Knowledge, Attitudes, Practices of The Parents/Caregivers on Homebased Management of Diarrhoea in Children Under Five Years at a Local Hospital in Namibia

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ABSTRACT

Background: Diarrhoea illnesses is the leading cause of death in children under five years old globally. The existing evidence on diarrhoea illnesses shows that knowledge, attitudes and practices of the parents and caregivers play a fundamental role in prevention and management of diarrhoea in children.

Objective: To analyse the association between the sociodemographic variables and the knowledge, attitudes, practices of parents and caregivers of children under the age of five years at Outpatient Department, Intermediate Hospital Rundu, Kavango East Region.

Method: A quantitative, descriptive, cross-sectional and analytical design was conducted among 400 parents and caregivers. The study used a systematic sampling technique of random sampling method. The Likert's scaled questionnaires were used to collect data from 400 parents and caregivers. The SPSS version 29 was used to provide descriptive and inferential statistics. The Pearson's correlation was used to examine the correlation between the demographic variables and the knowledge, attitude and practices of parents and caregivers. The Chi-square cross tabulation was applied to test the associations between the knowledge, attitudes, practices and demographic data of the respondents.

Results: The practices of the parents and caregivers are significantly, negatively correlated to the ages. ($r = -0.191$; $p<0.001$). In addition, attitudes were positively correlated to practice ($r = 0.341$; $p<0.001$). Knowledge was found to be positively correlated to the attitude ($r = 0.206$; $p<0.001$). The educational level of the parents and caregivers is significantly correlated with the knowledge, attitudes and practices regarding homebased management of diarrhoea.

Conclusion: : Parents and caregivers residences, employment status, marital status and chiefly educational level are the predictors of the knowledge, attitudes and practices on home based management of diarrhoea. Therefore, health education and awareness programs for parents and caregivers on causes of diarrhoea, homebased management and diarrhea prevention of diarrhoea are critical.

Key words: Knowledge, Attitude, Practice, Diarrhoea, Homebased management, Children under five years, Parents, Caregivers

INTRODUCTION

Diarrhoea as a passage of unformed watery, mucoid or bloody stools three or more than three times a day, consequently to gastro-intestinal infections which are mostly as a result of parasitic worms, bacteria and viruses (World health Organisation [WHO] 2019).

Diarrhoea is a leading cause of morbidity nd mortality in children under five years old globally, predominantly in undeveloped countries where there is poor knowledge and practice in the management of diarrhoea diasease (Terefe, 2022). Walker-smith and McNeish, (2016) reported that, around 2 000 000 children globally, suffer from diarrhoea annually and each diarrhoea episode deprives children of the vital nutrients responsible for growth. In addition, diarrhoea is the third leading cause of mortality among children under the age of five years in South Africa and it is reported that parent's poor usage of ORS at home when children have diarrhoea lead to dehydration and subsequent deaths (Terefe et al., 2022).

In addition, lack of community awareness on diarrhoea, poor parental knowledge about diarrheal illness, poor management of diarrhoea and poor hygiene are managing impediments to effective and timely health interventions on diarrhoea illnesses among children. The Namibia Statistics Agency [NSA] (2018) report on mortality and causes of death indicated diarrheal diseases as the sixth cause of death among persons of all ages and the second & third leading cause of children under the age of five years deaths in 2016 and 2017 respectively. The national prevalence of diarrheal disease in Namibia is at 17% and 5% of deaths occur among children under five years (MoHSS, 2021).

Home-based management of diarrhoea disease in children under five years is quite shared among parents and caregivers. Oral rehydration solution is poorly utilized by mothers and caregivers when managing diarrhoea at home, despite its extensive uses of rehydration (Terefe, 2022). This ineffective use of Oral rehydration solution is associated incorrect preparation, which may be a result of lack experience and knowledge among caregivers. The knowledge, attitudes and practices of the family, particulally the parents are significant in health promotion, disease prevention, and management of diarrhoea in children. Therefore, the actions parents and caregivers take include the basic observation of dehydration in children with diarrhoea.

A study conducted in Ohangwena region, Engela district Bauleth, Mitonga and Pinehas, (2020) indicated the prevalence of diarrheal diseases among children under the age of five years at 23.8% and the demographic variables, poor sanitations, lack of clean water, feeding practices and the child age were determinents of diarrhoea among children under the age of five years.

