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Knowledge and Preventive Practice Towards Non-Communicable Diseases Risk Factors Among Civil Servants of Kellem Wollega Zone, Western Ethiopia in January, 2019

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Abstract

Background: According to WHO international report, more than 38% millions people die annually from Non-communicable diseases (63% of global deaths), including 16 million people who die before the age of 70. The objective of this study: Assessment of knowledge and practicing prevention of Non-communicable diseases' risk factors among the civil servants in Kellem Wollega Zone, Oromia region, Western Ethiopia, January, 2019.

Methods: Government office based Cross-sectional study was conducted in three selected woredas of Kellem Wollega Zone, Oromia region, Ethiopia from January 1-30/. Administered structured questionnaire were used for data collection. The collected data were sorted manually, entered in to Computer and cleaned by using Epi-data version 3.1 and exported to SPSS version 23.0 for analysis. Descriptive statistics, binary and multiple logistic regressions were employed. The analysed data were interpreted by using adjusted odd ratio with 95% confidence interval.

Results: five hundred sixty eight (100%) were participated , about 324(57.1%) were Degree in their level of education, 155(27.3%) heard ever about non-communicable diseases risk factors, 120(21.1%, 48(8.5%) and 29 (5.1%) measured their body mass index, Blood pressure, and total blood cholesterol frequently by skilled health care providers respectively. Those who have attended first degree and above, and those with Health care professionals were found to be more knowledgeable and practicing prevention of Non-Communicable Diseases' risk factors (AOR=4.53; 95%: 1.86, 11.14) and (AOR = 2.37: 2.964, 5.834) respectively.

Conclusion: The overall knowledge and practicing prevention of Non-Communicable Diseases' risk factors were 155(27.3%) and 58(10.2%) respectively, Civil servants with high level of education (BSc/BA and MSC/MA) and those with health care professional were identified to have favorable level of knowledge and practicing prevention of risk factors of Non-Communicable Diseases. Hence, Awareness on Non-communicable diseases' Risk factors prevention particularly, on biological and physiological risk factors should be given for the civil servants of the study area.

Keywords: Non-Communicable Diseases Risk factors; civil servants; knowledge; preventive practice

Introduction

Background: According to britanica.com; Disease is any harmful deviation from the normal structural or functional state of an organism, generally associated with certain signs and symptoms and differing in nature from physical injury [1].

Based on the time course, disease can be categorized as chronic diseases which characterized by prolonged duration and as acute characterized by a rapid onset and short duration [1]. Diseases can also be categorized in to infectious which could be transmitted by living microorganism such as bacteria, viruses, parasite and fungus and noninfectious that can be transmitted by other than living microorganism [1].

According to WHO international report, globally, non-communicable diseases, 63% of global deaths were from non-communicable diseases from which 16 million people were died before celebrating their 70 years of age; in other way 50% of global disability is attributed from non-communicable diseases [2].

According to WHO report, in developing country; 43% of diseases burden from non-communicable diseases. By 2020, WHO expected that 60% of diseases burden, 70% death will be from non-communicable diseases [3].

In order to alleviate the problem, World Health Organization (WHO) is recommending prevention and control program of NCDs, as a global strategy, by focusing on the major risk factors which are common in the most countries including: hypertension, diabetes, obesity and hyperlipidemia, smoking, inappropriate nutrition and inadequate physical activity(journals.tums.ac.ir) [3]. This study is aimed at assessing Knowledge and preventive practice towards Non-communicable diseases risk factors among civil servants of Kellem Wollega Zone, Western Ethiopia in January, 2019.

Methods and Materials

The Study area

The study was conducted in Kellem Wollega Zone, Oromia region. Dambi Dollo town is the capital city of this Zone located 637 kilometer from the capital city of Ethiopia, Addis Ababa. According to Central Statistical Agency of Ethiopia (CSA) of 2007, this Zone has a total population of 997,666, of whom 401,905 are men and 395,761 women.

