

ANALYSIS OF ONTARIO HEALTH UNIT DATA FROM THE WAIST CIRCUMFERENCE RRFSSⁱ MODULE



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ⁱ Rapid Risk Factor Surveillance System

PHREDⁱⁱ INVESTIGATORS

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EXECUTIVE SUMMARY

Obesity is a major public health concern in Canada and many other countries. Although body mass index (BMI) has been used to monitor health risks related to obesity, research suggests that abdominal fat (specifically visceral fat) is an independent predictor of disease development irrespective of total body fatness^(1;2). Waist circumference (WC) is considered an adequate surrogate measurement of visceral fat in addition to BMI^(3;4). In 2006, the Ministry of Health Promotion (MHP) acknowledged the importance of WC as a key outcome measure of the success of *Ontario's Action Plan for Healthy Eating and Active Living*⁽⁵⁾. The Public Health Research, Evaluation and Development (PHRED) Program responded by conducting a validation study that developed equations to convert clothing size into a WC measurement (i.e., predicted WC)⁽⁶⁾. The PHRED study demonstrated that the equations had acceptable reliability and validity among adults. Members of the PHRED Program subsequently participated on a provincial module development work-group to develop a WC module for the Rapid Risk Factor Surveillance System (RRFSS). The purpose of the current project was to analyze the WC module data collected from 6898 RRFSS participants across 12 participating Ontario health units (i.e., Brant County Health Unit; Durham Region Health Department; Grey Bruce Health Unit; Halton Region Health Department; City of Hamilton Public Health Services; KFL&A Public Health; County of Lambton Community Health Services Department; Middlesex-London Health Unit; Ottawa Public Health; Simcoe Muskoka District Health Unit; Sudbury & District Health Unit; and Windsor-Essex County Health Unit) between June 2008 and May 15, 2009. In addition to the overall report, each participating health unit will receive tables summarizing their health unit's results.

Key Results

- 1/3 of the surveyed population did not know their waistline measurement.
- Mean predicted WC was 98 cm in males and 86 cm in females.
- 1/3 of the surveyed population was at increased health risk, based on their predicted WC.
- More females than males were at increased health risk.
- Older individuals were more likely to be at increased health risk than younger individuals.
- Socio-economic factors had more impact on females' health risk than males'.
- Among the participants who were at increased health risk based on their predicted WC, females were significantly less likely to know their waistline measurement than males.

Implications and Recommendations

- Strategies to increase knowledge of personal WC measurement and reduce the percentage of people at increased health risk due to a high WC should target the identified priority populations, namely older individuals and females, especially those from lower socio-economic backgrounds.
- A broad spectrum approach targeting social and environmental factors (e.g., local economic context, accessibility of healthy foods, and opportunities for physical activity) may be particularly important for addressing abdominal obesity among priority populations.
- Continue to monitor the prevalence of abdominal obesity through RRFSS using clothing size as a proxy.
- Lobby to include the WC module as a core RRFSS module to facilitate ongoing population-level surveillance.
- Options should also be explored to establish a population-based provincial surveillance system with adequate infrastructure to facilitate ongoing and systematic monitoring of key population health indicators, such as WC, across the entire province.

Limitations

- Although clothing size is a valid proxy for WC, the results for females should be viewed with caution because the level of health risk for approximately one in five female participants is misclassified⁽⁵⁾.
- The data collected is not a representative sample of Ontario residents. The sample includes only English speaking residents, aged 18-69, from 12 health units across the province.
- The module underwent revision after the first three months of data collection. An introductory statement was added to clarify that female participants were to report pant size instead of jean size.

References

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