METHODOLOGY

Study design

A quantitative, descriptive, cross-sectional and analytical designs were used examine relation among the demographic variables, knowledge, attitudes and practices of the parents and caregivers on home-based management of diarrhoea.

Study setting

The study was conducted at Intermediate Hospital Rundu, Outpatient Department located in Kavango East region. Rundu is in the Eastern part of Namibia, closer to the Angola borders. Hence, some of the patients attended at Rundu hospital are from Angola. Rundu hospital is an intermediate, teaching hospital, which serves the community of thirteen health districts. The children with diarrhoea are attended to at paediatric outpatient consultations, casualty department in cases of emergency cases.

Study population

The study population include all mother and caretakers of children under the age of five years old attended at the Outpatiend Departement, Rundu hospital.

Inclusive criteria

Parents and caregivers whose children were under the age of five years in Rundu district and had presented with diarrhoea during the data collection exercise.

The sample size determination

The sample for this study was determined using the Yamane formula of 1968.

$$n = \frac{N}{1+N(a^2)}$$

n = sample size

N = population size ()

a = level of significance or acceptable sampling error, which is (5%)

The population size was 4128 parents/caregivers, therefore a sample size of 400 parents and caregivers was determined using the formula.

Validity and reliability

The designed questionnaires were shared with the research supervisor, research statistician, University Decentralised Ethicak Committe, Ministry of Health and Social Services in order to evaluate the appropriateness, institutional and ministerial standards. These questionnaires were initially made in English and then translated into the local Rukwangari language. Forward and backward translation steps were taken to ensure the quality of the final Rukwangari version. The questionnaires were pre-tested among the parents and caregivers of children under five years old at Rundu hospital and theses parents/caregivers were exempted from the bigger study. The findings from the pre-testing exercise were used to revise the questionnaire.

Data collection

Self-developed Likert scaled questionnaires were used in the study to evaluate the knowledge, attitude, and practices of the parents and caregivers on diarrhoea management and the correlation with the demographic variables.

Data analysis

Data analysis was carried out by using the International Business Machine (IBM) Statistical Package for Social Sciences (SPSS) version 29 for analysis. Descriptive statistics like frequencies, percentages, means, and standard deviations were performed. The Pearson's analysis was used to examine the correlation of the demographic variables and knowledge, attitude and practices. The Chi-square cross tabulation was applied to test the associations between the knowledge, attitudes, practices and demographic data of the respondents.

Ethical consideration

Ethical clearance was granted from the University of Namibia Decentalised Ethical Committe, permission to the study was obtained from the Ministry of Health and Social services and Rundu mediccal superintedent. Respondents written informed consents were made in local Rukwangali and English laguange. Prior to data collection, the research debrief potential respondents about the nature of the study. Respondents were informed of their right to participated and the right to discontinue from the study at any point of time, without any penalty. All respondents were treated ethically and morally according to the Declaration of Helsinki.

RESULTS

Demographic data

A total of 400 questionnaires were collected from the Outpatient Department of the Intermediate Hospital Rundu. Majority of the respondents (71.25%) were female, whereas minority (28.25%) where male. Around 65.6% respondents were single, while 111 (27.7%) were married. In addition, 3.4% of the respondents were divorcees, while 3.2% were minors under the age of 18 years old. The study findings indicated that 96% of the respondents

were Christians and only 4% were Islamic. Out of the 400 respondents, majority of the parents and caregivers (52.3%) had attended tertiary institutions, 37.5% respondents had attended secondary education, while 6.3% had completed primary education and 3.8% of respondent did not have formal education.

Regarding the employment statuses, 29.2% of the respondents were employed, while majority of the respondents were unemployed (70.8%). The 64.2% of respondents reside in urban area, while 35.8% of respondents reside in rural areas.

The respondents were parents and caregivers of children who had diarrhoea during the data collection process. Majority of respondents 38.7% had only one child under the age of five years, 24.4% respondents had two children, followed by 14.2% of respondents with three children in their households, 11.2% of respondents had four children under five years and 6.2% respondents had five children under five years in their households. On the other hand, a minority group of respondents had six, seven, eight, nine and whose percentages were 2.5%; 1.7%; 0.5%;0.2% and 0.2% respectively.

On the other hand, the study revealed that (127) 31.9% of the children under the age of five years that had diarrhoea during the data collection process were 12-23 months, followed by the children age group of 0-11 months reported at 111 (27.7%), 48-59 months with frequency of 65 (16.3%) then, 24-35 months were 57 (14.2%), then and the least presented age group was 36-47 months with frequency of 39 (9.8%).

