

The Utilization of Depression Screening Tools in Patients with Diabetes Type 2

Hanna Book, BSN and Kennedy Eldridge, BSN

Faculty Advisors: Dr. Margaret Harvey, Dr. Artangela Henry, and Dr. Laura Reed

College of Nursing - The University of Tennessee Health Science Center - Memphis, TN

Purpose

The purpose of this DNP project is to assess the utilization of the PHQ-2 and PHQ-9 versus no screening of diabetes type 2 (DM2) patients in a primary care setting.

Specific Aims

- To determine if and how often the PHQ-2 or PHQ-9 is utilized for depression screening in DM2 patients in a primary care setting.
- Provide descriptive data for demographic variables.

Background

Evidence links depression in a patient with DM2 to poorer glucose, lipid, and blood pressure control and unfavorable effects on mortality, clinical outcomes, treatment adherence, and function (Barnacle et al., 2016; Gote & Bruce, 2014).

Early recognition, routine screening, and the use of evidence-based treatment approaches in DM2 patients results in both improved overall health of patients and medical cost savings, including improved control of HbA1c, blood pressure (BP), and cholesterol levels (van Dijk et al., 2018).

By administering the quick and easy PHQ-9 to patients with DM2 upon entry to the primary care clinic (PCC), providers can efficiently screen for depression and preemptively diagnose and treat comorbidities. The PHQ-9 parallels the nine diagnostic symptom criteria that define MDD according to the DSM V. This tool was designed with the intention for use on medical patients, and with only 9 items it is time efficient and appropriate for use in busy PCCs (Fann, et al., 2009).

Evidence-based guidelines recommend regular depression screening of individuals with type II diabetes (DM2) to diagnose and treat depression and proactively enhance clinical outcomes (Barnacle, et al., 2016); however, screening tools are not always implemented as guidelines suggest due to constraints of busy clinics, limited staffing, and patients' limitations including health literacy.

In a retrospective study of 1,817 patients with DM2 only 64.82% of those with a history of major depressive disorder (MDD) and 11.39% of those without MDD were screened using the PHQ-9 (Barnacle, et al., 2016).

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

DATE: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems? (Check one)

Not at all	Several days	More than half the days	Nearly every day
0	1	2	3
0	1	2	3
0	1	2	3
0	1	2	3
0	1	2	3
0	1	2	3
0	1	2	3
0	1	2	3
0	1	2	3

PHQ-9 Score: _____

Depression Severity: _____

Proposed Treatment Actions: _____

PHQ-9 Score	Depression Severity	Proposed Treatment Actions
0 - 4	None-minimal	None
5 - 9	Mild	Watchful waiting; repeat PHQ-9 at follow-up
10 - 14	Moderate	Treatment plan, considering counseling, follow-up and/or pharmacotherapy
15 - 19	Moderately Severe	Active treatment with pharmacotherapy and/or psychotherapy
20 - 27	Severe	Immediate initiation of pharmacotherapy and, if severe impairment or poor response to therapy, expedited referral to a mental health specialist for psychotherapy and/or collaborative management

* From Kroenke K, Spitzer RL. *Psychiatric Annals* 2002;32:509-521

Methods

Study Design:

- Retrospective chart review
- 29 patients total

Setting:

- Urban Primary care setting
- Located in Memphis, Tennessee

Study Duration:

- November 15, 2018- November 8, 2021

Study Population:

- Adults 18 and older with a diagnosis of DM2

IRB:

- UTHSC Institutional Review Board has deemed the project as exempt.

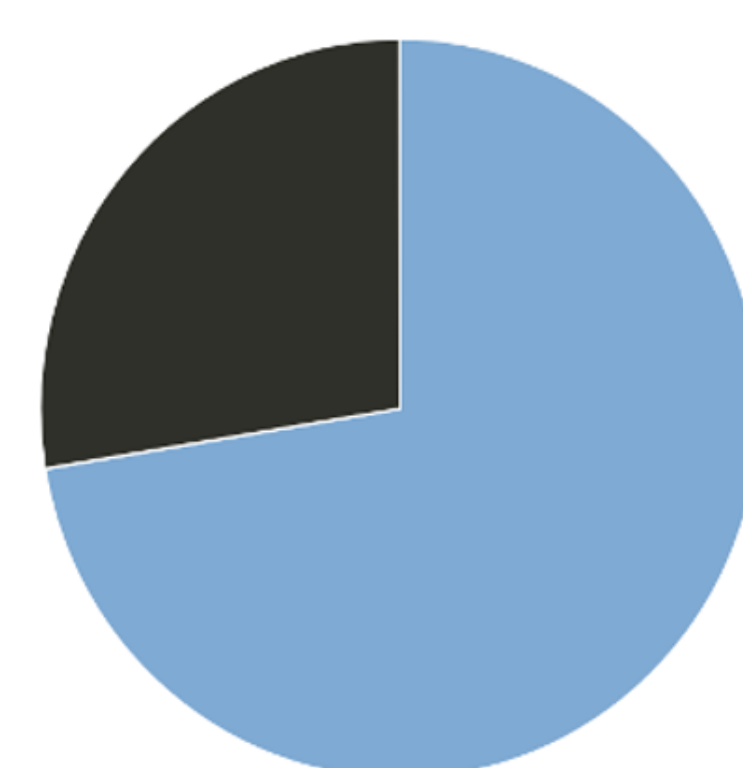
Procedure:

