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THE PREVALENCE OF HYPERTENSION, OBESITY, DIABETES AND JOB SATISFACTION AMONG PUBLIC HEALTH WORKERS IN CENTRAL PROVINCE, SRI LANKA

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Abstract

Aim of this study was to assess the prevalence of hypertension, obesity, overweight, diabetes and job satisfaction among public health workers in the Central province, Sri Lanka. This cross sectional study was conducted in three districts in the Central Province, Sri Lanka. Data were collected from public health workers (PHW) (n= 336). BMI, blood pressure and random blood sugar were measured. General information and self-reported job satisfaction and coping strategies were collected by a self-administered questionnaire. Mean age of PHW was 42.5 (SD

10.3, CI=95%). There were 302 females (89%) in the group. Prevalence of overweight and obesity among PHW were 29. 5% and 16.4% respectively. Among the group 26.4 % individuals (n=89) were hypertensive and 21 (6%) individuals were living with diabetes. 57.1% of individuals (n=192) reported with moderate pressure on their work. Extremely satisfied, very satisfied and moderately satisfied unsatisfied and not at all satisfied were 31.5%, 61%, 5.4 %, 1.2% and 0.6 respectively. Field work, work load, working environment, income were found to be as the common sources for stressful circumstances at work. Study revealed that overweight and obesity prevalence among public health workers in the Central Province is considerable. Significant amount of public health workers were hypertensive and living with diabetes. More than half from the group had a moderate satisfaction with their job.

Keywords

Job Satisfaction, Obesity, Public Health Workers, Coping Strategy

1. Introduction

Job satisfaction is defined as pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values (Nasiripour, et al., 2005) (Hassard, et al., 2005) And also job satisfaction is one of the important factors in organizational psychology is regarded as an indicator of working-life quality (Locke, 1297-1350) Experiences of work, gender, age, attitudes towards job, relationship with co-workers, efficiency of work, salary can be identified as factors contributing to the job satisfaction among employees (Mbindyo, et al., 2009). (Parvin, 2009) Occupational stress is known as the outcome of fact of the assigned work role that caused harmful effects for workers. Also job stress can lead to poor health and injuries (Hong, et al., 2013) Although pressure is seen as a positive factor to improve personal performance, problems emerge when the sources of pressure become too frequent without time to recover, then it negatively impact on the structure and work flows of the organization (Azad, 2014) Researchers have found that the attainment of the high performance of job satisfaction among employees is highly determined by the level of job satisfaction (Ahmed & Ramzan, 2013). It has been revealed that the dissatisfaction of the employees has adverse effects of efficiency and effectives of the organization or the institution where they are attached (Pushpakumari, 2008).

Several studies have shown that the job satisfaction was immensely contributed to the work performance of health care workers worldwide (Jathana et al., 2011), (Joy & Rashakrishnan, 2014). Job satisfaction of the health workers is highly important in building up employee motivation and efficiency as it determines better employee performance and higher level satisfaction in beneficiaries (Kumar & Sundaram, 2014). Studies revealed that the job satisfaction influences the quality of health care services they deliver to the community (Javed et al., 2014). Job satisfaction among public health workers is important to retain the existing as well as the new recruitment (Jathana, et al., 2011).

Non communicable diseases (NCDs) are the leading causes of death globally, killing more people each year than all other causes combined (Peterset al., 2010). Four major NCDs, cardiovascular diseases (including heart disease and stroke), diabetes, cancer and chronic respiratory are the leading cause of illness and death worldwide including the South-East Asia Region (SEAR) (World Health Organization, 2010). The burden is expected to rise by 74% - 89%, by the year 2030 (Dans et al., 2011). Most of non-communicable diseases share common preventable risk factors such as tobacco use, high alcohol consumption, raised blood pressure, sedentary lifestyle, obesity unhealthy dietary practices and inactivity (Sánchez et al., 2007). Many studies have shown that the prevalence of common non-communicable risk factors was high among employees (Jun et al., 2011). The majority of studies from the international context found that the risk of cardiovascular diseases and also work related factors may contribute to the high prevalence of overweight and obesity among health care workers (Ameera et al., 2012; Luckhaupt et al., 2014). Furthermore studies have confirmed the risk of diabetes found to be increasing problem among employees including healthcare workers (Poulsen et al., 2014), (Kuwahara et al., 2014). There were no studies found which observed the relationship between NCD risk factors and job satisfaction among particular working groups. Although many studies have been done to address the question of level of job satisfaction among various occupational groups, there were no research done that address the relationship between job satisfaction and NCD risk factors among public health workers in Sri Lanka.