The study found out that among 400 parents and caregivers, 385 (96.3%) had good level of knowledge, 326 (81.5%) had negative attitudes, while 351 (87.7%) had poor level of practice**.** The respondents were knowledgeable about homebased management of diarrhoea but they have negative attitudes and poor level of practice.Therefore, the study findings can be used to identify reasons of negative attitudes and poor practices to inform mothers and caregivers on the importance practicing correct homebased management of diarrhoea.

Knowledge, attitudes and practices of parents and caregivers plays a major role in managemnt of diarrhoea in children. However the associations and correlation between the sociodemographic variables and the knowledge, attitudes and practices of parents and caregivers should be examined.

Table 1: Analysis of parents and caregivers' knowledge on homebased management of diarrhoea in children' questions

Questions/Statement	**Wrong Frequency (%)**	**Correct Frequency (%)**
1. Diarrhoea is a passage of watery, mucoid or bloody stools three or more than three times a day.	25 (6.25%)	375 (93.8%)
2. Diarrhoea can be prevented and managed at home.	100 (25.1%)	300 (74.9%)
3. Children under five years suffers more from diarrhoea.	44 (10.8%)	356 (89.1%)
4. Bacteria, viruses and intestinal worms are the major causes of diarrhoea in children.	59 (14.6%)	341 (85.4%)
5. Diarrhoea may be caused by spiritual power	153 (38.3%)	247 (61.8%)
6. Drinking contaminated water and eating contaminated food may cause diarrhoea	41 (10.1%)	359 (89.9%)
7. Teeth eruption in children cause diarrhoea	94 (23.4%)	306 (76.6%)
8. Unconsciousness is a danger sign of diarrhoea in children	61 (15.3%)	339 (84.7%)

9. Dry, sunken eyes is a danger sign of diarrhoea in children	61 (15.3%)	339 (84.7%)
10. Frequent passing of stools is danger signs of diarrhoea in children	61 (15.3%)	339 (84.7%)
11. Difficulties in breathing is danger signs of diarrhoea in children	61 (15.3%)	339 (84.7%)
12. Eagerness to drink or suck is common sign of dehydration in children.	115 (28.8%)	285 (71.2%)
13. Dryness of the skin and lips is a common sign and symptom of dehydration in children.	115 (28.8%)	285 (71.2%)
14. ORS is the first line treatment of diarrhoea.	109 (27%)	294 (73%)
15. The sugar salt solution is prepared by mixing 8 teaspoons of sugar with ½ teaspoon of salt in a 1 litre of clean, boiled, water.	148 (36.5%)	252 (63.5%)
16. ORS and sugar salt solution replace the body salts and water lost through diarrhoea.	74 (18.4%)	326 (81.6%)
17. Friends, elders educate people on how to manage diarrhoea.	63 (15.8%)	337 (84.2%)
18. Diarrhoea is a serious disease, that can lead to diarrhoea.	49 (12.2%)	350 (87.8%)

Table 2: Analysis of the parents and caregivers attitudes question by question

Statements	**Strongly agree F (%)**	**Agree F (%)**	**Not sure F (%)**	**Disagree F (%)**	**Strongly disagree F (%)**
1. Breastfeeding may prevent diarrhoea and dehydration	17 (4.2%)	35 (8.7%)	50 (12.4%)	141 (34.9%)	161 (39.9%)
2. Children with diarrhoea should be given more fluid than usual	7 (1.7%)	5 (1.2%)	39 (9.7%)	183 (45.4%)	169 (41.9%)
3. Hospital medications treat diarrhoea in children better.	5 (1.2%)	26 (6.4%)	45 (11.1%)	190 (47%)	138 (34.2%)
4. ORS is not for children and it causes more vomiting and diarrhoea.	160 (39.7%)	98 (24.3%)	46 (11.4%)	68 (16.9%)	31 (7.7%)
5. Children who are bottle fed suffers more from diarrhoea than children who are exclusively breastfed.	9 (2.2%)	48 (11.9%)	52 (12.9%)	155 (38.4%)	140 (34.7%)
6. Children under five years should be taken for immunisation in order to prevent diarrhoea.	8 (2.0%)	20 (5.0%)	46 (11.6%)	184 (45.7%)	145 (36%)
7. Diarrhoea in children cannot be managed at home.	83 (20.8%)	116 (29.0%)	48 (12.0 %)	70 (17.5%)	83 (20.8%)
8. Children recovers from diarrhoea illnesses well when put on drips.	26 (6.6%)	56 (14.2%)	51 (13.0%)	148 (37.7%)	112 (28.5%)

