HYPOGLYCEMIA AWARENESS AMONG DIABETIC PATIENTS ATTENDING PRIMARY HEALTH CENTRE IN RURAL COMMUNITY AREAS

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ABSTRACT

Introduction: Diabetes is a group of metabolic disorders characterized by an increase in blood sugar level due to inability of the body to either produce insulin or to maintain its level in the blood. A descriptive study was conducted to assess the awareness regarding hypoglycaemia among diabetic patients attending visiting to primary health centre. **Objectives**: The objectives were to assess the awareness regarding hypoglycaemia among diabetic patients and to find out the association of findings with selected demographic variables. **Material and Methods:** TheDescriptive design was adopted for this study. the main study was carried out on 100 diabetic patients. Non-probability sampling technique in that Purposive sampling method was used to selected samples for diabetic patients visiting to primary health centre. Pilot study and was carried out in another primary health centre of same city of the main study population among the ten-percentage population of the final study samples size. Study tool content validity was obtained by the experts from the nursing field. reliability of the tool was obtained through the test-retest method. Research study conduction permission was obtained from the primary health centre officer and participant before collection of the data.Data analysis was done mainly using descriptive statistics. **Results-** Study results revels that 22% of the subjects had a poor awareness while 78% of them had good awareness regarding Hypoglycaemia. Also 54% of participants had poor awareness while 46% of them had good awareness regarding management of hypoglycaemia and 18% of the total sample had poor awareness and 82% of them had good awareness

regarding prevention of hypoglycaemia. **Conclusion**- Findings of the study revel that, there is a better half of general population who need awareness regarding diabetes and ways to prevent and manage this disease specially in the rural community areas.

Keywords- Assess, Awareness, Hypoglycaemia, Diabetes Clients, Primary Health Centre

INTRODUCTION:

Diabetes Mellitus (DM) is a major health problem in the world. Diabetes mellitus describes a metabolic disorder of multiple etiologies. The effects of diabetes mellitus include long-term damage, dysfunction and failure of various organs. Diabetes mellitus may be there with characteristic symptoms such as thirst, polyuria, blurring of vision, and weight loss. In its most severe forms, ketoacidosis or a non-kenotic hyperosmolar state may develop and lead to stupor and coma. The diabetes mellitus long time effect includes progressive development of the retinopathy with potential blindness, nephropathy is a specific complication that can lead to renal failure and neuropathy with risk of foot ulcers, amputation, features of autonomic dysfunction, sexual dysfunction and, including Charcot joints. Two aspects of diabetes mellitus are hyperglycemia and hypoglycemia. Hyperglycemia is an increase in blood glucose level. Hypoglycemia is a lower-than-normal level of blood glucose. It can be defined as "mild" if episode is self-treated; "moderate" if assisted and "severe" if hospitalized and assisted by a physician.[1]

Diabetes Mellitus is currently the fastest growing tending disease in the world. It is estimated that one out of five people aged 20 to 79 lives with this disease, while a similar percentage of the population is at risk of developing it.[3]

19.4 million in 2005 to 57.2 million in 2025. Diabetes is rapidly obtaining the status of potential epidemic in India around 65 million people are currently being affected by it and by 2050, India's diabetes numbers are expected to cross the 100 million mark and it is increasing to nearly 2 million in a year.[4]

It is estimated in Globally in 2013, people suffer from diabetes are almost 382 million. Hypoglycemia is a true medical emergency, to prevent organ and brain damage it requires recognition and treatment. The spectrum depended on duration and severity of hypoglycemia and it varied from involuntary activation to the behavioural changes to altered cognitive function to seizures or coma. The complications include neurologic damage, trauma, cardiovascular events and death. Significant economic and personal burden

can be caused if the hypoglycemia is untreated.[2]

The need to develop teaching or health education practice activities for diabetic clients and their families associated with the prevention of complications through self- management of the disease, which permits patient to live with it better5. Nurses' roles in balancing glycemic control for preventing hypoglycemia is by providing optimum care for diabetes clients, such as recognizing precipitating factors or triggering events, ordering appropriate scheduled insulin or anti-diabetic oral agents, monitoring blood glucose at the bedside, educating patients, family, friends, and staff about symptom recognition and appropriate treatment and providing appropriate nutritional requirements. [5]

Nurse researcher observed the diabetes mellitus clients whether they had enough guidance and education regarding the awareness on management of hypoglycemia and able to identify their knowledge on management. With the above aspect and background, the current study was planned to promote the awareness on management of hypoglycemia among diabetic clients.

RESEARCH METHOD:

This study took place in a primary health centre with quantitative research approach and descriptive designed was used to complete this study. the primary health centre has a daily outpatient with a daily turnover of approximately 05-10 are reporting for follow up visits. out of them 100 patients were selected though the probability purposive random sampling technique who have met with the inclusion criteria. Patient with other chronic disease is were excluded from this study. Demographic variable sheet includes age, gender, educational status, occupation, diagnosed with diabetes from how many years, etc. and 8 items related to hypoglycemia, 5 items related to management of hypoglycemia, 7 item related to prevention of hypoglycemia tool were used for the data collection after the content validity and reliability. The pilot study was conducted after validation of tool content. Test-Retest reliability method was performed to check the reliability and tool was checked by "Karl-Pearson Correlation Coefficient" formula. According to Karl-Pearson Correlation Coefficient the range lies between -1.00 to +1.00. as "r" value" is more than 0.7, it is reliable. hence tool was found reliable for the main study data collection. The study data were analyzed by using descriptive statistics based on the objectives of the study and Chi square test was used to check the association of

knowledge score of samples with demographic variables.