Health workers deployed from within their own communities to deliver basic health care have various titles but "Community Health Worker (CHW)" is the term most commonly used to describe this cadre (Szymanski, 1999), (Elizabeth et al., 2000). Health care system in Sri Lanka has a well-developed infrastructure which includes primary care, curative health care and

rehabilitative health care (Family Heath Bureau, 2012). The delivery of health service is based on an integrated approach through a network of institutional and primary health care units that are primarily responsible for providing preventive and health promotion of people. Currently there are 444 health units in Sri Lanka, named as office of the medical officer of health (MOH) to cater population of 40000 to 60000 and the public health group is consisted by Public Health Midwifes, Pubic health Inspectors, Public Health Nursing Sisters and Supervisory Public Health Midwifes (Family Heath Bureau, 2012).

The aim of the present study was to determine the prevalence of NCD risk factors and also to assess correlation between NCD risk factors and job satisfaction among public health workers in Central Province, Sri Lanka. According to our knowledge this is the first study which assessed the prevalence of obesity, hypertension, diabetes and level of satisfaction together in public health workers in Central Province Sri Lanka.

2. Objectives of the Study

2.1 General Objective

To assess the prevalence of hypertension, obesity, diabetes and job satisfaction among Public health workers in Central Province, Sri Lanka.

2.2 Specific Objectives

- To determine the prevalence of obesity, overweight, hypertension, diabetes (based on RBS) and other behavioral factors (alcohol and tobacco consumption level) among public health workers.
- To determine the level of self-reported job satisfaction and the psychological pressure determined by occupation.
- To determine the relationship between job satisfaction and the factors associated with stress.
- To assess the relationship between anthropometric values and the overall job satisfaction among the public health workers.
- To assess the different coping strategies.

3. Material and Methods

3.1 Design and Participants

This cross sectional study was conducted from January to December 2015. At medical officer of health offices (MOHs) in three district namely Nuwara Eliya, Kandy and Matale in

Central Province, Sri Lanka. Multi stage cluster sampling technique was used to collect public health workers (N=336). Public health workers of the study included Public Health Midwifes (PHM), Public Health Instructors (PHI), Supervisory Public Health Midwifes (SPHM) and Public Health Nursing Sisters (PHNS).

3.2 Measures

Self-Administered general questionnaire was used to collect demographic information (age, sex, education qualification, etc.). Job satisfaction, work related occupational stress factors associated with the job satisfaction and coping strategies was collected through a Likert scale which is also self-administered.

Written consent was taken prior to the completion of questionnaires. BMI, blood pressure and the random blood sugar data were collected according to the standard protocols.

3.3 Questionnaires

Each worker was given two questionnaires; demographic and job satisfaction. Demography included age, gender, marital status, education qualification, work experiences, etc. section A of the Job satisfaction questionnaire contained 32 factors associated with the satisfaction of the job including relationship with co-workers, work load, income, administrative factors, attending monthly conference and in-service sessions, transport issues, field work, lack of resources, etc. For the each factor participants were able to choose from a four-point Likert scale representing various degrees of job satisfaction. 1- Extremely satisfied, 2- very satisfied, 3- Moderately Satisfied, 4- Unsatisfied and 5 – Not at all. Section B consisted by 14 items coping strategies to be selected.

3.4 Data Analysis

Collected data was coded and entered into Microsoft excel database and exported to SPSS 16.0 version for analysis. Descriptive statistics was performed to summarize the demographic information, anthropometric data factors associated with job satisfaction, overall job satisfaction and work related psychological pressure and the results were presented using frequency tables and percentages. 95% CI was used to determine the presence of association between explanatory variables and the level of job satisfaction among the respondents. Pearson correlation was performed to determine the relationship between identified factors, anthropometric measures and the job satisfaction. Overweight and obesity were described according to the WHO cut-off values for the Asian Region (World health organization,

2013).Hypertension was described according to the JNC 7.0 guideline (7th Expresses, 2003). Diabetes based on the random blood sugar was described according to the American Diabetes Association guideline (Standard of medical care in diabetes 2013).

3.5 Ethical Approval

The study was approved by the Ethical Review Committee (ERC), Faculty of Medicine, and University of Colombo, Sri Lanka. Informed consent was obtain by the researchers from each participants.

4. Results

4.1 Socio- Demographic Characteristics

The demographic characteristic of the participants (n=336) is shown in table 1. Participants of the study mostly represented by the PHMs (84.2 %) and female representation was quite high (89.9%). Majority of respondents were married (84.8%). Whereas, majority of public health workers were from age 30 -50 years old (62.5%). As for the education qualifications, most respondents passed G.C.E (O/L) and (A/L) (96.1%) and few of them had diploma (2.4%) and degree (3.6%). Respondents had less than five years of working experiences accounted for (19%). Majority of PHW had 15000-25000 monthly income (54.5%).

