



Patterns of Influence of Diabetics' Integrating Healthcare-Seeking Behaviours on Diabetes Management in Rongo Sub-County, Migori County, Kenya

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Summary

INTRODUCTION

Diabetes is a fast-growing socio-economic burden, highly prevalent in Kenya due to inadequacies of mitigation measures; though manageable through appropriate healthcare-seeking behaviours (HSBs). High malaria and HIV/AIDS prevalence in Migori County reveals high susceptibility; besides, Rongo Sub County recorded the highest increment in diabetes clinic attendance in 2019. Hence, the study sought to determine the patterns of influence of diabetics' integrating HSBs on diabetes management.

MATERIALS AND METHODS

Health Belief Model guided the study by adopting a correlational study design and convergent mixed-method approach. Yamane's formula was applied to select 257 respondents using cluster and simple random sampling, and 5 medical practitioners purposively sampled. Results were analysed using descriptive and inferential statistics through SPSS v.26.0 and presented in frequency tables and bar graphs.

RESULTS

Females were 55.2%, individuals aged > 50 years 60.9%, contemporary religious affiliation 98.9%, monthly income < Ksh. 20,000 46.0%, normal blood sugar levels 65.5%, raised blood sugar levels 22.9%, frequently integrating HSBs 86.2% and those satisfied integrating HSBs were 78.1%. Significant association and very strong positive correlation between diabetics' integrating HSBs and diabetes management was obtained (at p -value = .01; $r_s = .850$) using a 2-tailed Spearman's correlation. H_0 was rejected and H_a accepted, showing that there was statistically significant pattern of influence of diabetics' integrating HSBs on diabetes management.

CONCLUSION AND RECOMMENDATION

There were patterns of influence of diabetics' integrating HSBs on diabetes management in the study area. We recommend that Migori County Government and



Ministry of Health improve patient-healthcare worker relationships. Besides, they should identify and document acceptable informal therapies.

Keywords: *Integrating, Healthcare-Seeking Behaviours, Diabetics, Diabetes Management*

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Introduction

Non-communicable diseases (NCDs) are the leading causes of morbidity and mortality globally (Ministry of Health Kenya [MOH], 2015). Diabetes which is one of the NCDs is an unsustainable fast-growing health and socio-economic burden (Hegazi *et al.*, 2015). It is the seventh largest cause of chronic disease-related mortality (Kochanek *et al.*, 2011); and the fifth leading cause of mortality among Asian-Americans (Cockerham *et al.*, 2014). The International Diabetes Federation [IDF] (2019) projected that its global prevalence would rise by 24.8% in 2030, and by 51% in 2045; and that USD 760.3 billion was spent on treatments, besides it contributed to 1.6 million deaths in 2016 (WHO, 2018). It affects 8% and 9% of women and men respectively globally (Gregg & Bracco, 2019). 15.9 million adults had diabetes in Africa and it led to 312,000 deaths in 2017, and estimated to hit 41.6 million in 2045. The annual average cost of medication for diabetes in East Africa was USD 229 (McFerran, 2008); besides, 3.1% and 1.9% of Kenyans had impaired fasting glycaemia and raised blood sugar levels respectively (Kenya Stepwise Survey, 2015). Diabetes-related conditions and drugs for its management increase risk for cancer, stroke, lower limb amputations, pregnancy complications, micro and macro vascular complications, pneumonia, and TB (Nimesh *et al.*, 2019). WHO reported that 18.3% of Covid-19 deaths in Africa were of diabetics in 2020 because of their high susceptibility (Centre for Disease Control, 2020). Susceptibility to diabetes increases with prevalence of: malaria

(Pravat & Thatoi, 2018), HIV/AIDS (Spieler *et al.*, 2019), TB (Cockerham *et al.*, 2014), and age (Mathenge *et al.*, 2014; Ayah *et al.*, 2013), and urbanization (IHME, 2016); besides, most individuals are diagnosed when they are above 30 years (Chowdhury, 2014).