9. Hospitals are expensive and far from people.	98 (24.4%)	114 (28.4%)	46 (11.5%)	93 (23.2%)	50 (12.5%)
10. Healthcare workers always give health education on prevention, management and dangers signs of diarrhoea.	39 (9.7%)	50 (12.4%)	31 (7.7%)	118 (29.3%)	50 (12.5%)

Table 3: Analysis of the parents and caregivers practices

Questions	**Always Frequency %**	**Most of the time Frequency %**	**Sometimes Frequency %**	**Rarely Frequency %**	**Never Frequency %**
1. Do you wash your hands after changing the children's nappies or assisting the with toileting?	3 (0.7%)	59 (14.6%)	117 (29%)	77 (19.1%)	148 (36.6%)
2. Do you wash fruits before feeding your child?	4 (1%)	37 (9.2%)	121(30%)	112 (27.8%)	129 (32.0%)
3. Do you give children left-over medications when they have an episode of diarrhoea?	71 (17.7%)	48 (11.9%)	118 (29.4%)	126 (31.3%)	39 (9.7%)
4. Do you take children to the hospital when they have diarrhoea?	3 (0.7%)	19 (4.7%)	117 (29.1%)	125 (31.1%)	138 (34.3%)
5. Do you take the children to the hospitals when home management of diarrhoea failed home?	3 (0.7%)	10 (2.5%)	30 (7.4%)	103 (25.5%)	258 (63.9%)
6. Do you stop breastfeeding when children have diarrhoea?	223 (57.3%)	68 (17.5%)	43 (11.1%)	43(11.1%)	12 (3.1%)
7. Do you increase fluid intake for children with diarrhoea, in order to replace water lost through diarrhea?	11(2.7%)	29 (7.2%)	107 (26.5%)	96 (23.8%)	161 (39.9%)
8. Do you give ORS to children after every loose stool	11 (2.7%)	53 (13.2%)	114 (28.4%)	102 (25.4%)	121 (30.2%)
9. Utensils must be washed with water and soap before and after every use	3 (0.7%)	22 (5.5%)	89 (22.1%)	108 (26.9%)	180 (44.8%)
10. Do you give children herbs when they have diarrhoea?	188 (46.7%)	99 (24.6%)	72 (17.9%)	27 (6.7%)	17 (4.2%)

Correlations between the demographic variables and the knowledge, attitudes, practices of parents and caregivers

The age of the respondents was found to be significantly, negatively correlated to the practices (r= -0.191; p<0.001). However, there was no significant correlation between age and attitudes and knowledge (r= -0.008; p<0.879) and (r= -0.019; p<0.710) respectively. Furthermore, attitude of parents and caregivers are significantly, positively correlated to practices of the parents and caregivers (r= 0.341; p<0.001), while knowledge was found to be significantly, positively correlated to attitude (r= 0.206; p<0.001). There was a significant positive correlation found between knowledge and practices of the respondents (r= 0.322; p<0.001).

Table 4: The correlations between KAP and the respondents' continuous variable

Correlations					
		Age	**Practice**	**Attitude**	**Knowledge**
Age	Pearson Correlation	1	-0.191	-0.008	-0.019
	P		<0.001	0.879	0.710
Practice	Pearson Correlation	-0.191	1	0.341	0.322
	P	<0.001		<0.001	<0.001
Attitude	Pearson Correlation	-0.008	0.341	1	0.206
	P	0.879	<0.001		<0.001
Knowledge	Pearson Correlation	-0.019	0.322	0.206	1
	P	0.710	<0.001	<0.001	

Association between demographic variables, knowledge, attitudes, practices of parents and caregivers on homebased management of diarrhoea

In a Chi-square cross tabulation analysis, educational level, residence, employment statuses, marital statuses were found to be predictors of the knowledge, attitudes and caregivers of parents and caregivers. The educational level (P<0.011) and the residences (P< 0.024) of the respondents were found to be significantly associated with the knowledge of the parents and caregivers.

On the other hand, the educational level was significantly associated with the attitude of parents and caregivers (P<0.002) on homebased management of diarrhoea in children under the age of five years. In addition, employment statuses (P<0.052) of the parents and caregivers were found to be averagely associated with the attitudes.

