

**Physical Activity among Civil Servants in  
Government Ministry, Dar Es Salaam, Tanzania:  
Assessment of Knowledge, attitude and practice  
and population based intervention  
(Preliminary report)**

**Project team leaders**

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# Introduction (1/5)

- Each year, Non Communicable diseases account for almost 50% of the global burden of disease; 60% of the 56.5 million deaths each year
- 80% of chronic disease deaths occur in low and middle income countries

# Introduction (2/5)

## Tanzania (AMMP data. 2002)

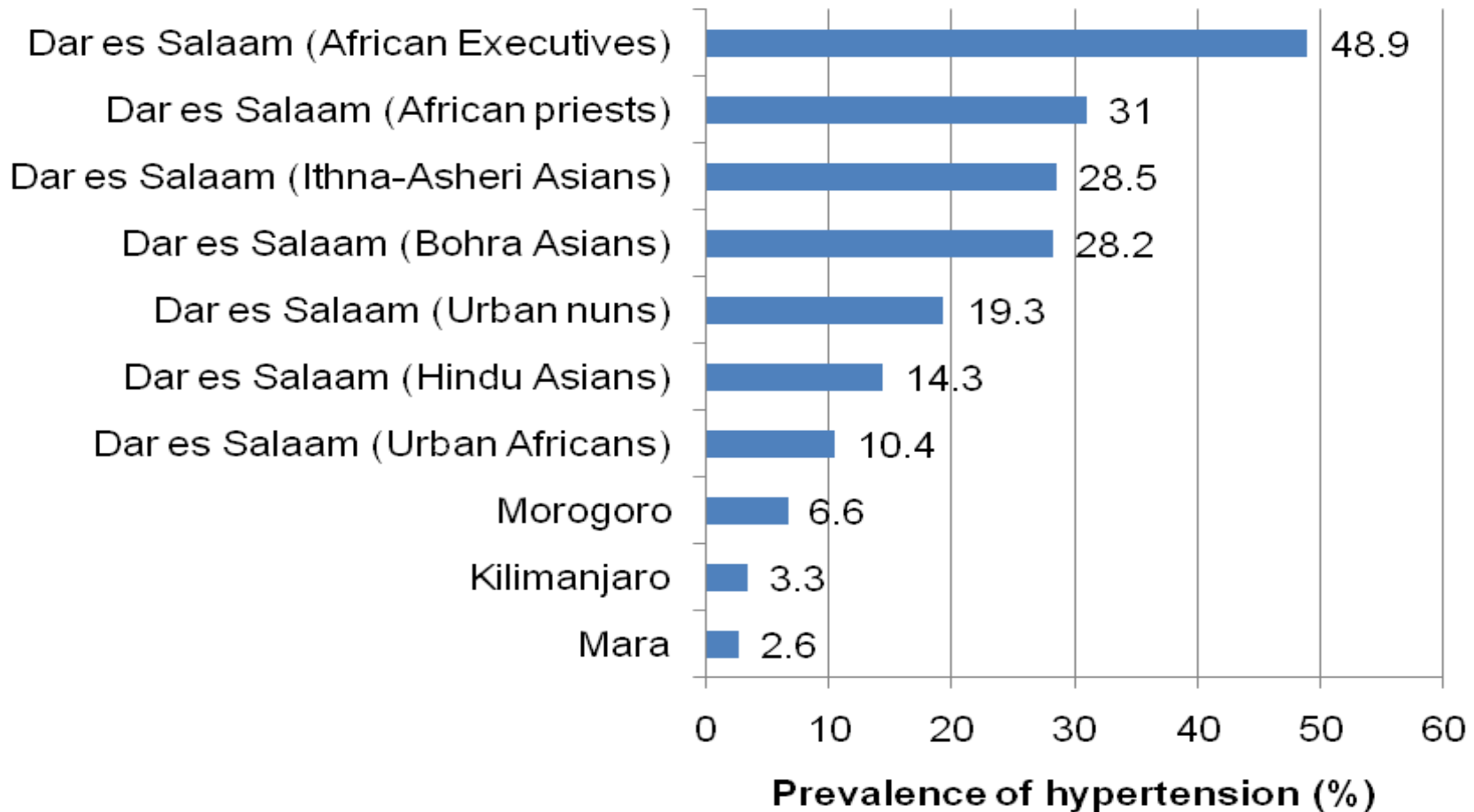
### Deaths due to NCDs and injuries by age group

Age Group	Morogoro	Hai	DSM
0-5	5%	12%	10%
6-15	29%	34%	34%
16-36	23%	33%	22%
36-60	29%	46%	33%
61+	27%	59%	58%