The Global Diabetes Plan 2011-2021 noted that investing on diabetes management is a major boost in addressing NCDs, TB, HIV/AIDS and malaria. Optimal diabetes management depend on individuals' responsibility and behaviours (Idris *et al.*, 2019). Relationship with healthcare service provider, previous treatment experience, and nearness to healthcare service provider further affects HSBs (Igwesi-Chidobe *et al.*, 2017). Pluralistic notion of doctor-patient relationship diversifies health consultations (Kushner, 2010); besides, they have changed including ideas, choices, and practices for both healthcare practitioners and patients (Kaufman, 2010). Metta (2016) revealed that appropriate HSBs and swift management is crucial to reducing severity of health conditions. Nevertheless, the percentage of diabetics reaching IDF treatment goals is very low due to high deviation from recommended therapies, and ranges from 1-12% (Mentock *et al.*, 2017). Kassahun *et al.* (2016) found a 31.2% non-compliance rate to anti-diabetes treatments in Ethiopia. Irwan (2016) noted that 68.6% of patients in urban centres of Indonesia rarely attended monthly clinics. Das *et al.* (2017) found that 41.6% and 37.5% of patients preferred consulting medical practitioners and indigenous practitioners respectively. Thompson *et al.* (2016) observed that more women sought primary healthcare in Canada, and were more



likely to integrate HSBs (Adams *et al.*, 2019); while Zehtab and Adib-Hajbaghery (2014) revealed that there was significant relationship between health and spirituality.

The Alma-Ata Declaration of 1978 recognized the role of informal HSBs (Topp & Abimbola, 2018); Beijing Declaration of 8th November, 2008 reiterated need for ensuring efficient use of informal medications and integrating healthcare; while World Health Assembly of May 2009 in its resolutions, urged member states to integrate medications and establish accreditation systems for enhanced access (Tomar, 2016). Kenya through an Act of Parliament in 2016, enacted the '*Protection of Traditional Knowledge and Expressions Act*'. Integrating HSBs offers a range of alternatives for patients (Egharevba *et al.*, 2015); by enhancing outcome in comparison to isolated care (Janse *et al.*, 2018). Besides, there is complementarity when integrating HSB without change in contribution of either (Ganz *et al.*, 2008). Besides, individuals shift or integrate HSB to maximise usage and increase chances of regaining optimum health (Batisai, 2016). It would supplement income of individuals in rural areas and further boost conservation efforts (Okello *et al.*, 2010), lowers risk of developing kidney failure, and enhances treatment of diabetic nephropathy (Hsu *et al.*, 2014).

Fairness of interactions with formal and informal healthcare practitioners influences HSB (Howland, 2020). High feasibility and acceptability boosted efforts to integrate HSB in Ghana; however, only 14% of patients disclose usage (Agyei-Baffour *et al.*, 2017). Integrating healthcare emphasises on prevention and self-healing, and common when addressing chronic illnesses where formal therapies are inadequate (Das *et al.*, 2017), and due to unregulated use of informal remedies. Incorporating indigenous socio-cultural knowledge (Verginer & Juen,

2018), is done for cure and clarification on cause of illness (Mbwayo *et al.*, 2013), and due to perceptions of sorcery, witchcraft, and taboos (Winkler *et al.*, 2010). Nimesh *et al.* (2019) found that healthcare provider shifting is prevalent in Central India with about 41.6% diabetics shifting healthcare; and it impacted on consistency of care. Cremers *et al.* (2013) revealed that most TB patients integrated HSB despite free and availability of anti-TB medications in Gabon due to stigma, ignorance, beliefs/ perceptions, shortages of medications, and financial constraints. Esan *et al.* (2019) recommends that efforts at integrating HSBs should ensure harmful indigenous treatment practices are well addressed. Mbwayo *et al.* (2013) further reveals need to educate indigenous healers on diagnosis and treatment, and timely referrals.