The study period and Study design

Institutional based cross sectional has been conducted in January 1-30/2019.

Target population

All civil servants of Kellem Wollega Zone, during the study period

The study population

Government employees in Kellem Wollega Zone during the study period

Exclusion criteria

Sicked, unwilling participants during the study period

Sample size determination and sampling techniques

Single population proportion formula was used. Knowledge of the civil servants towards non-communicable diseases was estimated from the study conducted in Sri Lanka, which is 66% [47].

Data collection procedure

The questionnaires were adapted from different literature reviews. The study purposes were explained. The was obtained from each participants. The questionnaires were distributed to all individual with voluntary participants. The participants were interviewed by health care workers and supervised by Health officers/BSc nurses.

Sampling technique

Multistage sampling technique was used. First, those woreda under Kellem Wollega Zone were listed, and then three woreda have been selected using systematic random selection methods. Second, from the selected woreda, the government offices were listed per woreda. From the listed office the study subjects were selected randomly again. The sample size was allocated proportional to the size of the government employee of selected office. Systematic random sampling was applied to identify the required participants from the selected office.

Data quality control

Two days training was given to data collectors and supervisors. Afan Oromo translated questionnaires were used. The Collected samples were rechecked by supervisors daily. Pilot test was conduct on 5% of the total sample size.

Analysis activity

EPI-INFO and SPSS version 23.00 software were used to ensure the quality and consistency of data. The study findings were described in descriptive statistics and analysed by Binary and multiple logistic regression. Those variables with P<0.25 have been selected for multiple regression analysis. P-values > 0.05 were considered as statistically significant.

Results

Socio-demographic characteristics of the respondents (n=568): Most of the Residence of the respondents were from Sayo woreda 240 (42%), Jimma Horo Woreda 168 (30%), and Dambi Dollo Town 160 (28%). Of these 315(55.3%) of the respondents were male, whereas 526 (92.6%) were Oromo. 393 (69.2%) were between the age of 30-49 years, 394 (69.5%) were married, and 324 (57.1%) were degree in level of educational. 225 (39.4%), 128 (22.4%) accountant and teachers in their professional type, respectively. 356 (62.3%) of the respondents were protestant in their religious. 393 (69%) of the respondents were earn salary of 3001-9000 ETB per month. 396 (69.4%) and 387 (67.8%) of the respondents were heard about NCDs and its risk factors from TV –program, respectively (Table 1). 447 (78.7%) walk to their working place on foot , 69 (12.1%) of the respondents were not performing any physical activity (Figure 1). 246(43.3%) heard about non-communicable diseases, whereas 322(56.7%) were not heard about non-communicable diseases (Table 2). 155(27.3) respondents were heard about risk factors of non-communicable diseases, whereas 413(72.7%) were not heard about risk factors of non-communicable diseases (Table 2). Education versus knowledge or awareness of the respondents, 110(51.9%) Diploma, 316(97.5%) BSc/BA, 31(96.9%) were heard ever about non-communicable diseases (Table 3).

Table1: Demographic variables frequency of the study subjects [n=568].

Variables		Frequency	%
Age	20-29	105	18.5
	30-39	201	35.4
	40-49	192	33.8
	50 and above	70	12.3
Residence	Dambi Dollo	160	28.2
	Sayo	240	42.3
	Jimma Horro	168	29.6
Gender	Male	315	55.5
	Female	253	44.5
Ethnicity	Oromo	526	92.6
	Amhara	20	3.5
	Guragne	16	2.8
	Other specify	6	1.1
Marriage	married	394	69.4
	Single	159	28.0

	Divorced	15	2.6
Religion	protestant	353	62.1
	Catholic	31	5.5
	Orthodox	132	23.2
	Others	52	9.2
Educational level	Certificate	0	0
	Diploma	212	37.3
	Degree	324	57.0
	MA/MSc/BSc	32	5.6
	PHD and above	0	0
Salary per months/ETB	1000-2000	53	9.3
	2001-3000	85	15.0
	3001-4500	220	38.7
	45001-9000	170	29.9
	9001 and above	40	7.0
Professional type	Health care provider	43	7.6
	Accountant/ Economist	203	35.7
	Teacher/ Lecturer	163	28.7
	Agriculture	78	13.7
	Others	81	14.3

Table2: Descriptive Knowledge and preventive practice of the respondents towards NCDs and its Risk factors (n=568).

