassa Piotie
University of Pretoria
School of Health Systems and Public Health

EM Webb
University of Pretoria
School of Health Systems and Public Health

DG van Zyl
University of Pretoria
Department of Internal Medicine
Kalafong Hospital

J Hugo
University of Pretoria
Department of Family Medicine

P Rheeder
University of Pretoria
Department of Internal Medicine
Steve Biko Academic Hospital

Abstract

In this paper, we describe the Tshwane Insulin Project (TIP) which is a translational research programme designed to address the hurdles to insulin use in primary healthcare. Indeed, initiation and titration of insulin in primary care has been identified as a major challenge globally and in South Africa due to scarcity of resources, lack of health professionals trained in insulin use and patient factors like psychological insulin resistance. A response to such challenges requires an innovative multidisciplinary intervention tailored to a constrained and overburdened health system. The aim is to design, implement and evaluate a patient-centred and nurse-led model of care that will facilitate insulin use for people with type 2 diabetes in primary care. The programme is a series of studies and interventions from a knowledge, attitudes and practices survey (Phase 1), a review of the legal and policy framework (Phase 2), an exploratory trial followed by a stepped wedge cluster randomised trial (Phase 3 & 4). Phase 5 focus is the implementation of the intervention into routine care.

Keywords: Diabetes Mellitus; Translational Research; Insulin; Primary Care
Introduction

The progressive nature of type 2 diabetes necessitates a step-by-step adjustment of therapy from diet and lifestyle to a combination of oral antidiabetic drugs often culminating in insulin being needed. In fact, many countries including South Africa adopted a stepwise approach to diabetes management. However, the initiation of insulin therapy is often delayed due to the reluctance of both health professionals and patients to initiate or intensify insulin therapy (Manski-Nankervis et al., 2017; Taylor et al., 2017). Changing clinical practice involves understanding and responding to the complex social and clinical environment within which doctors, nurses and allied workers, and patients often operate. This requires a sustained and iterative process of development, implementation and evaluation.

Aim and objectives

Aim

The aim of the programme is to design, implement and evaluate a patient-centred and nurse-led model of care that will facilitate insulin use in primary care in the Tshwane District.

Study objectives

The programme is designed based on the Normalisation Process Theory (NPT) and follows a phased implementation.

Phase 1: Identification of challenges and opportunities for insulin therapy

Objective 1: To identify the barriers and opportunities for insulin initiation and titration at primary care level in the Tshwane District from both patients and healthcare providers' perspective.

Objective 2: To identify the gaps in diabetes care as well as missed opportunities for intensification of therapy including insulin therapy through a review of medical records.

Phase 2: Review of the legal and policy framework

Objective 3: To conduct a document review and analysis of the current guidelines and policies for diabetes care as well as relevant legislation in order to improve insulin initiation at primary care level.

Phase 3 and 4: Evaluation of the proposed model of care

Objective 4: To evaluate the safety and feasibility, then the effectiveness of the model of care that will facilitate insulin initiation and titration in primary care facilities in the Tshwane District.

Phase 5: Implementation into routine care

Objective 5: To ensure the translation of research findings into practice by providing technical assistance to health departments and relevant stakeholders.

Methodology

Study design

This is a translational research programme with both qualitative and quantitative methods. Translational research refers to translating research into practice, i.e. ensuring that research knowledge and discoveries actually reaches the patients for whom they are intended.

Study participants

The target population for this programme is people with uncontrolled type 2 diabetes who receive diabetes care in primary healthcare facilities and require insulin for glucose control as per the South African guidelines (RSA Essential Drugs Programme, 2018).

Setting

The programme is implemented in Subdistricts 3 and 6 in the Tshwane Health District, which amounts to 24 facilities including 21 clinics and 3 Community Health Centres. The Tshwane Health District is situated in the northern part of Gauteng Province in South Africa.

Approvals have been obtained from the University of Pretoria's Faculty of Health Sciences Research Ethics Committee (No.: 496/2018) and the Tshwane Research Committee (NHRD GP_201810_049). The programme is sponsored by Lilly Global Health Partnership.

Conclusions and recommendations

Effective management of diabetes to achieve optimal glucose control is a crucial component of the National Department of Health Strategic Plan for the Prevention and Control of Non-Communicable Diseases. Translational research programmes can influence the development of evidence-based policies that drive improved outcomes at population level.

References

Manski-Nankervis, J. A., Furler, J., O'Neal, D., Ginnivan, L., Thuraisingam, S., & Blackberry, I. (2017). Overcoming clinical inertia in insulin initiation in primary care for patients with type 2 diabetes: 24-month follow-up of the Stepping Up cluster randomised controlled trial. *Primary Care Diabetes, 11*(5), 474-481. https://doi.org/10.1016/j.pcd.2017.06.005

Republic of South Africa. Essential Drugs Programme. (2018). Primary Healthcare Standard Treatment Guidelines and Essential Medicines List (6th edition ed.). Pretoria: The National Department of Health.

Taylor, C. G., Taylor, G., Atherley, A., Hambleton, I., Unwin, N., & Adams, O. P. (2017). The Barbados Insulin Matters (BIM) study: Barriers to insulin therapy among a population-based sample of people with type 2 diabetes in the Caribbean island of Barbados. *Journal of Clinical & Translational Endocrinology*, *8*, 49-53. https://doi.org/10.1016/j.jcte.2017.04.002