There is a strong significant association marital status and the practices of the parents and caregivers on management of diarrhoea (P<0.006). In addition, the practice of parents and caregivers is found to be statistical significantly associated with the educational level (P< 0.004). The employment status of the parents and caregivers (P<0.004) was found to be significantly associated with the practices.

In the T-test analysis, the gender (P<0.001), employment statuses (P<0.023), and residence (P<0.001) areas were predictors of the knowledge of parents and caregivers on homebased management of diarrhoea in children under the age of five years. Furthermore, the ANOVA test of variances indicated the marital statuses (P<0.001), religion (P<0.003), educational level (P<0.001) of the respondents and the ages of the children with diarrhoea (P<0.001) as factors associated with the knowledge of the parents and caregivers on managements of diarrhoea.

DISSCUSSION

Association of the knowledge, attitudes, practices and socio-demographics of the parents and caregivers

This study affirmed an association between sociodemographic variables and knowledge, attitude and practices of parents and caregivers on home-based management of diarrhoea in children under five years. Education level Education level ($p< 0.011$) and residence ($p<0.024$) of parents and caregivers were significantly associated with their knowledge regarding management of diarrhoea. This concurs with the study conducted by Dodicho 2016 in Ethiopian that showed a strong significant association between the educational status ($p<0.001$) of mothers and the knowledge of mothers on home management of diarrhoea in under-fives children.

There was a significant difference in the educational levels of parents and caregivers globally and the association with the sociodemographic variables differs. The study conducted at Ruli health centre concurred that age had ($p<0.035$) and wealth status had ($p<0.033$) are associated with knowledge of mothers on homebased management of diarrhoea (Archarge, 2019). Similarly, Momoh et al. (2022) revealed a significant association between the age, level of education and the knowledge of the mothers of children under the age of five years in Lagos, Nigeria.

In addition, the socio-demographic traits of the respondents are linked with the attitudes. The study reveals a significant association between the respondents' educational level ($p>0.002$), the employment status ($p<0.052$) and the parents and caregivers' attitudes towards homebased management of diarrhoea in children under the age of five years. Gender, marital status, religion, residence, age of the children and lost children had no significant association with the attitudes of the parents and caregivers. The association that may exist, may be by chance.

There was a significant difference in the practice levels of parents and caregivers among. The study found a strong significant association between the respondents' marital status ($p<0.006$), educational level ($p<0.004$), employment status ($p<0.004$) and the practices of the parents and caregivers on homebased management of diarrhoea in children under the age of five years. The other socio-demographic trait had no associations with the parents and caregivers' practices. Archange (2019) revealed that respondents' age with $p<0.002$; education level with $p<0.000$ were the sociodemographic factors associated with practice on home management of diarrhoea. A differing study conducted by Dodicho (2016) in Ethiopia, revealed that education ($p<0.000$) and residence ($p<0.000$) were found to influence the practice of mothers.

The T-test for independent samples and ANOVA

The T-test

The t-test was used to test the association between the sociodemographic variables and the knowledge of the respondents. The employed respondents ($P<0.001$) were strongly with good knowledge on management of diarrhoea in children under five years. Furthermore, there is an association between gender and knowledge. The study found out that female respondents demonstrated better knowledge on homebased diarrhoea in children than male respondents. Female parents and caregivers spent much of their time with children, more involved in the care of the children, the willingness to learn the management of diarrhoea in children, conversely better knowledge.

This study affirmed the association between the residences of the respondents and their knowledge. Parents and caregivers from urban areas are linked with better knowledge on homebased management of diarrhoea than parents staying in rural areas.

Analysis of Variances

On the other hand, the variances among the sociodemographic variables and the knowledge of the parents and caregivers on homebased management of diarrhoea was analised in order to examine the relationship. This test confirmed a statistically significant p value of $p<0.001$ on the marital statuses and the knowledge of the parents and caregivers. This infers that the single respondents have good level of knowledge, married respondents got

better level of knowledge on diarrhoea management than divorced parents and caregivers. The minor parents and caregivers, who were under the age of eighteen years demonstrated low level of knowledge regarding homebased management of diarrhoea in children under the age of five.

Knowledge and religion were found to have a statistical significance value of <0.003. This affirm that Christian parents and caregivers got better level of knowledge than the Islamic parents and caregivers.

The educational level is the greater predictor of good knowledge on diarrhoea management (P<0.001). The study found tertiary educated respondents to have good knowledge on home-based management of diarrhoea than respondents who had secondary education and primary education. Subsequently, respondents with no formal education were associated with poor level of knowledge regarding home-based management of diarrhoea in children under five years.