Nevertheless, there are concerns over efficacy, training medical doctors on ontology, cases of fake healing, and inherent ideological and epistemological differences in Africa (Abdullahi, 2011). Most urban Kenyans and medical practitioners have negative perception on informal therapies (Gathara, 2018). Patients also have low awareness and understanding of potential outcomes of integrating HSBs; factors of which consequently affect their HSBs (McDonnell, 2018). Mwaura (2019) observed that HSBs under highly spiritualized contexts was counter-productive to disease and illness. Diabetes'-associated disabilities and mortality rose by 51.7% and 31.2% respectively between 2007 and 2017 in Kenya (Kenya IHME, 2020). Migori County with a 2.7% diabetes prevalence is highly susceptible due to predisposing determinants like urbanization, and co-morbidities like malaria and HIV/AIDS of which it ranks high on prevalence. It ranks fourth and fifth on HIV/AIDS prevalence and annual related deaths respectively, and



comparatively low viral load suppression prevalence (KENPHIA, 2018). It jointly tops on malaria prevalence in the Lake Endemic Region (Bashir *et al.*, 2019); besides having the second highest proportion of elderly persons residing in urban centres in Nyanza region (Kenya National Bureau of Statistics [KNBS], 2019). Rongo Sub County has the highest population density in Migori County; besides, it registered the highest positive increment in diabetes clinic attendance in 2019 (MCRH, 2020). This study therefore sought to determine the patterns of influence of diabetics' integrating HSBs on diabetes management in Rongo Sub County.

Materials and Methods

This study adopted descriptive-correlational study design, and convergent mixed-method approach.

Study area and population

The study was conducted in Rongo sub-county, Migori County, Kenya; which is one of the 10 sub-counties in Migori County covering 213.40 km² with a population of 124,587 people, and a population density of 584 persons per km² (KNBS, 2019). It registered a diabetes clinic attendance increment of 27.07% in 2019 which was the highest in Migori County (MCRH, 2020).

Sample size determination and sampling

A sample size of 257 selected using Taro Yamane formula (1967) was drawn from 718 persons diagnosed with and attending diabetes clinics in the health facilities in Rongo Sub County. Respondents were clustered in health facilities and selected based on population within respective health facilities; that is, Rongo Sub County Hospital and Royal Hospital. Main respondents were selected using cluster and

simple random sampling, while key informants were judgmentally sampled.

Inclusion and exclusion criteria

Individuals who were diagnosed with diabetes and were attending diabetes clinics, and medical practitioners offering diabetes-care in the health facilities in Rongo Sub County were included as participants in the study.

Data collection

Piloting was done in Suna East Sub County, Migori involving 26 respondents. Interview schedules were used to collect qualitative data from the key informants who were 5 medical practitioners offering diabetes-care within the selected health facilities, while both open and closed-ended questionnaires were used to collect data from the main respondents.

Data analysis and presentation

Quantitative data collected were analysed on IBM SPSS v.26.0 using descriptive statistics of percentage counts, frequency counts, mean and standard deviation; and presented on frequency tables and bar graphs. Inferential statistics were used for analysing quantitative data using Spearman's rho correlation to establish the relationship between integrating HSBs and diabetes management (Seeram, 2019), and ANOVA to determine statistical significance of influence of the independent variable on the dependent variable.

Results and Discussion

The study administered 257 questionnaires of which 174 were completed and submitted for analysis, which was equivalent to 67.70% response rate which was adequate according to Mugenda and Mugenda (2010), and Fincham (2008). Majority of the respondents were females (55.2%) and 44.8% were males (Table 1); showing that more females frequently sought healthcare services.