Table 1: *Demographic Characteristics of Respondents (N=336)*

Characteristics	Mean	SD (CI=9%)	
Age (Years)	42.5	10.3	
BMI (Kgm^{-2})	24.3	3.5	
Systolic Blood Pressure (Hgmm)	123.6	14.5	
Diastolic Blood Pressure (Hgmm)	76.9	10.3	
Blood Sugar (Mg/dl)	121.7	49.4	
Districts	Male N (%)	Female N (%)	Overall (%)
Working district			
Kandy	19 (55.9)	174 (57.6)	193 (57.4)
Mathale	9 (26.5)	78 (25.8)	87 (25.9)
Nuwara Eliya	6 (17.6)	50 (16.6)	56 (16.7)
Job Category			
PHM		283 (93.4)	283 (84.2)
PHI	33 (100)		33 (9.8)
SPHM		9 (3)	9 (2.7)
PHNS		11 (3.6)	11 (3.3)
Marital Status			

Married	31.3 (91.8)	254 (84.1)	285 (84.8)
Unmarried	3 (8.2)	35 (11.6)	38 (11.3)
Divorce		1 (0.3)	1 (0.3)
Separated		1 (0.3)	1 (0.3)
Widowed		11 (3.6)	11 (3.3)
Age years			
<30 years	3 (8.8)	40 (13.2)	43 (12.8)
31-40 years	13 (38.2)	76 (25.2)	89 (26.5)
41-50 years	12 (35.8)	109 (36.1)	121 (36)
>50 years	6 (17.6)	77 (25.5)	83 (24.7)
Education Level			
Passed G.C.E (O/L)	25 (73.5)	250 (82.8)	275 (81.8)
Passed G.C.E (A/L)	3 (8.8)	39 (12.9)	39 (11.6)
Diploma			4 (1.2)
Post graduate diploma	2 (5.9)	1 (0.3)	4 (1.2)
Degree	3 (8.8)	2 (0.7)	12 (3.6)
Post Graduate Degrees	1 (2.9)	9 (3)	1 (0.3)
Work Experiences			
<5	4 (11.8)	60 (19.9)	24 (19)
6-15	14 (44.1)	106 (35.5)	121 (36)
16-25	8 (23.5)	91 (30.1)	99 (29.5)
>25	7 (20.6)	45 (14.9)	52 (15.5)
Monthly income			
<15000	4 (11.8)	44 (14.6)	48 (14.3)
15000-25000	14 (41.2)	169 (56)	183 (54.5)
25000-35000	8 (23.5)	55 (18.2)	63 (18.8)
>36000	4 (11.8)	6 (2)	10 (3)

4.2 Health Information

It was found that 33.6 % of respondents take medicines for a particular medical condition. Among the respondents majority of respondents had neck pains (5.3 %), back pains (30.9 %) and severe headaches (19.9%). Also it was found that 33.9 % public health workers had multiple body pains together. Prevalence of tobacco and alcohol use among PHW were 8 % and 7.4% respectively. Prevalence of underweight, normal weight, overweight and obesity according to the job category were 5.9 %, 49.4%, 36.3% and 8.9% respectively. It was found that 24.7% of respondents were hypertensive and 4.1% of respondents were living with diabetes (Table 2).

Table 2: *Health Information of the Respondents according to the Job Category (n=336)*

Description	PHM	PHI	SPHM	PHNS
Taking Medicines for a disease				
Yes	96 (33.9)	10 (30.3)	2 (22.2)	5 (45.5)
No	174 (61.5)	22 (66.7)	7 (77.8)	5 (45.5)
Non respondent	12 (4.2)	1 (3)	0	1 (9)
Body pains				