Study data the findings were organised and presented under the following sections:

RESEARCH FINDINGS:

Section-I: Demographic Data frequency and percentage distribution

Demographic Data			
Parameters		Frequency	Percentage (%)
Gender	Male	60	60
	Female	40	40
Age	18-25	00	00
	26-35	30	30
	36-45	50	50
	46-60 And above	20	20
Education	Primary Level	30	30
	Higher Secondary Level	40	40
	Graduation	20	20
	Post-Graduation	10	10
Occupation	Government Employee	10	10
	Private Employee	10	10
	Self-Employee	40	40
	Unemployment	20	20
Duration of DM	Less Than 1 Year	20	20
	1-3 Years	50	50
	4-6 Years	30	30
	More Than 7 Years	00	00
Hypoglycemic Agent	Yes	80	80
	No	20	20
Family History	Yes	60	60
	No	40	40
Hypoglycemic Episode	Yes	70	70
	No	30	30
Medication	Oral	70	70
	Insulin	30	30
Source of information	Mass media	30	30
	Family	20	20
	Friends	00	00
	Health team members	50	50

Section-II: Awareness Regarding Hypoglycemia Among Diabetic Patients

Awareness score	Frequency (N=100)	Percentage	Mean	SD
Poor (0-4)	22	22 %	5.27	0.91
Good (5-8)	78	78%		

Section-III: awareness regarding hypoglycemia management among diabetic patients

Awareness score	Frequency (N=100)	Percentage	Mean	SD
Poor (0-3)	54	54%	3.36	0.65
Good (4-5)	46	46%		

Section-IV: awareness regarding hypoglycemia prevention among diabetic patients

Awareness score	Frequency (N=100)	Percentage	Mean	SD
Poor (0-3)	18	18%	4.7	0.97
Good (4-7)	82	82%		

Section – IV: Association of demographic variables with awareness regarding hypoglycemia among diabetic patient.

Demographic Parameters		awareness		d.f	Cal.Chi Square	Chi Table Value	P value	Results
		Good	Poor					
Gender	Male	34	10	1	0.02	3.84	0.87	NA
	Female	44	12					
Age	18-25	15	05	2	0.20	5.99	0.90	NA
	26-35	43	11					
	36-45	20	06					
	46-60 And above	27	08					
Education	Primary Level	27	08	3	0.54	7.81	0.90	NA
	Higher Secondary Level	35	09					
	Graduation	09	02					
	Post-Graduation	07	03					
Occupation	Government Employee	07	03	3	3.36	7.81	0.33	NA
	Private Employee	18	02					
	Self-Employee	37	14					
	Unemployment	16	03					
Duration of DM	Less Than 1 Year	13	05	2	0.51	5.99	0.77	NA
	1-3 Years	37	09					
	4-6 Years	28	08					
Hypoglycemic Agent	Yes	13	10	1	1.39	3.84	0.29	NA
	No	65	12					
Family History	Yes	38	08	1	0.07	3.84	0.78	NA
	No	40	14					
Hypoglycemic Episode	Yes	19	06	1	1.25	3.84	0.26	NA
	No	59	16					
Medication	Oral	24		1	0.09	3.84	0.75	NA
	Insulin	54						
Source of information	Mass media	22	09	2	0.53	5.99	0.76	NA
	Family	19	07					
	Health team members	37	09					

Section – V: Analysis related to association of demographic variables with awareness regarding management of hypoglycemic among diabetic patient.

Demographic Parameters		awareness		d.f	Cal.Chi Square	Chi Table Value	P value	Results
		Good	Poor					
Gender	Male	34	10	1	0.25	3.84	0.61	NA
	Female	44	12					
Age	18-25	15	05	2	0.39	05.99	0.82	NA
	26-35	43	11					
	36-45	20	06					
	46-60 And above	27	08					
Education	Primary Level	27	08	3	5.30	7.81	0.15	NA
	Higher Secondary Level	35	09					
	Graduation	09	02					
	Post-Graduation	07	03					
Occupation	Government Employee	07	03	3	4.52	7.81	0.21	NA
	Private Employee	18	02					
	Self-Employee	37	14					
	Unemployment	16	03					
Duration of DM	Less Than 1 Year	13	05	2	1.45	5.99	0.48	NA
	1-3 Years	37	09					