Table 1: Socio-Demographic Information

Variable		Frequency (No.)	Percent (%)
Sex of respondent	Male	78	44.8
	Female	96	55.2
	Total	174	100.0%
Age of respondent	18-30 years	18	10.3
	31-40 years	32	18.4
	41-50 years	18	10.3
	51-60 years	28	16.1
	Above 60 years	78	44.8
	Total	174	100.0%
Level of education	Primary	70	40.2
	Secondary	30	17.2
	Certificate/ diploma	42	24.1
	Graduate	28	16.1
	Postgraduate	4	2.3
	Total	174	100.0%
Religious affiliation	Post Primary	104	59.7
	Christian-Catholic	52	29.9
	Christian-Protestant	100	57.5
	Muslim	20	11.5
	Atheist	2	1.1
Total	174	100.0%	
Average monthly income	Below 20000	80	46.0
	20001-30000	52	29.9
	30001-40000	30	17.2
	40001-50000	6	3.4
	Over 50000	6	3.4
	Total	174	100.0%
Recent blood sugar level (see appendix XVI)	Below 3.5 mmol/L	20	11.5
	3.6-5.4 mmol/L	48	27.6
	5.6-7.4 mmol/L	66	37.9
	7.6-9.4 mmol/L	26	14.9
	Beyond 9.5 mmol/L	14	8.0
	Total	174	100.0%

This was attributable to females' cultural social responsibilities. The findings were consistent with observations made by Agyei-Baffour *et al.* (2017), and Thompson *et al.* (2016) that comparatively more women sought healthcare. The findings were however inconsistent with findings by Ayah *et al.* (2013) in Kibera Slum of Nairobi which found that comparatively more males had diabetes. This was however a household survey unlike this study which focused on adults attending diabetes clinics in the health facilities in the study area.

Gregg and Bracco (2019) also revealed that comparatively more men had diabetes globally. This therefore suggests that men have comparatively low HSBs despite majority of them having diabetes.

It was revealed that 60.9% of the respondents were aged above 50 years (Table 1); consistent with observations made by Ayah *et al.* (2013) that diabetes prevalence progressed with age. This was attributable to low immunity of most elderly persons as noted by Mathenge *et al.* (2014). It was also observed that majority



(89.6%) of the respondents were aged above 30 years confirming findings by Chowdhury (2014) that most individuals were diagnosed when they were above 30 years; therefore, calling upon individuals particularly in this age category to have frequent medical check-ups. Besides, Migori County Government should create more awareness on diabetes diagnosis and care. This would address concerns over delayed diagnosis as highlighted by Metta (2016), and associated metabolic and financial costs attached to late diagnosis and poorly managed sugar levels.

It was established that 59.7% of the respondents had post-primary education suggesting that they could easily comprehend professional health pieces of advises and information hence making informed decisions on their life with diabetes (Table 1). This was consistent with findings by Ayah *et al.* (2013) that most respondents had a minimum of primary school education. Nevertheless, the gap in literacy could be addressed by promoting utilization and participation in social support groups since they improved sharing of information, enhanced coordination and continuity of diabetes-care. Besides, their potentials would greatly boost efforts in diabetes management (Eisenstat *et al.*, 2013).

The study found that 98.9% of the respondents were affiliated to contemporary religions (Christians= 87.4%; Muslims= 11.5%) (Table 1); consistent with findings of KNBS (2019) Census Report that majority of residents in the study area were Christians. Since spirituality, as posited by Mwaura (2019) influences HSBs, therefore, religious affiliation of the respondents would consequently influence diabetes management.

The average monthly income 46.0% of the respondents was below Ksh. 20,000 (Table 1). This was in agreement with Zehtab and Adib-Hajbaghery (2014), who revealed that

Western Kenya is relatively resource constrained. These findings were relatable to the fact that 44.8% of the respondents were aged above 60 years; and could be either retirees depending on pension, cash transfers and/ or well-wishers for their survival. It also suggested probability of hardships faced on medical and food expenses; which would eventually have implications on diabetes management as it would influence their HSBs. From the foregoing therefore, there is need Migori County Government in collaboration with MOH and National Hospital Insurance Fund to initiate friendly health insurance terms targeting diabetics.

The blood sugar level of 65.5% of the respondents was okay as per the most recent test done; that is either normal or marginal (Table 1). On the other hand, 22.9% had raised blood sugar levels which was higher than the national statistics of 1.9% as per Kenya Stepwise Survey (2015), suggesting that despite majority of respondents having managed fairly well their medical condition, a lot is yet to be done in addressing diabetes prevalence. This calls for need for more awareness creation on health education to be done in Rongo Sub County by Migori County Government.