Source: Pooled data from 1994-2002; AMMP/MOHSW, reanalysed by IHRDC

## Introduction (3/5)

# Prevalence of hypertension in different areas and sub-populations of Tanzania



# Physical Inactivity (1/2)

- The lack of regular physical activity (also known as a sedentary lifestyle), has been considered one of the most prevalent and worrisome public health problems in the World
- WHO estimates that about million deaths are attributable to physical inactivity worldwide, every year

## Physical Inactivity (2/2)

### Physical activity

Results for adults aged 25-64 (including 96% CI)

Results for adults aged 25-64 years (incl. 95% CI)	Both Sexes	Males	Females
Percentage with low levels of activity (defined as <600 MET-minutes/week)	18.6 (13.1-24.1)	11.0 (7.8-14.2)	25.4 (17.3-33.5)
Percentage with high levels of activity (defined as ≥ 3000 MET-minutes/week)	62.2 (52.9-71.5)	71.7 (63.8-79.6)	53.6 (42.0-65.2)
Median time spent in physical activity per day (minutes)	192.9 (47.1-1440.0)	278.6 (88.9-1440.0)	132.9 (30.0-1200.0)
Percentage not engaging in vigorous physical activity	56.5 (44.4-68.7)	43.7 (31.3-56.2)	68.1 (54.6-81.6)

# Rationale

- Lack of physical activity is one of the central risk factors especially for CVD and Diabetes; contributing to 2-3% of the global burden of disease (WHO, 2002).
- It has been shown that, at least 60% of the world population do not undertake sufficient physical activity to gain health benefits (WHO, 2002; Bull *et al*, 2005).
- In Tanzania, 19% of the population studied in 2007 had low levels of activity (WHO Steps data).
- No study has been done at workplace setting
- We aimed to assess the knowledge, attitude and practise as well as level of physical activity

# Objectives

- To assess the level and pattern of physical activity among civil servants
- To assess knowledge, attitude and practice of physical activity among civil servants
- To assess the effectiveness of a combined education and structural intervention to promote physical activity of civil servants in this setting

# Project design and methods

- **Study design:**  
Cross sectional KAP study with a multi-component intervention aimed at promoting physical activity
- **Target population:**
  - Employees in the selected ministry
- **Sample size: 200 planned; 103 studied**
- **Interventions and activities**
  - Population based intervention through promoting of physical activity among civil servants
  - Health promotion package (HPP)
    - Education component
    - Structural intervention

# Data collections tools

- **Knowledge, attitude and practise**
  - Questionnaire
- **Level of Physical activity**
  - Questionnaire
  - Pedometer (step diary record)
- **Assessment of BMI and Blood Pressure**
  - Aneroid BP machine
  - Weighing scale
  - studio meter



# Flow diagram of the procedure

Meeting with Top Management  
(Advocacy meeting)



Selection of study participants



Baseline assessment

- *Level of Physical activity(Pedometer, QPAC and Sub Saharan Questionnaire)*
- *KAP assessment*
- *Weight, height, BM ,waist, hip BP (duplicate readings)*



Health Promotion Package

- Educational component to raise awareness intervention
- Structural intervention



Evaluation at 3 months and 6 months



# Results (1/8)

- 103 (52%) out of 200 respondents participated in the study
- Age mean was 39 y (SD=10 y)
- Sex distribution
  - Males were 50 (48%)
  - Females were 53 (53%)
- Majority (42%) had attended a “college/university”; the least attended class was “some secondary school” (3%)
- The Ministry has no policy on physical activity but has annual sporty activities where employees are encouraged to participate

# Results (2/8)

**Table 1: Distribution of respondents according to type of occupation**

Occupation	Frequency	Percent	
Human resource officer	12	11.7	
Secretary	12	11.7	
Office attendants	12	11.7	
Drivers	10	9.7	
Accountants/Auditors	9	8.7	
Information technology specialist	9	8.7	
Data managers	7	6.8	
Administrator	7	6.8	
Head of units/Directors	6	5.8	
Inspectors	5	4.9	
Planning officers	4	3.9	
Watchman	2	1.9	
Program officers	2	1.9	
Procurement officers	2	1.9	
Communication officer	1	1.0	
Lawyer	1	1.0	
Statistician	1	1.0	
Storekeeper	1	1.0	
	103	100.0	