Back pains	84 (45.2)	12 (54.5)	4 (66.6)	4 (50)
Knee pains	90 (48.4)	9 (40.9)	4 (66.6)	3 (37.5)
Neck pains	14 (7.5)	2 (9)	1 (16.6)	1 (12.5)
Shoulder pains	20 (10.75)	1 (4.5)	00	00
Severe Headache	57 (30.6)	8 (36.4)	00	2 (25)
Having multiple pains	96 (51.6)	10 (45.5)	3 (50)	5 (62.5)
Occurring accidents at work				
Yes	22 (7.8)	2 (6.1)	1 (11.1)	5 (45.5)
No	190 (67.1)	7 (21.2)	00	2 (18.2)
Not Responded	71 (25.1)	24 (72.2)	8 (100)	4 (36.4)
Use of tobacco products				
Yes	13 (4.6)	13 (39.4)	1 (11.1)	00
No	233 (82.3)	20 (60.6)	6 (66.7)	8 (72.7)
Non Respondents	37 (13.1)	00	2 (22.2)	3 (36.4)
Use of alcohol products				
Yes	5 (1.8)	19 (57.6)	1 (11.1)	00
No	92 (32.5)	11 (33.3)	3 (33.3)	1 (10.1)
Non respondents	186 (65.7)	3 (9.1)	5 (55.6)	10 (90.9)
Sleeping types				
Frequent waken in the night	109 (38.5)	11 (33.3)	4 (44.4)	7 (63.6)
Rarely awaken in the night	101 (35.7)	12 (36.4)	5 (55.5)	2 (18.2)
Good sleep over night	73 (25.8)	10 (30.3)	00	2 (18.2)
BMI information				
Under weight	16 (5.7)	4 (12.1)	00	00
Normal weight	138 (48.8)	16 (48.5)	6 (66.7)	6 (66.7)
Overweight	101 (35.7)	13 (36.4)	2 (22.2)	6 (54.3)
Obesity	28 (9.9)	1 (3)	1 (11.1)	00
Hypertension				
Systolic	30 (10.6)	2 (6)	00	00
Diastolic	45 (15.9)	5 (15.1)	3 (33.3)	4 (36.4)
Diabetes Prevalence				
Diabetes	17 (5.0)	00	1 (0.3)	3 (0.9)

4.3 Job Satisfaction and Work related Psychological Pressure among Public Health Workers

In terms of the overall job satisfaction 92.5% respondents were satisfied with the job (31.5% were extremely satisfied and 61% were very satisfied) while 5.4% respondents were moderately satisfied with the job while 1.2% were dissatisfied and 0.6% did not satisfied with their job (Table 3). Overall self-reported pressure on work among PHW was found to be 71.1%. It was revealed that PHW who were in age group 30-34 and 40-55 had moderate pressure on work (46.4%). Finding of this study indicated that majority of public health workers were not

satisfied with the relationship with the colleagues (62%) while only 0.9% were extremely satisfied , work load (62.8%), field where they were attached (62.8%), being responsible for an vacant area (61.3%), Support from colleagues (51.2%), Monthly Salary (45%), accountability for the health of the area (50.3 %). External influences (43.8%), Social environment of the MOH office (49.4%), Administrative factors (44.1%), Resources (53.3%) and Relationship with the MOH (57.4%). Only 1.5 % were satisfied with the relationship with the MOH (Table 4).

Table 3: *Overall Job Satisfaction and Work related Psychological Pressure among Public Health Workers*

Criteria	Extreme pressure (%)	Very (%)	Moderate (%)	Low (%)	Not at all (%)	Non respondents
Work related psychological pressure	47 (14)	192 (57.1)	71 (21.1)	23 (6.8)	1 (0.3)	2 (0.6)
	Extremely satisfied (%)	Very satisfied (%)	Moderately satisfied (%)	Dissatisfied (%)	Not at all (%)	Non respondents
Job satisfaction	106 (31.5)	205 (61)	18 (5.4)	4 (1.2)	2 (0.6)	1 (0.3)

Table 4: *Satisfaction of Selected Factors among Public Health Worker*

Factor	Not at all satisfied	Slightly satisfied	Moderate satisfied	Very satisfied	Extremely satisfied	Non respondents
Relationship with colleagues	44 (13.1)	166 (49.4)	60 (17.9)	62 (18.5)	3 (0.9)	1
Relationship with the MOH	32 (9.5)	161 (47.9)	67 (19.9)	71 (21.1)	5 (1.5)	00
Work Load	103 (30.7)	108 (32.1)	109 (32.4)	9 (2.7)	6 (1.8)	1 (0.3)
Attached field	110 (32.7)	101 (30.1)	85 (25.3)	33 (9.8)	5 (1.5)	2 (0.6)
Administrative factors	19 (5.7)	129 (38.4)	101 (30.1)	72 (21.4)	13 (3.9)	2 (2.6)
Being responsible for a vacant area	89 (26.5)	117 (34.8)	87 (25.9)	35 (10.4)	4 (1.2)	4 (1.2)
Physical environment of the field area	40 (11.9)	43 (12.8)	81 (24.1)	128(38.1)	13 (3.9)	30 (12.8)