Furthermore, there are significant variances among the ages of children and the knowledge of the parents and caregivers (P<0.001). All in all, the younger the child, the poorer the knowledge of the parents and caregiver management of diarrhoea. As children grow older, the parents and caregivers tend to gain experienced and their knowledge toward home-based management of diarrhoea in children under the age of five years improve.

Study strengths and limitations

There was no previous similar study in the region. Therefore, strength of this study was that it examined the correlation and associations between the sociodemographic variables and the knowledge, attitude, and practice of parents and caregivers regarding home based management of diarrhoea in children under the age of five years. Conversely, the results of the current study may be the foundation for the interventional health education program in the community.

Subsequently, this study was ony quantitative due to a language barrier experienced by the researcher. In addition, the study was restricted to Intermediate hospital Rundu, Kavango East, Namibia only. and it only quantitatively assessed the diarrhoea in children under five years.

Study Implications

This study has revealled an indepth critical findings on associationas between the sociodemographic variables and the knowledge, attitude, and practice of parents and caregivers on diarrhoea management that can be considered by the various stakeholders.

Therefore, there is a need to strengthern awareness programmes on diarrhoea, conventional medicines, policy formulation and community health education programmes ssould be provided and executed to condense the childhood diarrhoea rate and mortalities. The study also lays a ftrong foundation for the future researchs in the region.

CONCLUSION

The was a statistically significant between the sociodemographic variables and the parents and caregivers' knowledge, attitudes and practices on home-based management of diarrhoea. Educated and employed parents and caregivers had good knowledge, attitudes and practices on management of diarrhoea. As the children grow older the parents and caregivers become experienced and their knowledge, attitudes and practices improves, conversely when parents and caregivers age the practices on diarrhoea management becomes poorer.

Employment status significantly affects the attitudes of the respondents. Therefore, parents and caregivers were found to have good attitudes towards the management of diarrhoea in children. Furthermore, the employment, education and marital statuses of parents and caregivers were significantly associated with good practices of parents regarding the management of diarrhoea in children under five years.

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Competing interest

The authors declared no competing interest with reverence to the research and publication of this journal article.

Authours contributions

KT Nambombola proposed the study, collected, coded the data and did the data analysis of the study under direction and supervision of all co author. Dr S I Uushona contributed to the design, drafting the manuscript, and approving the final version to be manuscript for publication.

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Data availability

The supporting data for this study are available from the corresponding author upon request.

Disclaimer

We declare that this research article is our ownoriginal work and has not been submitted before to any institution or journal. Furthermore, the ideas of other authors used in this paper are acknowledged in the references.

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Ethical Clearance Certificate

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ETHICAL CLEARANCE CERTIFICATE

Ethical Clearance Reference Number: DEC OSH 0073 **Date:** 19/10 2023

This Ethical Clearance Certificate is issued by the University of Namibia Ethics Committee (REC) in accordance with the University of Namibia's Research Ethics Policy and Guidelines. Ethical approval is given in respect of undertakings contained in the Research Project outlined below. This Certificate is issued on the recommendations of the ethical evaluation done by the ethics committee.

Title of Project: KNOWLEDGE, ATTITUDES AND PRACTICES OF PARENTS AND CAREGIVERS ON HOME-BASED MANAGEMENT OF DIARRHOEA IN CHILDREN UNDER THE AGE OF FIVE YEARS AT INTERMEDIATE HOSPITAL RUNDU, OUTPATIENT DEPARTMENT, KAVANGO EAST REGION, NAMIBIA

Principal researcher: NAMBOMBOLA KRISTOFINA TASHIYA

Staff Number/ Student number: 201503682

Remarks: Low Risk Approved after corrections done.

Centre for Research Services

Take note of the following:

1. Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the ethics committee. An application to make amendments may be necessary.
2. Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the ethics committee.
3. The Principal Researcher must report issues of ethical compliance to the ethics committee (through the Chairperson) at the end of the Project or as may be requested by the ethics committee.
4. The ethics committee retains the right to:
   i) Withdraw or amend this Ethical Clearance if any unethical practices (as outlined in the Research Ethics Policy) have been detected or suspected,
   ii) Request for an ethical compliance report at any point during the course of the research.

The ethics committee wishes you the best in your research.

Prof Hans J Amukugo (Oshakati Campus Chairperson Decentralized Ethics Committee)

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