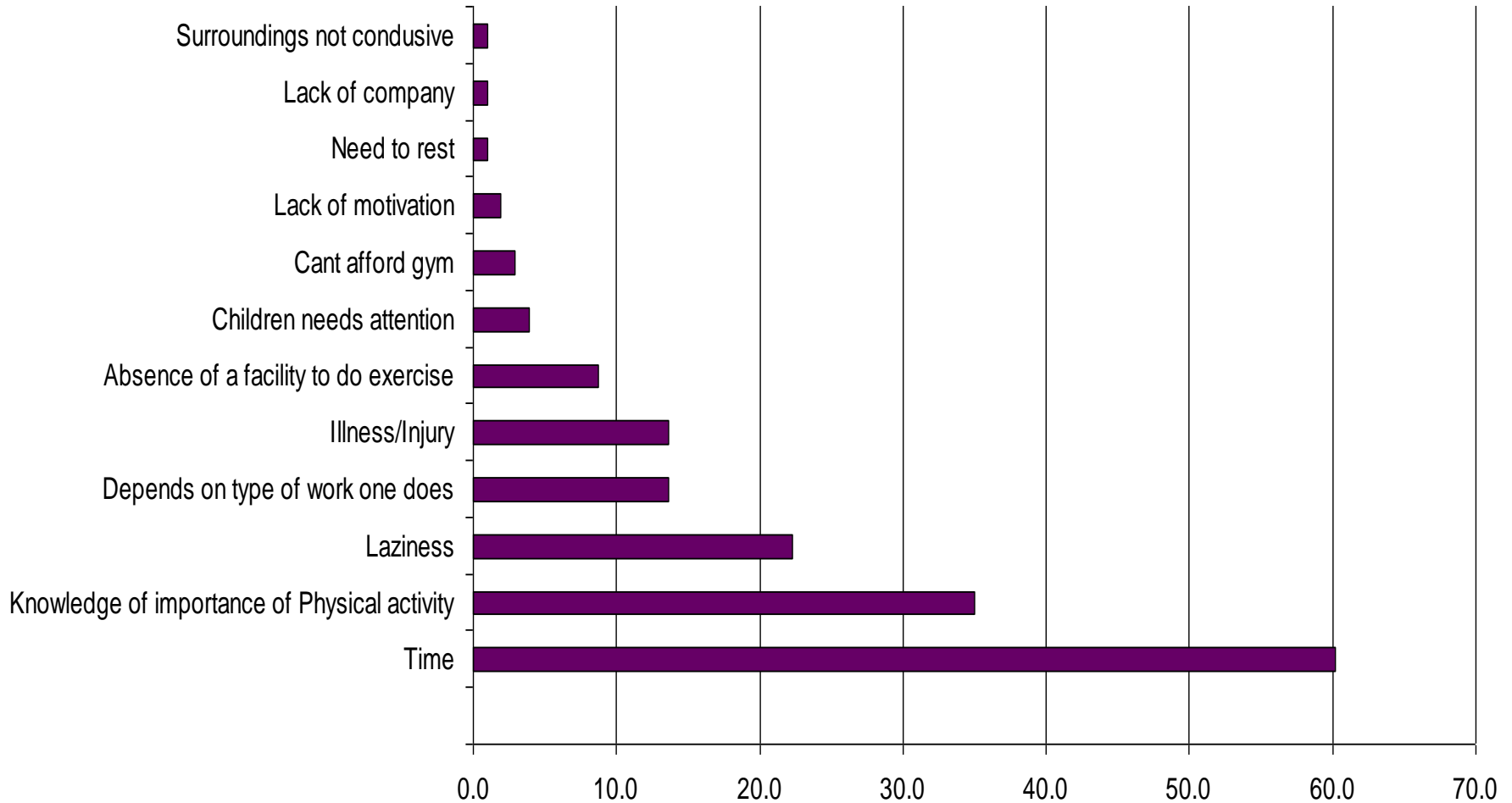
# Results (3/8)

## Knowledge, Attitude and Practise

- More than half (68%) had an understanding that physical activity is only doing sporty related activities like jogging etc
- Although about 72 (73/103) considered themselves to be active
  - 95%(97/103) of participants` work were found not to involve vigorous activity
  - 71% (73/103) of participants` work were found not to involve moderate intensity activity
- Only 16% of participants participated in vigorous intensity sports, fitness or recreational activity and 23% of participants in moderate intensity sports