Social environment of the MOH	46 (13.7)	120 (35.7)	106 (31.5)	47 (14)	11 (3.3)	6 (1.8)
Physical Environment of the MOH office	26 (7.7)	114 (33.9)	119 (53.4)	64 (19)	8 (2.4)	5 (1.5)
Attending the In-Service	19 (5.7)	111 (33.)	91 (27.1)	101(31.8)	5 (1.5)	3 (0.9)
Attending monthly conferences	21 (6.2)	131 (38.9)	92 (27.3)	78 (23.1)	10 (3)	5 (1.2)
Recordings	18 (5.4)	109 (32.4)	72 (22.6)	118 (53.1)	13 (2.9)	2 (0.6)
Resources	55 (16.4)	124 (36.9)	76 (22.6)	72 (21.4)	7 (2.1)	2 (0.6)
Support from the colleagues	60 (17.9)	112 (33.3)	122 (36.3)	30 (8.9)	8 (2.4)	4 (1.2)
Preparation for the field work	19 (5.7)	81 (24.1)	110 (32.7)	125 (37.2)	7 (3)	3 (0.9)
Making home visits	7 (2.1)	47 (14)	61 (18.2)	203 (60.4)	13 (3.4)	5 (1.5)
Distance to the field from home	5(1.5)	25 (7.4)	104 (31)	186 (55.4)	10 (3)	6 (1.8)
Available time to assist community people	13 (3.9)	76 (22.6)	107 (31.8)	125 (37.2)	12 (3.6)	3 (0.9)
Physical environment of the working field	20 (6)	54 (16.1)	151 (44.4)	90 (26.8)	17 (6.2)	4 (1.2)
Opportunities for the promotion	46 (13.7)	90 (26.8)	134 (39.8)	49 (14.6)	10 (3)	7 (2.1)
Salary	51 (15.2)	100 (29.8)	113 (33.6)	49 (14.6)	19 (5.7)	4 (1.2)
Submitting report	29 (8.6)	108 (32.1)	86 (25.6)	91 (27.1)	16 (4.8)	4 (1.2)
Accountability for health of the area	59 (17.6)	(110 (32.7)	62 (18.5)	92 (27.4)	11 (3.3)	2 (0.6)

Supervision	30 (8.9)	60 (17.9)	131 (39)	98 (29.2)	13 (3.6)	5 (1.5)
Managing income	8 (2.4)	35 (10.4)	158 (47)	115 (34.2)	14 (4.2)	6 (1.8)
External influences	60 (17.9)	87 (25.9)	66 (19.6)	100 (29.8)	17 (5.1)	6 (2.1)
Recognition	5 (1.5)	25 (7.4)	104 (30.9)	186 (55.2)	10 (3)	6 (1.8)
Transport	25 (7.4)	30 (8.9)	102 (30.4)	160 (47.6)	14 (4.2)	6 (1.8)
Opportunities for making decisions	25 (7.4)	30 (8.9)	102 (30.3)	160 (47.5)	14 (4.2)	5 (1.5)
Duty transfers	51 (15.1)	59 (17.5)	103 (30.6)	105 (31.2)	13 (3.9)	6 (2.1)
Criticism	9 (2.7)	34 (10.1)	127 (37.8)	145 (43.2)	16 (4.8)	5 (1.5)
Support from the district and province level	23 (6.8)	58 (17.3)	143 (42.6)	75 (22.3)	20 (6)	17 7.5)

5. Discussion

Findings of this study indicated that the health status in terms of determining the status anthropometric measures, behaviors related to healthy lifestyle and satisfaction of the job among public health workers in a province which is administrated by the Provincial Director of Health Services in Central Province Sri Lanka. Present study basically focused on determining prevalence of overweight, obesity, hypertension and diabetes as well as the prevalence of job satisfaction among public health workers who are employed in central province Sri Lanka. (Table 5) shows that prevalence of overweight, obesity, hypertension and diabetes among the respondents is relatively. (Figure 1) shows that the risk of overweight and obesity was greater among public health midwifes compared to the other category.

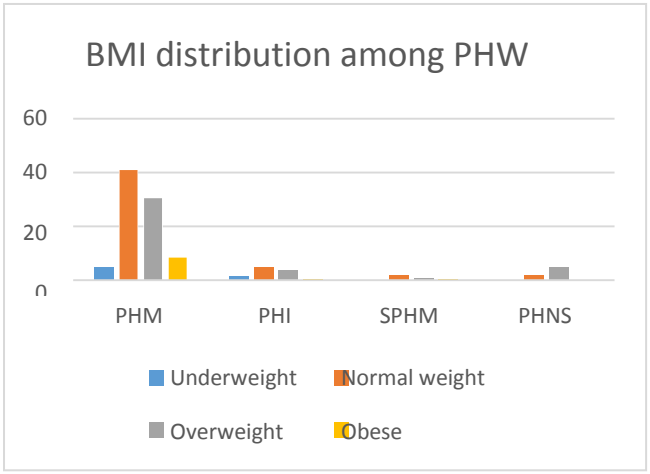

Figure 1: *Distribution of BMI among Public Health Workers according to the Job Category*

Table 5: *Overall Prevalence of Overweight, Obesity, Hypertension and Diabetes among Public Health Workers (n=336)*

