Predicting factors of body fat of Metabolic Syndrome Persons

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Significance

- A new health threat among Thai people
  - 15% among Thai people
  - Related factors
    - Overweight & obesity (10-15% among children and adolescents)
    - Obesity (30-40% in Thai adults)

- Known as an antecedence of
  - diabetes mellitus (10.3 times)
  - cardiovascular diseases (2.13 times)
  - Cancer
  - Chronic kidney disease
Metabolic syndrome is a combination of disorders:

- Dislipidemia
  - Raised triglycerides: > 150 mg/dL (1.7 mmol/L)
  - Reduced HDL cholesterol: < 40 mg/dL (1.03 mmol/L) in males, < 50 mg/dL (1.29 mmol/L) in females,
- Raised blood pressure (BP): systolic BP > 130 or diastolic BP > 85 mm Hg, or treatment of previously diagnosed hypertension
- Raised fasting plasma glucose (FPG): > 100 mg/dL (5.6 mmol/L)
- Disorders of pro-inflammatory & pro-thrombotic factors
Metabolic syndrome: Criteria

- **American Heart Association/Updated NCEP (2004) as NECP ATP III**
  - Elevated waist circumference:
    - Men — greater than 40 inches (102 cm)
    - Women — greater than 35 inches (88 cm)
  - Elevated triglycerides: Equal to or greater than 150 mg/dL (1.7 mmol/L)
  - Reduced HDL ("good") cholesterol:
    - Men — Less than 40 mg/dL (1.03 mmol/L)
    - Women — Less than 50 mg/dL (1.29 mmol/L)
  - Elevated blood pressure: Equal to or greater than 130/85 mm Hg or use of medication for hypertension
  - Elevated fasting glucose: Equal to or greater than 100 mg/dL (5.6 mmol/L) or use of medication for hyperglycemia
The objectives of this study were to explore

- MS situation among Thai people living in Chon Buri province, Thailand.
- Determinants of MS
Sample

- 300 metabolic persons
  - Gain criteria of the NECP ATP III
  - Lived in Chonburi provinces
  - Visited primary health care center
- Convenient sampling
Instruments

- A package of questionnaire
  - Demographic
  - Health status
  - Health behaviors: eating behavior, exercise behavior, risk behavior
  - Health & MS management

- Scale & Body fat analyzer (Omron HBF356, USA)
- Stadiometer (measure height)
- Standard Tape (measure waist circumference)
Data collection & Data analysis

- IRB approved (Burapha University)
- Researcher/RA
  - Informed participants about the project and requested for volunteers
  - Volunteer was assessed body weight, height, and body fat percentage
  - A package of question was distributed to volunteers and explained how to filled out the questionnaire
- Data analysis (descriptive, bivariate, and multiple regression)
Results: Sample characteristics

- Female
  - Average age 60.19 (SD =10.8)
  - Low income (5,000 baht (M=4,941.70, SD=9868.10))
  - primary school completion
  - Housewife
Results: Health and management

- Perceived health
  - Chronic illness survivors (100%)
  - Good health (54.6%)
- Received treatment for chronic illness
  - Hypertension (87.8%)
  - Diabetes (87%)
  - Hyperlipidemia (74%)
- Utilized herbs/complementary therapy (12%)
Results: Correlation

- Body fat percentage was related to
  - Herb utilization ($r = .159, p < .05$)
  - Snack ($r = .136, p < .05$)
  - Weight control ($r = .132, p < .05$)
  - Received health information from TV ($r = - .137, p < .05$)
  - Perceived health status ($r = -.103, p < .05$)
Results: Predicting factors

- Predicting factors of percent body fat
  - Herb utilization ($\beta = .147, p < .05$)
  - Weight control ($\beta = .206, p < .05$)
  - Snack ($\beta = .195, p < .05$)
  - Received health information from TV ($\beta = -.137, p < .05$)
  - Perceived health status ($\beta = -.123, p < .05$).

- Total variance explain account for 10.9 ($p < .05$).
Suggestions

- Nurses and health care providers should create interventions to prevent and manage MS focusing on significant factors
  - reduce snack consumption
  - Provide health information on TV program /media
  - Promote health status
- To better understand, Further research should focus on significant predictors of Herb utilization and weight control
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