# Results (4/8)

## Barriers for not doing Physical activity



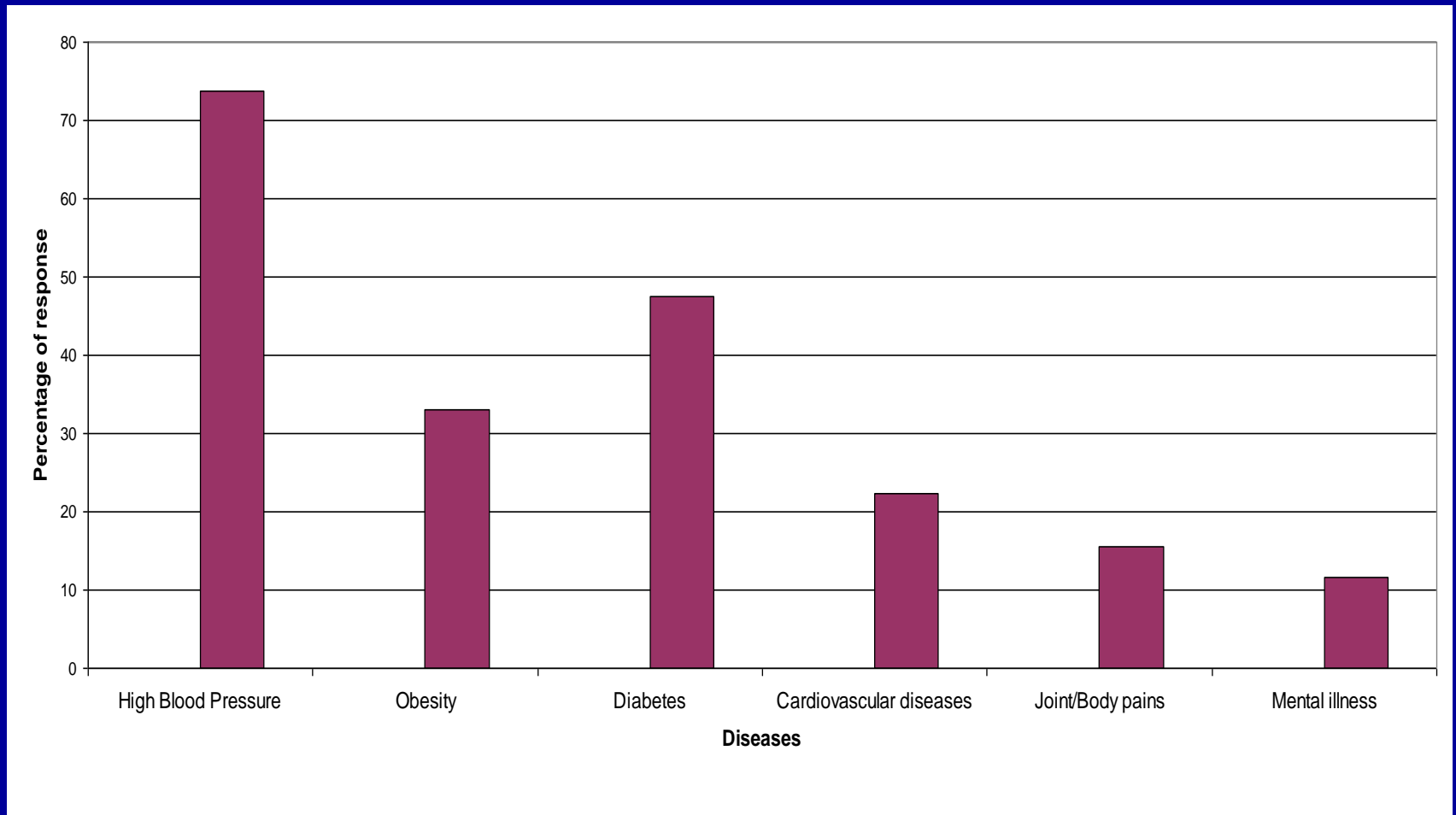
# Results (5/8)

## Knowledge, Attitude and Practise

- The mean time spent for sitting or reclining per day was 3.5 hours (SD=2hours, range 10-11 hours)
- 66 (64.9%) out of 103 thought that a woman can only do the light exercise
- The weekly steps diary records found that most are relatively inactive at baseline with a mean of 6068 (SD=2751)steps per week (range, 70-11,578 steps per week).