Risk factor	Number	%	Mean	SD
Overweight	99	29.4	26.19	0.078
Obesity	55	16.4	29.61	0.246
Hypertension (systolic BP)	32	9.5	155. 65	1.589
Hypertension (Diastolic BP)	57	15.8	101.73	1.684
Blood sugar	21	6.2	264.9	20.88

Researches done in Sri Lanka found that the prevalence of overweight and obesity were 25.2% and 9.2% respectively (Katulanda, et al., 2010). Similar results were obtained by another study done in Sri Lanka revealed that the prevalence of overweight and obesity were (28.7% (BMI 23.01-27.5) and 15.2% (BMI>27.5) respectively (Jayathissa, et al., 2012). Present study observed that the risk of being overweight and obese among public health workers were greater than the general population in Sri Lanka. The prevalence of hypertension (Table 5) among the respondents was found to be 23.5 % (Hypertensive due the raised systolic and diastolic blood pressure were 7.7% and 15.8% respectively). One of the systematic review done in order to observe the hypertension trend among workers in African region observed that the prevalence of hypertension among health care workers ranges from 17.5% to 37.5% (William, 2015). Also it revealed that the risk of being hypertensive is greater (>30%) among sedentary workers (William, 2015). It is evident that the working population is more vulnerable to become hypertensive with the factors associated with their occupation (Kumar, etal., 2014; Johnson &

Hall, 1988). Results of the many studies reinforced that the job strain, age, sex, too much work, income can be known as the major predictors of hypertension among employees (Mika, et al., 2002). According to the results of the present study, it shows a greater risk of being hypertensive among the respondents. Even though the present study did not focus on the underlying factors associated with the hypertension, behavioral factors which were observed by the previous studies would influence the risk of hypertension status in this group.

Researchers found that diabetes was notably prevalent among the health care workers (Andrade, et al., 2015). In Sri Lanka, it was found that one in five adults are diabetics (20%) (Pulsen, et al., 2014). another study documented the prevalence of diabetes in different provinces found that the prevalence of diabetes in Central Province was 12.6% (Katulanda, et al., 2008). This study indicated that the risk of being diabetic was 6% (n=21) which was less than the prevalence of diabetes in general community in Central Province. When compared the results with above two studies, it is observed that public health workers do not show a greater risk of getting diabetics. Even though the risk was low among the respondents 30.7% of them were undiagnosed diabetics which needs to be considered. (Table 6) presents the association between the physical measures and age, gender and work experiences. It was found that there is a positive correlation between the gender and diastolic blood pressure which is significant (at 95% CI). BMI of the respondents was positively correlated with age of the respondents. Results indicated that there was a strong correlation between BMI and systolic and diastolic blood pressure levels. There was a negative correlation between random blood sugar and gender which was not significant.

Findings of the present study indicated that majority of public health workers have a considerable level of psychological pressure with their job. Overall, 13.9% and 57% respondents reported that they were in a severe pressure and moderate pressure respectively. Study revealed that the overall job satisfaction was high among public health workers in central province Sri Lanka. Overall, 31.5% and 60.8 % of them were highly satisfied and satisfied with the job respectively. Even though the overall job satisfaction was high, variables such as relationship with the colleagues, work load, field where they are attached, being responsible for an vacant area, Support from colleagues, Monthly Salary, accountability for the health of the area, external influences, social environment of the MOH office, administrative factors, resources and relationship with the MOH have a considerable influence on level of job satisfaction. In present

study, Factors such as work load, external influences, administrative factors, salaries, accountability were associated with the job satisfaction seem to be a common issue that is also evident in several studies (Katulanda, et al., 2011; Kumar, et al., 2013). (Table 8) shows that the factors such as duty transfers, opportunities to make decisions, transport, income management, accountability, distance from home, support from colleagues, resources and work load were positively correlated with the job satisfaction which was significant (CI=95%). This finding was consistent with a study by Khamlub Senbunsou, which showed that the job satisfaction was influenced by most of factors mentioned above.

Table 6: *Correlation between Physical Measures and Age, Gender and Work Experiences*

	Mean	SD	BMI	P value	Systolic BP	P value	Diastolic BP	P value	Random blood sugar	P value
Gender			.035	.524	.100	.068	.107*	.049	-.053	.332
Age	42.5595	10.4	.107*	.050	.005	.934	.077	.159	.083	.127
Work Experiences	12.8229	18.8	.017	.759	-.031	.568	.007	.898	.046	.404
BMI	24.4371	3.50	1		.263*	.000	.300*	0.000	.013	.806
Systolic BP	123.6	14.5	.263*	.000	1		.633*	.000	.087	.113
Diastolic BP	76.9	10.8	.300*	.000	.633*	.000	1		.125*	.022
RBS	120.4	48.3	.013	.806	.087	.113	.125*	.022	1	