Integrating HSB and diabetes management

This study sought to determine the patterns of influence of diabetics' integrating HSB on diabetes management in Rongo Sub County. Findings illustrated in Figure 1 indicate that 86.2% of the respondents frequently integrated HSB. These findings were attributable to the need to complement health information and increase chances of getting well faster as observed by Ganz *et al.* (2008). One of the respondents had the following sentiments:

‘... this disease I started feeling after knocking my head when alighting from a matatu. Therefore, it was directed to me by some evil person. That is why I have to visit indigenous spiritual healers, herbalists and even doctors.’

(Respondent: R-163)

These sentiments were consistent with observations made by Cremers *et al.* (2013) that most TB patients frequently integrated HSB

despite there being free and availability of anti-TB. This was because they regarded TB as a magical disease; hence, they resorted to spiritual healing and herbal medications. Integrating HSB is attributable to perceptions that some diseases and misfortunes were caused by evil spirits (Winkler *et al.*, 2010); thus, the study confirms that individuals’ perceptions have significant role on their decision to integrate HSB.

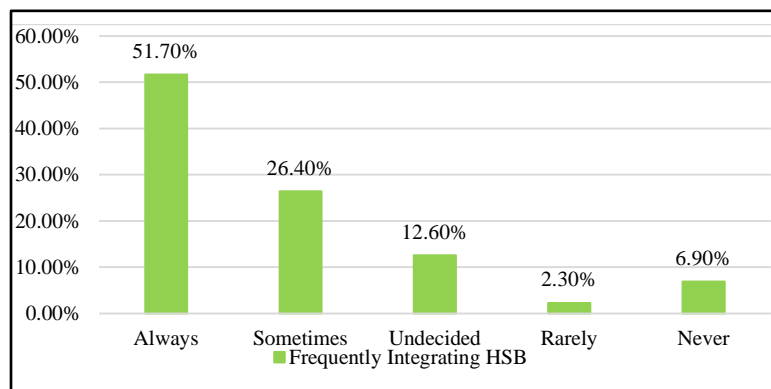


Figure 1: Frequently Integrating HSBs

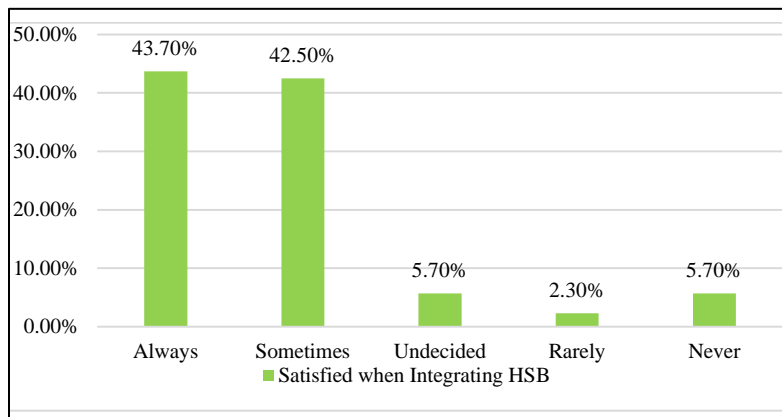


Figure 2: Satisfaction when Integrating HSB

As illustrated in Figure 2, 78.1% of the respondents were satisfied when integrating HSBs. This was attributable to the need to increase chances of getting better faster as found by Batisai (2016). However, unlike this study which focused on diabetes which is an NCD in Rongo Sub County, it focused on HIV/AIDS

which is a communicable disease in Zimbabwe. One of the respondents said:

‘I have been going to the hospital and using herbal medications. Combining these has helped me feel better. Only that you cannot tell which one helped you more.’ **(Respondent: R-114)**



KIIs revealed that most medical practitioners discouraged integrating HSBs because utilization of different types of health information could be confusing and be counter-productive to achieving diabetes remission.

