

# Gender Differences in Self-Care Behaviors in Persons with Type 2 Diabetes

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## Background

- Type 2 diabetes, one of the most rapidly increasing chronic illnesses worldwide, is associated with significant morbidity, mortality, personal and societal costs (WHO, 2012)
- Nearly 26 million adults in the United States have type 2 diabetes; costing nearly \$172 billion dollars for treatment (American Diabetes Association, 2017).
- Self-care activities including following a specialized diet, taking medications and monitoring blood glucose result in improved glucose control and patient outcomes. However, difficulty with performing self-care and inadequate glucose control is common (Robertson, Stanley, Cully, & Naik, 2012)
- The literature is conflicting on the role of gender in diabetes self-care (Bai, Chou, & Chang, 2009; Cheisla, Kwan, Chun & Stryker, 2014; Chlebowy, Hood, & Lajoie, 2013; Waller & Tzeng, 2010).

## Purpose Statement

- The purpose of this study is to describe gender differences in specific aspects of self-care.

## Research Question

- Are there gender differences in diabetes self-care behaviors?

## Setting and Sample

- The setting is a private advance practice nurse run clinic located Rhode Island.
- Inclusion criteria: adults with Type 2 diabetes, over 18 years of age, able to speak, read and write in English

## Methods

- The research design was an exploratory, descriptive study
- The study received IRB approval
- Informed consent was obtained from each participant.
- Cross sectional data were collected by interview during an outpatient clinic visit.

## Theoretical framework

- The middle-range Theory of Self-Care in Chronic Illness guided the study
  - Self-care maintenance behaviors include health promotion and adherence to prescribed therapies.
  - Self-care monitoring is a process of monitoring for symptoms or alterations in bodily processes.
  - Self-care management is an active process of evaluation, interpretation and treatment of bodily alterations (Riegel, Stromberg, & Jaarsma, 2012).

## Demographics

Characteristic (N = 187)	Mean	Standard Deviation	Total Number	Percentage of Total
Age	58.13	12.44	181	96.8
Number of Years in School	13.59	2.72	186	99.4%

Ethnicity	Frequency	Percent
Caucasian/White	167	89.3
Latino(a)/Hispanic	6	3.2
Other	13	6.8
<b>Total</b>	<b>186</b>	<b>99.5</b>

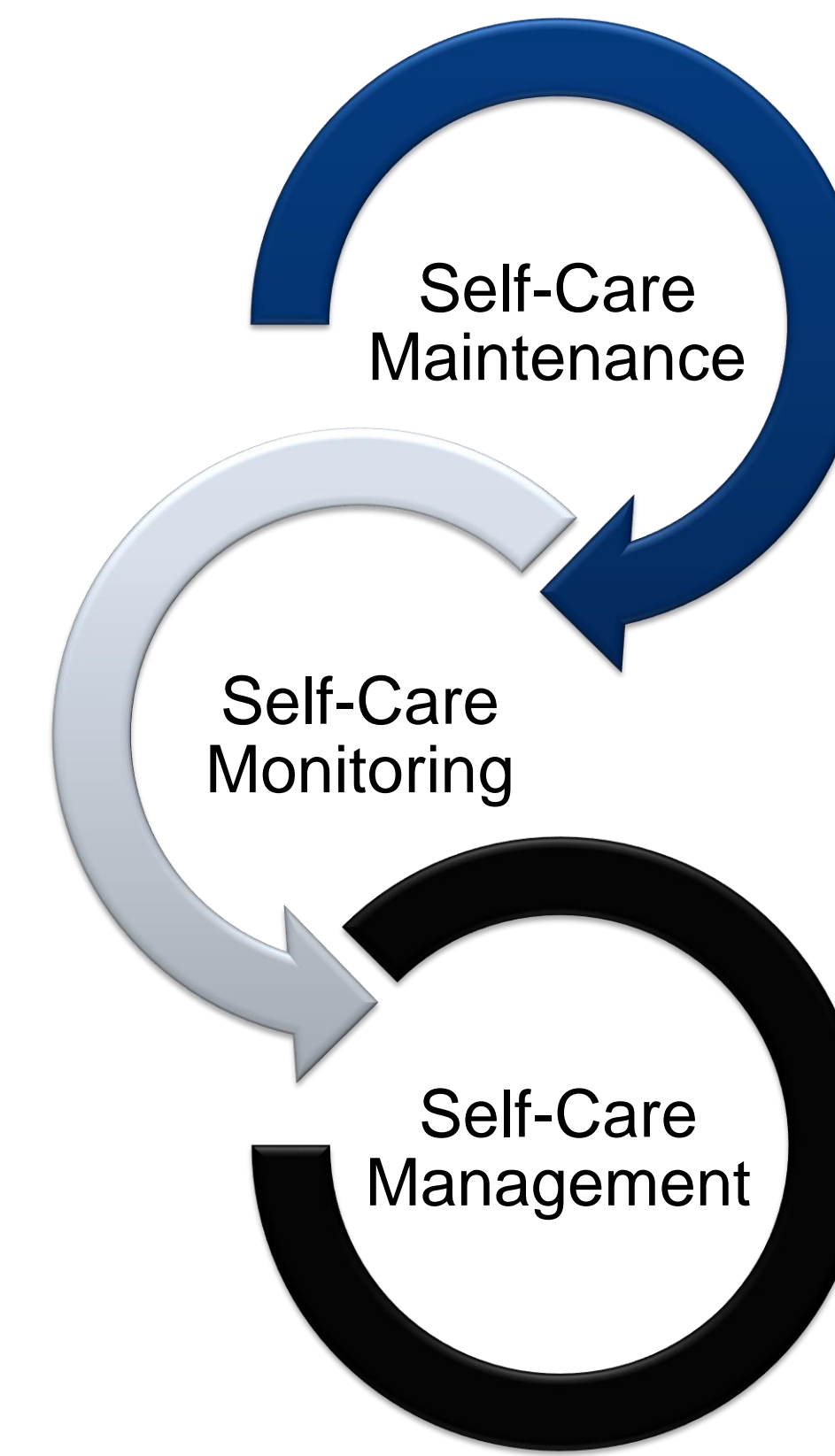
Gender	Total Number	Percentage of Total
Female	71	38
Male	112	59.9