Table 7: *Correlation between Overall Job Satisfaction and the Mean Score of Factors associated with the Work and the Satisfaction on the Job*

			Correlation			
Factor	Mean	SD	Job Satisfaction	P values	Pressure on work	P values
BMI	24.43	3.50	.074	.089	0.127**	0.000
Systolic Blood Pressure	123.6	14.5	.099	.035	0.066	0.010
Diastolic blood Pressure	76.9	10.8	.076	.083	0.000	0.496
Random blood sugar	120.5	48.30	-.025	.324	-0.17	0.381
Gender			.056	.303	-.019	.730
Work experience	15.45 (9.3)		.125*	.022	.122*	.025
Relationship with colleagues	2.4524	.97619	-.058	.285	.096	.080
Relationship with the MOH	2.5714	.97473	.011	.840	.136*	.013
Work Load	2.1339	.95413	.179*	.001	.284*	.000
Attached field	2.2143	1.29819	.132*	.015	.171*	.002
Administrative factors	2.8065	.98409	.035	.525	.166*	.002

Being responsible for a vacant area	2.2738	1.04068	.062	.257	.254*	.000
Physical environment of the field area	3.2768	1.19858	.053	.332	.087	.112
Social environment of the MOH	2.5208	1.05357	.021	.700	.129*	.018
Physical Environment of the field office	2.5208	1.05357	.021	.700	.129*	.018
Attending In-Service	2.9226	.98343	.020	.711	.136*	.013
Attending Monthly conferences	2.8006	1.00095	.023	.677	.143*	.009
Recordings	2.9792	1.04931	.146*	.008	.140*	.010
Resources	2.5327	1.08949	.151*	.005	.261*	.000
Support from the colleagues	2.4107	.99749	.244*	.000	.132*	.016
Preparation for the field work	3.0506	.96528	-.006	.906	.073	.183
Making home visits	3.1429	.98214	.180*	.001	.119*	.029
Distance from home	3.4760	.91911	.233*	.000	.042	.446
Available time to assist community people	3.1577	.95361	.157*	.004	.076	.166
Physical environment of the working field	3.1131	.95214	.000	.998	.066	.226
Opportunities for the promotion	2.6012	1.05457	.106	.051	.103	.058
Salary	2.6815	1.10754	.046	.396	.094	.085
Submitting report	3.0060	2.44582	.103	.061	.140*	.010
Accountability for health of the area	2.4792	1.17671	.162*	.003	.208*	.000
Supervision	3.0357	1.01566	.007	.903	.095	.081
Managing income	3.2202	.90719	.148*	.006	.076	.166
External influences	2.7976	1.23414	.102	.062	.048	.382
Recognition	3.5446	.76359	.031	.572	.039	.481
Transport	3.1012	1.04319	.169*	.002	.142*	.009
Opportunities for making decisions	3.3512	.98429	.140*	.010	.087	.110
Criticism	3.0208	1.62155	.209*	.000	.181*	.001
Duty transfers	3.3869	.87024	.286*	.000	.213*	.000
Support from the district and province level	2.8810	1.16316	.074	.175	.046	.403

*Statistically significance $P < 0.05$

Although the self-reported pressure was high among the respondents, job satisfaction found to be high among the group (Figure 2). Numerous studies have confirmed that the job dissatisfaction among the public health care professionals is high due to various factors (Katulanda, et al., 2011; Jathana, et al., 2011). Results also indicates that the BMI of public health workers was positively correlated with the pressure at work which was also significant (Table 7). Even though the blood pressure was correlated with the job satisfaction and the

pressure, it wasn't significant (CI=95%). Random blood sugar was negatively correlated with the job satisfaction and positively correlated with the pressure on work which is not significant.

Coping skill to overcome from the stressful event is known as the attempting to deal with the source of the stress or control reactions to it or both (Table 8). Coping was defense against the stress inherent in living (Joy, et al., 2014). Present study indicated that the majority of respondents were practicing coping strategies to overcome from the stressful events which were resulted by the occupation. Coping skills are known as the fundamental needs to be encouraged to lowering the work related stress among the health care professionals (Koinis, et al., 2015). In our study, it was found that majority of workers are practicing coping strategies to overcome from stressful circumstances. Watching television, listening music, engaging with religious activities, sharing with others, taking medicines and sleeping/relaxation were found to be the most common coping strategies among the respondents.