Integrating HSB and diabetes management

Figure 1 revealed that respondents frequently integrated HSBs. Respondents were

asked to comment on whether integrating HSBs enabled them manage diabetes. Diabetes management was examined based on the determinants: accessing social support, gaining life skills, lessening medical expenses, getting nutritional education, and contracting fewer diseases and results were as presented in Table 2.

Table 2: Frequently Integrating HSB and Diabetes Management

Diabetes management	Frequency (No.)	Percent (%)	Mean	Std. Dev.
Accessed social support	140	79.3	3.9885	1.2116
Gained life skills	144	82.8	4.1379	1.1990
Lessened expenses	132	75.9	4.0345	1.1920
Nutritional education	142	81.6	4.1609	1.1864
Fewer disease attacks	128	73.5	4.0345	1.1920
Average (Diabetes management)	137	78.6	4.0713	
Valid N (listwise)				

Table 2 indicates that integrating HSB enabled 78.6% of the respondents manage diabetes. It enabled, 79.3% access social support, 82.8% gain life skills, 75.9% lessen medical expenses, 81.6% get nutritional education, and 73.5% contract fewer diseases. These findings were consistent with observations made in previous studies by Janse *et al.* (2018) and Batisai (2016) that integrating HSBs enhanced achieving positive health outcomes in comparison to isolated care by maximising usage and hastening regaining of optimum health.

One of the respondents said:

'Apart from going to the hospital, I also normally seek support from my pastor and herbalists medicine. They have helped me a lot... I have never told the doctor because I know they will not accept... I just use it, and also when I come to the hospital, they also give me theirs which I also use.'

(Respondent: R-062)

These sentiments confirmed findings by Agyei-Baffour *et al.* (2017), that high feasibility and acceptability boosted efforts to integrating HSBs; and that most individuals hardly disclosed usage to their medical practitioners as highlighted by Adams *et al.* (2019). This was attributable to 'hostility' faced when they opened up about their HSBs. Thus, this study asserts that integrating HSBs has significance on diabetes management and addressing other medical conditions. One of the key informants shared the following sentiments:

'I can recommend utilization of both hospital-based and non-hospital-based medications provided clients do good spacing and not default from hospital-based medications... they can use hospital-based medications in the mornings and herbal medications in the evenings.

They can also use herbal medications once their condition stabilizes; but if unfortunately, their



sugar levels rise, then they should stick to hospital-based. They can recommend use prayers but never to forego hospital-based unless with prior consent of a specialist.’ (Key Informant: KII-K003)

Sentiments of Key informant: KII-K003 reveals that despite integrating HSBs, formal HSBs should be treated as superior to informal HSBs.

Inferential statistics

Inferential statistics was used to establish association/ relationship between integrating HSBs and diabetes management using a 2-tailed Spearman’s rho correlation, and ANOVA used to establish existence of statistical significance.

Results in Table 3 shows a significant association and very strong positive correlation between frequently integrating HSBs and diabetes management ($n=174$; $r_s = .850$; $p = .01$). Suggesting that the more individuals integrated HSBs the more they increased their chances of managing diabetes. The findings also indicate that individuals who were integrating HSBs were very likely to better manage diabetes as opposed to seeking and utilization of either formal or informal healthcare alone.

These findings were consistent with observations made in previous studies which indicated that integrating HSBs enhanced outcome of treatments as compared to isolated care (Janse *et al.*, 2018). Besides, integrating HSBs enhanced conceptualization of medical conditions hence offering more understanding of what was to be treated (Verginer & Juen, 2018). Nevertheless, Esan *et al.* (2019) recommended that integrating HSBs should ensure harmful indigenous treatment practices are well addressed. Besides, low awareness and inadequate understanding among medical practitioners and diabetics on potential outcomes of interactions of particular herbal medications

with formal medications could water the value of integrating HSBs on diabetes management (McDonnell, 2018). Nevertheless, through research on efficacy of integrating HSB, formulation and implementation of policies to guide service provision by the healthcare service providers; benefits of integrating HSBs would be tapped in Rongo Sub County. Besides, integration of HSBs and its complementarity would help address the limitations faced with isolated utilization of formal or informal healthcare; thereby minimizing shifting of healthcare and non-compliance.

