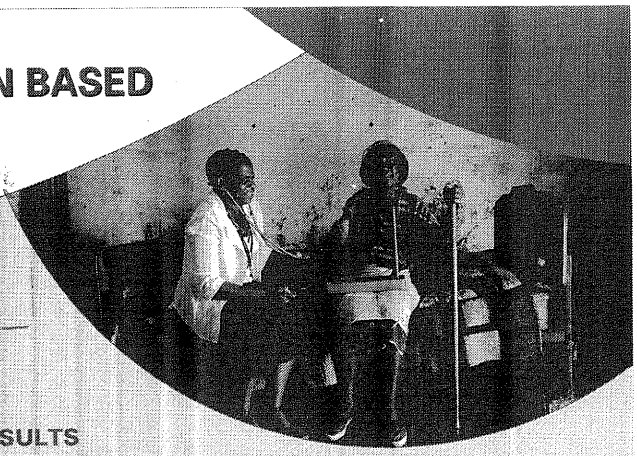
PREVALENCE OF DIABETES IN A POPULATION BASED SURVEY: PRELIMINARY RESULTS



N Phaswana-Mafuya, K Peltzer, M Schneider, M Makiwane, K Zuma, C Tabane, A Davids, M Mbelle, G Matseke, S Ramlagan & K Phaweni
Human Sciences Research Council

20th World Diabetes Congress, 18-22 October 2009, Montreal, Canada

BACKGROUND

- The Human Sciences Research Council (HSRC), World Health Organization and the National Department of Health conducted the first ever population-based longitudinal cohort survey on ageing and health (SAGE) in South Africa among individuals aged 50+ years.
- This survey was concurrently conducted in five other developing countries, namely: China, India, Russia, Ghana and Mexico to allow cross country comparisons.
- SAGE examines the health status and health system's responsiveness to the needs of individuals aged 50+years.
- This survey will be repeated twice in 5-10 years in order to observe changes, trends and patterns that occur over time.
- This presentation focuses on the prevalence of diabetes based on self-report (SR), percentage on current (past 2 weeks) therapy (CTx) and recent (last 12 months) therapy (RTx) by selected demographic characteristics.

METHODS

- SAGE used the HSRC's Master Sample (HSRC 2002) as the sampling frame which was developed based on the 2001 Census (Stats SA, 2001) Enumerator Areas (EAs)
- The master sample has 1000 EAs which are representative of the country's provincial, settlement and racial diversity.
- Six hundred EAs were randomly selected; the number of people aged 50+ years was used as a measure of size.
- In each EA, a Statistical Analysis Software procedure SURVEYSELECT was used to randomly select 30 households (Kish,1987, 1965; Kalton, 1983 & Cochran, 1977.
- A screening questionnaire was administered in the 30 households to assess whether the household had a 50+ year old person.
- If the household had one or more persons aged 50+ years, it was included in the 50+ sample. The targeted sample of this aged group was 5000.
- Two households were randomly selected from the remaining households that did not have individuals aged 50+ years.
- In the two selected households, one individual aged 18-49 was selected (for comparison purposes) using Kish grid (Kish, 1987, 1965). The targeted sample of this age group was 1000
- The realized sample was 4897 individuals from 396 EAs interviewed using a the revised World Health Survey standardized questionnaire involving both subjective and objective measures (http://www3.who.int/whs/)
- The standardized CSPro software programme was used for data entry; data quality checks and cleaning were done throughout the data collection process
- Study approval at the multi-country level was given by the WHO ERB and the country level was given by the HSRC Research Ethics Committee.

RESULTS

Characteristics	SR	CTx	RTx
Sex			
Male	6.72	87.80	83.75
Female	10.57	84.26	82.98
Age group			
18-49	3.08	75.00	75.00
50-59	7.73	81.31	79.05
60-69	11.72	87.83	86.09
70+	12.09	87.95	85.54
Residence			
Urban	11.84	84.35	82.80
Rural	4.75	84.72	81.94
Marital Status			
Never married	7.28	90.48	88.10
Currently married	9.30	84.55	80.99
Cohabiting	4.07	75.00	75.00
Separated/Divorced	6.20	88.24	82.35
Widowed	12.27	84.13	84.13

** SR = self-reported diagnosed condition; CTx = current (in last 2 weeks) therapy; RTx = recent (last 12 months) therapy*

DISCUSSION AND CONCLUSION

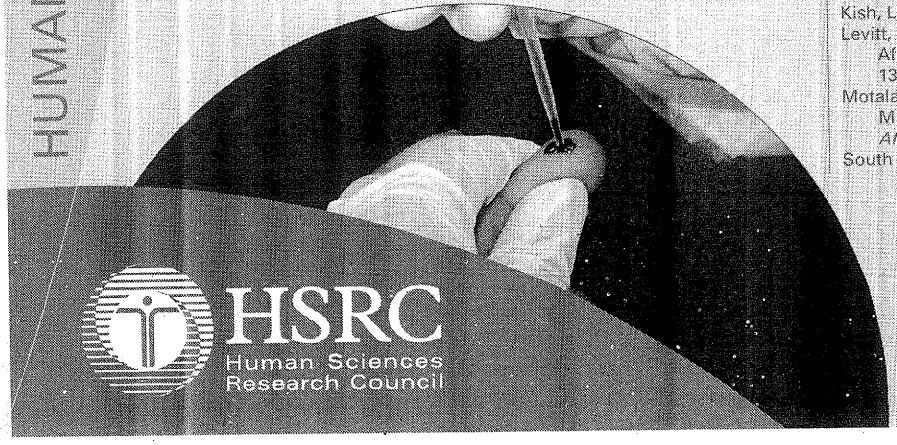
Self-reported diabetes prevalence is high among women, urban dwellers and prevalence increases with increasing age as found in previous local studies (South Africa, 2007; Levitt, 2008; Motala et al, 2008). The findings in this regard are highly critical given the fact that the percentage of women is relatively high in South Africa. Further there is rapid urbanization and increasing population ageing in the country. These changes are taking place not only in South Africa, but also continent and world-wide. Therefore, prevention efforts should be targeted towards these groups of individuals. Quantifying the prevalence of diabetes is important to allow rational planning and allocation of resources.

LIMITATIONS

The sampling weights have not yet been calculated. Data from objective measures (such as biomarkers and anthropometrics) have not yet been measured to cross-validate self-reported information. Therefore the results of this study should be interpreted with caution.

SELECTED REFERENCES

Cochran, W.G. (1977), *Sampling Techniques*, Third Edition, New York: John Wiley & Sons, Inc.
Kalton, G. (1983), *Introduction to Survey Sampling*, Sage University Paper series on Quantitative Applications in the Social Sciences, series no. 07-035, Beverly Hills and London: Sage Publications, Inc.
Kish, L. (1987), *Statistical Design for Research*, New York: John Wiley & Sons, Inc.
Kish, L. (1965), *Survey Sampling*, New York: John Wiley & Sons, Inc.
Levitt, N.S.(2008). *Global Burden of Cardiovascular Diseases*. Diabetes in Africa: epidemiology, management and health care challenges. Heart, 94, 1376 -1382
Motala, A.; Esterhuizen, T.; Gouws, E.; Fraser, J.; Mohammed, A.k ; Omar, M.D. 2008. *Diabetes and other disorders of glycemia in a rural South African Community*. Diabetes Care, 31, 1783-1788.
South African Demographic Health Survey 2003



HSRC Human Sciences Research Council

Contact e-mail address: nphaswanamafuya@hsrc.ac.za