	4-6 Years	**28**	**08**				
Hypoglycemic Agent	**Yes**	**13**	**10**	**1**	**3.42**	**3.84**	**0.06**	**NA**
	No	**65**	**12**					
Family History	**Yes**	**38**	**08**	**1**	**4.16**	**3.84**	**0.04**	**A***
	No	**40**	**14**					
Hypoglycemic Episode	**Yes**	**19**	**06**	**1**	**0.50**	**3.84**	**0.04**	**NA**
	No	**59**	**16**					
Medication	**Oral**	**24**		**1**	**4.41**	**3.84**	**0.03**	**A***
	Insulin	**54**						
Source of information	**Mass media**	**22**	**09**	**2**	**0.73**	**5.99**	**0.69**	**NA**
	Family	**19**	**07**					
	Health team members	**37**	**09**					

* Association at 0.05 level of significance

Section – VI: Analysis related to association of demographic variables with awareness regarding prevention of hypoglycemic among diabetic patient

Demographic Parameters		**Awareness**		**d.f**	**Cal.Chi Square**	**Chi Table Value**	**P value**	**Results**
		Good	**Poor**					
Gender	**Male**	**34**	**10**	**1**	**27.93**	**3.84**	**0.000**	**A***
	Female	**44**	**12**					
Age	**18-25**	**15**	**05**	**2**	**15.65**	**5.99**	**0.004**	**A***
	26-35	**43**	**11**					
	36-45	**20**	**06**					
	46-60 And above	**27**	**08**					
Education	**Primary Level**	**27**	**08**	**3**	**43.16**	**7.81**	**0.0003**	**A***
	Higher Secondary Level	**35**	**09**					
	Graduation	**09**	**02**					
	Post-Graduation	**07**	**03**					
Occupation	**Government Employee**	**07**	**03**	**3**	**34.37**	**7.81**	**0.005**	**A***
	Private Employee	**18**	**02**					
	Self-Employee	**37**	**14**					
	Unemployment	**16**	**03**					
Duration of DM	**Less Than 1 Year**	**13**	**05**	**2**	**20.46**	**5.99**	**0.0003**	**A***
	1-3 Years	**37**	**09**					
	4-6 Years	**28**	**08**					
Hypoglycemic Agent	**Yes**	**13**	**10**	**1**	**5.14**	**3.84**	**0.0023**	**A***
	No	**65**	**12**					
Family History	**Yes**	**38**	**08**	**1**	**0.0352**	**3.84**	**0.023**	**NA**
	No	**40**	**14**					
Hypoglycemic Episode	**Yes**	**19**	**06**	**1**	**8.11**	**3.84**	**0.004**	**A***
	No	**59**	**16**					
Medication	**Oral**	**24**		**1**	**9.40**	**3.84**	**0.002**	**A***
	Insulin	**54**						
Source of information	**Mass media**	**22**	**09**	**2**	**25.76**	**5.99**	**0.000**	**A***
	Family	**19**	**07**					
	Health team members	**37**	**09**					

*Association at 0.05 level of significance

Only one variable; family history was calculated less than chi square table value so this variable was not associated with awareness regarding prevention hypoglycemic among diabetic patient. All other variable age, gender, education, occupation, hypoglycemic agent, hypoglycemic episode was calculated more than chi square table value so these all variables were associated with awareness regarding prevention of hypoglycemia among diabetic patient.

DISCUSSION AND CONCLUSION:

The title of the study was "A descriptive study to assess the awareness regarding hypoglycemia among diabetic patients visiting to primary health centre" A total 100 samples were selected by using non-probability sampling technique in that purposive sampling method was adopted. Using self-structured questionnaire collected data of study reviled that Awareness on hypoglycemia shows 22% shows participants had a poor knowledge, and 78% participants had a good knowledge, Awareness related to management of hypoglycemia shows 54% participants had poor knowledge, and 46% participants had good knowledge, Awareness on prevention of hypoglycemia shows 18% participants had poor knowledge, and 82% participants had good knowledge.

The present study was carried out to assess the awareness about the hypoglycemia among the diabetes peoples.In th study findings related to demographic variables, Majority participants 60% belongs to male category and 40% belongs to female category. About 50% belong to the age group of 36-45 years of age group. 70% belongs to oral medication. Regarding source of information, 50% was a source from the health team. similar findings are found in to the studies which were conducted before the on interest,Dr. Komal Suresh Gawand research in 2015 Diabetes mellitus (DM) is a metabolic disorder, of multiple etiological factors which are characterized by chronic hyperglycemia with disturbance of carbohydrate, fat and protein metabolism which resulted from either insufficient insulin secretion, resistance to the action of insulin or both. Out of 56 surveyed subjects, mean age of study subjects was 39.48± 3.49(95% CI: 35.99-42.97); with a mean duration of diabetes 7.768± 1.372(95% CI: 7.07-9.64). Majority of patients were males 64.29%. Inspite of the limitations, this study can be used as baseline to identify educational needs and formulate strategies to impart positive attitudes and beneficial practices among diabetics.

Implications; The present study outcome has implicated for Nursing Education, Nursing Administration and Nursing Research.

Recommendations: 1. Similar study can be done in a large population to generalized the research findings. 2. An experimental study can be conducted to assess the effectiveness of the study. 3. Study can have been conducted to assess the management of nurses in providing care different settings.

Conflict of interest: There is no any conflict of interest raised in this study .

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