Question	Yes		No	No response		
	Count	%	Count	%	Count	%
Have you heard ever about NCDs?	246	43.3	322	56.7		
Do you think that can we prevent NCDs?	58	10.2	367	64.6		
Have you heard ever about NCDs' risk factors?	155	27.3	413	72.7		
Can smoking leads to NCDs?	138	24.3	291	51.2	139	24.5
Can drinking alcohol leads to NCDs?	167	29.4	272	47.9	129	22.7
Would you believe that physical inactivity leads to NCDs?	158	27.8	214	37.7	196	34.5
Would you have any awareness that unhealthy diet can leads to NCDs?	324	57.0	154	27.1	90	15.8
Do you know that High blood pressure can be the risk factor for NCDs?	174	30.6	288	50.7	106	18.7
Do you know that High blood glucose can be the risk factor for NCDs?	278	48.9	230	40.5	60	10.6
Do you know that overweight/ obesity can be the risk factor for NCDs?	166	29.2	202	35.6	200	35.2
Do you smoke cigarette?	21	3.7	547	96.3		
Have you ever	120	21.1	448	78.9		

measured your body mass index in the past your life time, by skilled health care providers?						
Have you ever measured levels of your blood pressure in the past your life time by skilled health care providers?	48	8.5	520	91.5		
Have you ever measured your blood cholesterol level, in the past your life time by skilled health care providers?	29	5.1	539	94.9		
Do you drink alcohol?	59	10.4	509	89.6		

Figure1: Physical activities status of the respondents' n=568.

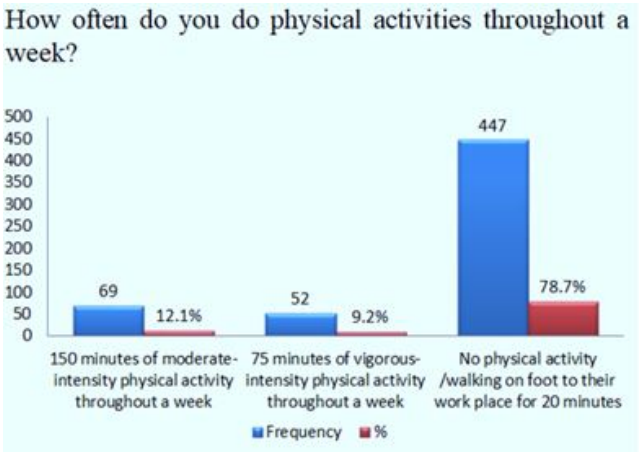

Table3: Cross relationship of selected variables with knowledge of the respondents (n=568).

			Educational level				
Have you heard ever about NCDs' risk factors?			**Diploma**	**BSc/BA**	**MA/MSC**	**Total**	
	Yes	Count	110	316	31	457	
		%	51.9%	97.5%	96.9%	80.5%	
	No	Count	102	8	1	111	
		%	48.1%	2.5%	3.1%	19.5%	
Professional type of the respondents							
Have you heard ever about NCDs' risk fa			**Health care provider**	**Accountant/ Economist**	**Teacher/ Lecturer**	**Agriculture**	**Others**	**Total**
	Yes	Count	40	172	126	65	54	457
		%	93.0	84.3	77.3	83.3	66.6	80.4
	No	Co	3	32	37	13	27	111

ctors?		unt							
		%	7.0	13.7	22.7	16.7	33.4	19.6	

From (Table 3), as the level of the respondents' education increased, knowledge of the respondents toward NCD's risk factors also increased. HEALTH care providers were found to be more knowledgeable on Risk factors' of NCDs than those with non-health care professionals (Table 3).