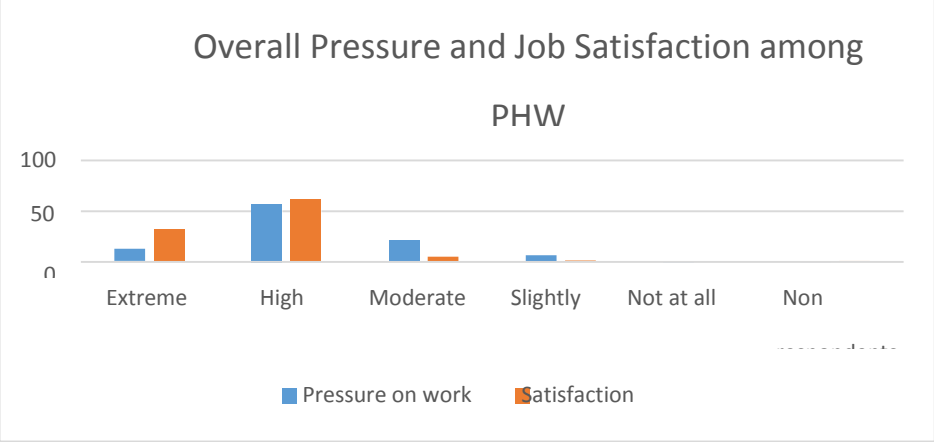

Figure 2: *Overall Job Satisfaction and Pressure on Work among Public Health Workers*

Table 8: *Coping Strategies which are practiced by Public Health Workers to Overcome from Stressful Even*

Strategy	Yes	%	No	%	Non Respondents	%
Avoid Situation	173	51.5	113	3.6	50	14.9
Try to keep problems perspective	198	58.9	97	28.9	41	12.2
Watching TV	240	71.4	55	16.4	41	12.2
Use internet (face book , twitter)	181	53.9	101	30.1	16	4.8
Listen to music	208	61.9	77	22.9	51	15.2
Engaging with a sport /jogging	102	30.4	175	52.1	59	17.6
Engaging with a religion activity	260	77.4	41	12.2	35	10.4

Discuss problems and express feelings to others	263	78.3	35	10.4	38	11.3
Plan ahead and prioritize	170	50.6	117	34.8	49	14.6
Take actions to deal with the problem	225	67	65	19.3	46	13.7
Keeping feelings under control	260	77.4	35	10.1	42	12.5
Devote more time particular tasks	164	48.8	116	34.5	56	16.7
Use medicine	211	62.8	73	21.7	52	15.5
Sleeping/relaxation	189	56.2	87	21.7	60	17.8

5.1 Limitations of the Study

Our study has some limitations, first there is some difficulties to generalize the results to all the public health workers in Sri Lanka as this was done based on Central Province administrative zone in Sri Lanka. We could not estimate the level of variables as the overall sample was low. The sample size of the study was relatively small. It is recommended to use larger sample with a proper sampling method would result in a more conclusive description of job satisfaction in future studies. Since present study was done based on a self-administered questionnaire, it is therefore possible that the respondents might have over or under-reported their level of job satisfaction and stress over the job. Use of more comprehensive methods to assess the job satisfaction would be an external value for the future studies. Another limitation of the study was determining the prevalence of diabetes based on the random blood sugar. It is recommended to use fasting blood sugar to assess the diabetes among the respondents in future studies. Assessment of dietary pattern and physical activity level among the group would more useful to understand about their behavioral risk factors on NCDS.

6. Conclusions

In conclusions, the prevalence of obesity, overweight, hypertension is significantly high among public health workers in Central Province Sri Lanka. Also the considerable amount of workers were having body pains and headaches. The overall pressure on work among public health workers was relatively high. Although the overall job satisfaction was high among the respondents, few other factors related to the occupation were having significant correlation with the job satisfaction. Sri Lanka has a high rank in terms of the providing quality health care service through the public health stream. This would be an outcome of the high level of job satisfaction among the public health workers. Public health workers in Central Province may require interventions for reducing the posture related body pains such as neck pains, back pains and headaches. Job satisfaction is found to be an essential factor on improving the quality of

work they deliver to the communities. Our research team envisages communicating the results with the relevant authorities such as the Provincial Director of Health Services in Central Province Sri Lanka. We hope to encourage policy makers to pay attention on duty transfers, opportunities to make decisions, transport facilities, promoting measure on income management, considering the distance to the work from resident, encouraging mutual support from co-workers, providing necessary resources and consider on work load. Interventions should be carried out to reduce the pressure on work and also to reduce modifiable risk factors for NCDs among the group. It was found that most of respondent satisfied with attending the monthly conference, therefore administrators can use the monthly conference to take measure to ensure the job satisfaction and monitor the outcome. Also the work done by the public health team should be appreciated in order to increase the job satisfaction and consequently to have a positive effect on beneficiaries and the. Work place which useful improve the quality youth public healthbare system in Sri Lanka.

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