In addition, non-compliance would be addressed considering the value that individuals had on indigenous medications; in which case Okello *et al.* (2010) cited socio-cultural conformity. Besides, as noted by Abdullahi (2011), legislation on integrating HSBs would be a better avenue for preserving knowledge on indigenous medications and cultural heritage.

Null hypothesis testing

To determine statistical significance, null and alternative hypothesis were set as: ‘There is no statistically significant pattern of influence of diabetics’ integrating HSBs on diabetes management in Rongo Sub County’, and ‘There is statistically significant pattern of influence of diabetics’ integrating HSBs on diabetes management in Rongo Sub County’.

A one-way ANOVA test was run and results obtained as per SPSS output Table 4. The p-value obtained ($p = .000$) was less than the set p-value (.05), while $F(4,169) = 211.367$. Therefore, the null hypothesis was rejected and alternative hypothesis accepted. This study therefore confirms that there was statistically significant pattern of influence of diabetics’ integrating HSBs on diabetes management in Rongo Sub County.



Table 3: Correlation between Integrating HSB and Diabetes Management

Diabetes management		Frequently integrating HSBs
Accessed social support	Spearman's rho correlation	.871**
Gained life skills	Spearman's rho correlation	.879**
Lessened expenses	Spearman's rho correlation	.874**
Nutritional education	Spearman's rho correlation	.848**
Fewer disease attacks	Spearman's rho correlation	.779**
	Average Spearman's rho correlation	.850
	Sig. (2-tailed)	.000

Note: **-Correlation is significant at the 0.01 level (2-tailed).

Table 4: Significance of Integrating HSB and Diabetes Management

		Sum of squares	Df	Mean square	F	Sig.
Accessed social support	Between groups	207.478	4	51.870	188.520	.000
	Within groups	46.499	169	.275		
	Total	253.977	173			
Gained life skills	Between groups	209.033	4	52.258	222.704	.000
	Within groups	39.656	169	.235		
	Total	248.690	173			
Lessened expenses	Between groups	209.999	4	52.500	247.871	.000
	Within groups	35.795	169	.212		
	Total	245.793	173			
Nutritional education	Between groups	210.099	4	52.525	265.803	.000
	Within groups	33.396	169	.198		
	Total	243.494	173			
Fewer disease attacks	Between groups	186.174	4	46.544	131.936	.000
	Within groups	59.619	169	.353		
	Total	245.793	173			
Average (Diabetes management)					211.367	

Conclusion

The study concludes that there were patterns of influence of diabetics' integrating HSBs on diabetes management in the study area. Individuals frequently sought and were satisfied when utilizing both formal and informal health information since they complemented each other hence enabling them manage diabetes.

Despite being beneficial to respondents, combining both formal and informal health information was not recommended by most

medical practitioners; asserting that it could expose them to confusing information which would be counter-productive to achieving diabetes remission. On the other hand, some medical practitioners revealed that some informal therapies could be combined with formal therapies but with caution, and provided that such usage would not lead to discarding formal therapies.

A significant association and very strong positive correlation were obtained between



diabetics' integrating HSBs and diabetes management. Therefore, their suggesting that addressing limitations to integrating HSBs would help in tapping and utilizing benefits for more sustainable and cost-effective diabetes management approach. Besides, a more cordial relationship between healthcare workers and diabetics would provide a better platform for open-sharing of other practices utilized apart from the hospital-based care.

The study further tested and rejected a null hypothesis, while accepting alternative hypothesis, hence concluding that there was statistically significant pattern of influence of diabetics' integrating HSBs on diabetes management in the study area. Therefore, asserting that there were patterns of influence of diabetics' integrating HSBs on diabetes management in Rongo Sub County.

Recommendations

The study recommends that Migori County Government in collaboration with Ministry of Health should strengthen formal healthcare to improve patient-healthcare worker relationships in Rongo Sub County hence enabling patients be more willing to share their informal healthcare practices in order to achieve diabetes remission. Secondly, they should identify and document acceptable informal therapies.

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