Factors associated with the knowledge of Respondents (n=568): Those who have attended first degree and above were found to be more knowledgeable on Risk factors' NCDs than those who have diploma level of education (AOR=4.53;95%: 1.86,11.14) (Table 4). Health care providers were found to be more knowledgeable on the Risk factors' NCDs than those who have diploma level of education (AOR = 2.37(.964, 5.834) (Table 4).

Table4: Factors association with the knowledge of the respondents toward the risk factors of NCDs' (n=568).

Educational status of the respondents	**Knowledge of the respondents (n=568).**				
		Yes (%)	**No (%)**	**AOR (95%)**	**p**
	Diploma	37(23.9%)	175(42.4%)	1.00	= 0.061
	BA/BSc	103(66.5%)	221(53.5)	4.53 (1.86,11.14)	=0.021
	MA/MSc	15(9.7%)	17(4.1%)	2.37(.964, 5.834)	=0.0420
Professional type of the respondents	Health care providers	41(95.3%)	2(4.7%)	3.4(1.32, 47.92)	=0.001
	Accountant / economist	50(24.6%)	153(75.4)	1.00	=0.402
	Lecturer/ Teacher	55(33.7%)	108(66.3%)	1.00	=0.112
	Agriculture	20(25.6%)	58(74.4%)	1.00	=0.201
	Others*	15(18.5%)	66(81.5%)	1.00	=0.07

Table5: Factors association with the practice of the respondents toward preventing the risk factors of NCDs' (n=568).

Socio demographic	**Practice of the respondents toward the prevention NCDs' risk factors (n=568)**				
		Yes (%)	**No (%)**	**AOR (95%)**	**p**
Educational status of the respondents	Diploma	69(12.1)	161(28.3)	1.00	=0.411
	BA/BSc	153(27.0)	200(35.2)	2.4(1.02, 1.34)	=0.035
	MA/MSc	22(3.9)	10(1.7)	4.1(5.3, 8.4)	=0.025
Professional type of the respondents	Health care providers	41(7.2)	2(0.3)	3.4 (2.9, 5.30)	=0.001
	Accountant / economist	101(17.8)	102(18.0)	1.03(.86,11.14)	=0.031
	Lecturer/ Teacher	58(10.2)	105(18.5)	1.53 (2.86,11.14)	=0.032
	Agriculture	23(4.01)	55(10.0)	1.23(.65, 8.23)	=0.011
	Others*	11(1.9)	70(12.3)	1.00	=0.69

Government employee who had BA/BSc/MA/MSc shown to have strong association towards practicing prevention of NCDs' (AOR=3.4; 95%: 2.9, 5.30) more likely than those below education level (Table 5).

Those Government employees with: Health care providers (AOR=3.4, 95%: 2.9, 5.30); Accountant/Economist (AOR 1.03, 95%: .86, 11.14); Lecturer/Teachers (AOR 1.53, 95%: 2.86, 11.14) were shown to have strong association with towards practicing prevention of NCDs' risk factors than those with others professional (Table 5).