Income	Frequency	Percent
Less than \$40,000 a year	101	54
≥\$40,000 a year	81	43

Marital Status	Frequency	Percent
Married	119	63.6
Widowed	14	7.5
Divorced/Separated	22	11.8
Cohabiting	7	3.7
Single	24	12.8

Condition	Total Number with Condition	Percentage of Participants
Heart Failure	10	5.3
Hypertension	110	58.8
Stroke	9	4.8
Myocardial Infarction	18	9.6
Lung Disease	7	3.7
Ulcer	6	3.2
Kidney Disease	10	5.3
Arthritis	59	31.6

## Middle-Range Theory of Self-Care of Chronic Illness



## Data Collection and Analysis

- Three surveys were used to collect data:
  - **Demographics:** Gender, ethnic background, educational level, income level, marital status, partnered status (yes/no) and medical conditions were collected with a researcher developed tool.
  - **Self-care:**
  - Self-Care of Chronic Illness Survey(SC-II)
    - A reliable and valid 30 item instrument that measures global self-care maintenance, monitoring and management behaviors undertaken by patients with diabetes (Riegel et al., 2017)
    - Adequate self-care scores ≥ 70.
  - Summary of Diabetes Self-Care Activities Measure
    - A reliable and valid 25 item measure of diabetes specific self-care behaviors including foot care, blood sugar monitoring, diet, medications, exercise and smoking behavior (Toobert, Hampson, & Glasgow, 2000).
    - Scores for each subscale range from 0 to 7 and represent the number of days in a 7 day period the diabetes specific self-care behavior was undertaken.
- Data was analyzed using SPSS 23.
- Independent T tests were computed to compare gender differences in self-care behaviors.
- Mixed between within ANOVA was computed to determine the interaction of partnered status on self-care by gender.

## Results

- General self-care maintenance (63.2 vs. 71.6, t = -2.663, p = .009, male vs. female), monitoring (74.6 vs. 81, t = -2.112, p = .036, male vs. female), and management (67.2 vs. 74.2, t = -2.557, p = .011, male vs. female) scores significantly differed by gender.
- Men were more likely than women to wash their feet (6.3 vs. 5.5, male vs. female, t = -2.557, p = .011).
- Gender differences did not exist in frequency (# days of the week) of adhering to a proper diet (4.17 vs. 4.6, male vs. female), amount of exercise (2.1 vs. 2.6, male vs. female), blood glucose monitoring (5.1 vs. 5.3, male vs. female), and foot care (3.2 vs. 3.8, male vs. female).
- No significant interaction was found between gender and partnered status.

## Conclusions

- Significant gender differences exist in more general as opposed to specific diabetes self-care behaviors
- Men had worse self-care maintenance, monitoring and management behaviors than women that was not explained by partnered status.
- Prior research suggests that social support influences self-care but this was not supported in this study.
- Perhaps support from outside the home is more influential in promoting self-care and requires further research

## References

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