# Results (6/8)

**Figure 1: Diseases knowledgeable by respondents that are contributed to lack of physical activity**



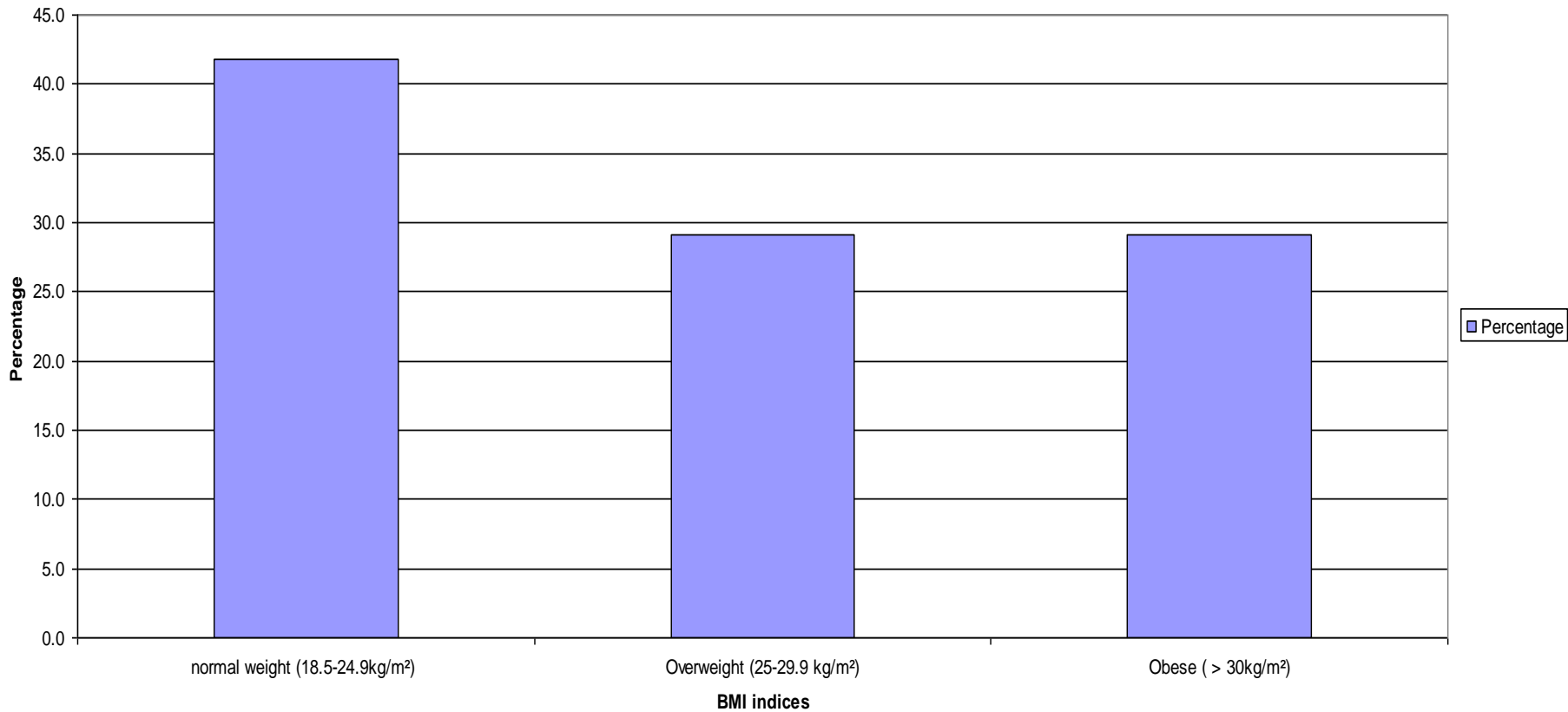
# Results (7/8)

- Blood Pressure results
  - 28 (27%) out of 103 participants had a blood pressure of >140/90
- Mean SBP and DBP
  - Mean SBP=137mmHg(SD=27)
  - Mean DBP=84mmHg (SD=17)

# Results (8/8)

## BMI

BMI distribution indices among participants



# Discussion

- The average steps per day obtained in this study conform with other many observational studies in done workplace before an intervention has been instituted i.e range of 6,000-12,000 steps/day [Bravata et al, JAMA, 2007)
- Similarly, the prevalence of hypertension found here is consistent with a study done in Congo among employees in Kinshasa National Company of Electricity; where they found a prevalence of 21.3% [Puepet et al, Niger J Med, 2008]

# Study limitations

- Although initially it was planned to do random sampling; convenient sampling was used and hence this could bias the results
- Self records of steps/day from participants; this could also bias the results
- Not reaching the required target; because the period the study was done was in the last phase of a financial year where most participants were unavailable

# Conclusion

- This is only the baseline; as such we need to do an intervention and do post evaluation assessment
- Milestones
  - Develop an intervention package (Aug 2009)
  - Assessment after intervention (November 2009)

# Acknowledgement

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