Discussion

Many studies have been done in different parts of the world among diversified social groups.The study was new for the study area in that to identify 'Knowledge and preventive practice towards Non-communicable diseases risk factors among civil servants of Kellem Wollega Zone, Oromia, Ethiopia in January, 2019

Socio demographic characteristics: Most of the Residence of the respondents were from: Sayo Woreda 240 (42%), Jimma Horo Woreda 171 (30%), and Dambi Dollo Town 160 (28%). Of these 316 (55.3%) of the respondents were male, whereas 529 (92.6%) were Oromo. 395 (69.2%) were between the age of 30-49 years, 397 (69.5%) were married, and 326 (57.1%) were degree in their level of educational. 225 (39.4%), 128 (22.4%) accountant and teachers in their professional type, respectively. 356 (62.3%) of the respondents were protestant in their religious. 393 (69%) of the respondents were earn salary of 3001-9000 ETB per month. 396 (69.4%) and 387 (67.8%) of the respondents were heard about NCDs and its risk factors from TV –program, respectively. 447(78.7%) walk to their working place on foot , 69 (12.1%) of the respondents were not performing any physical activity (Table 1).

Knowledge of the respondents:

Around 246(43.3%) of the respondents were heard about NCDs, whereas 155(27.3%) were knew about the risk factors for NCDs (Table 2). The findings of this study were lower when compared with study conducted in Sri Lanka 279 (66%). 138(24.3%) of the respondents were have awareness that smoking can leads to NCDs (Table 2). 139(24.5%) of the

respondents were did not have awareness on the disease caused by smoking (Table 2). The findings were lower when compared to the study conducted in India (81.5%). Almost half of the study participants 324(57.0%) were have awareness that increasing vegetables and fruits in food has positive factor for CVD risk control. This finding might be equal with the finding from the research conducted in India, in which 54.6% of the respondents were aware of increased vegetable and fruits in food consumption have a positive factor for CVD risk control. Less than one-third of the Civil servants 158 (27.8%) was believed that physical inactivity can leads to NCDs (Table 2). About 278 (48.9 %) responded that diabetes is caused by high sugar levels in the blood, but lower 62,320(77.9%) when compared to the study conducted in iganga Uganda (Table 2). About 166 (29.2%), 167 (29.4%) of the civil servants agree that drinking alcohol and overweight/obesity can be the risk factor for NCDs respectively (Table 2). About 174 (30.6%) (Table 2) agreed that high sugar in take can be the risk factor for NCDs but Lower when compared to the conducted in India, 1048(87.9%) believed that routine checkup for Blood Pressure has beneficial, (Manoj Mahajan, 2019).

Practicing toward preventing the risk factors for NCDs:

About 447(78.7%) of the respondents were performing walking to their work place on foot (Figure 1). Whereas 255(44.9%) of the respondents were having diet with fruit and vegetables in their food at least one per a week. 120 (21.1%), of the respondents were measured for their Body mass index in their life. About 48(8.5%) of the respondents were for their blood pressure level in their life, but lower when compared with the study conducted in India. Of those with awareness about the Non-communicable diseases, 87.9% believed that routine checkup for blood pressure has high benefits to control the diseasses (Manoj Mahajan,2019). 21(3.7%) of the respondents were respond 'yes' for smoking cigarette during the study period. 59(10.4%) of the respondents were respond 'yes' for drinking alcohol during the study 29(4.1%) of the respondents were measured for their total blood cholesterols level in their life (Table 2).

Factors associated with knowledge of the respondents:

Those who have attended first degree and above were found to be more knowledgeable on Risk factors' NCDs than those who have diploma level of education (AOR=4.53;95%:1.86,11.14). Health care providers were found to be more knowledgeable on the Risk factors' NCDs than those who have diploma level of education (AOR = 2.37(.964, 5.834). Government employee who had BA/BSc/MA/MSc shown to have strong association towards practicing prevention of NCDs' (AOR=3.4; 95%: 2.9, 5.30) more likely than those below educational level (Table 4).

Conclusion

Around 246(43.3%) of the respondents were heard about NCDs, whereas 155(27.3%) of the respondents have favorable knowledge towards the risk factors of NCDs (Table 2). From this study, Civil servants with high level of education (BSc/BA and MSC/MA) and those with health care professional were identified to have high level of general knowledge regarding Knowledge and practicing prevention of risk factors for NCDs (Table 4,5).

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