- When inclusion criteria were met, we obtained data including:
 - Sex
 - Age
 - Whether the patient was screened for depression at the office visit
 - Which depression screening tool was utilized

Results

- Total patients: 29**
- Total visits: 102**
- Total screened: 68%**
- The average number of visits per patient: 3.5**

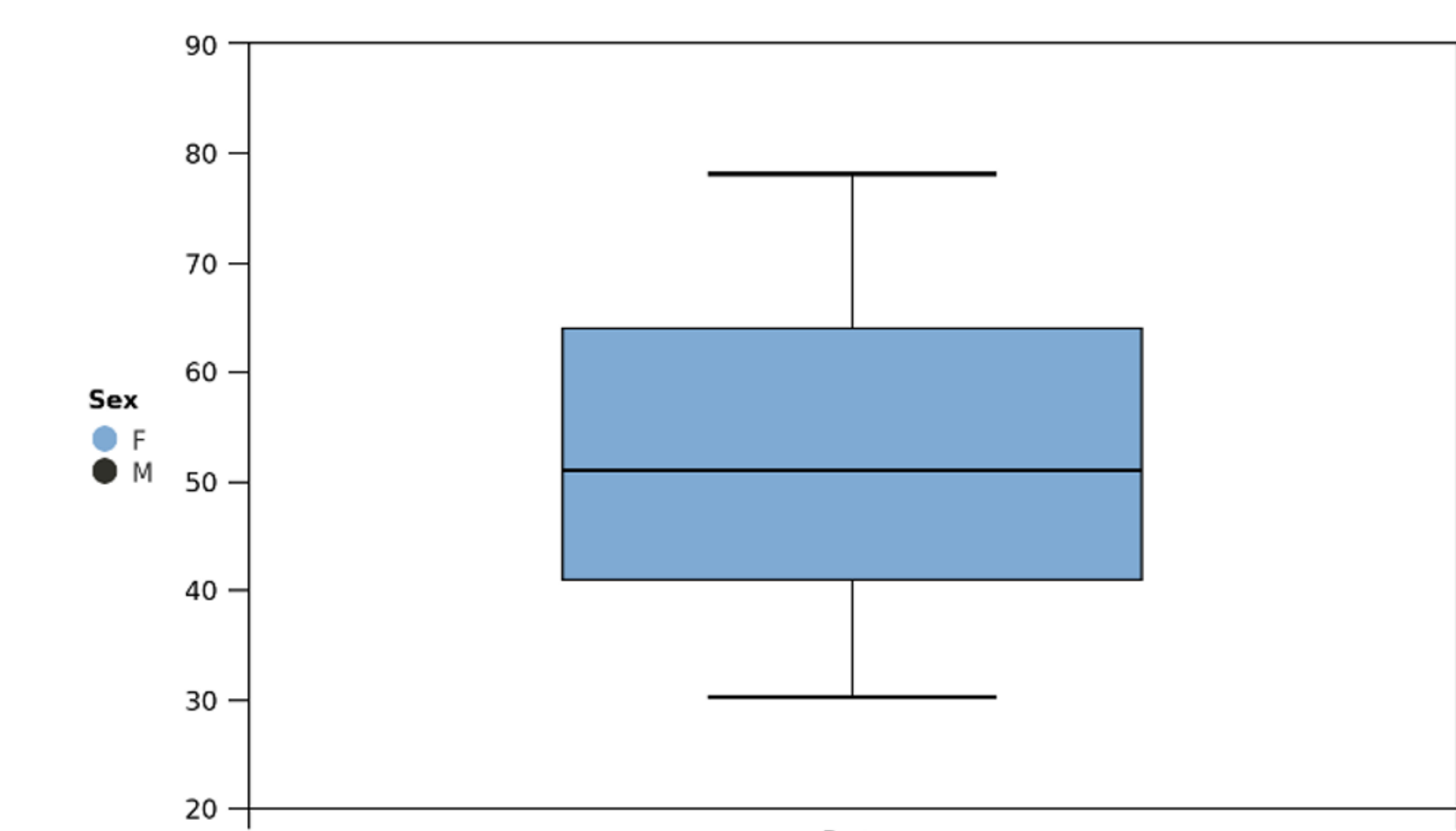
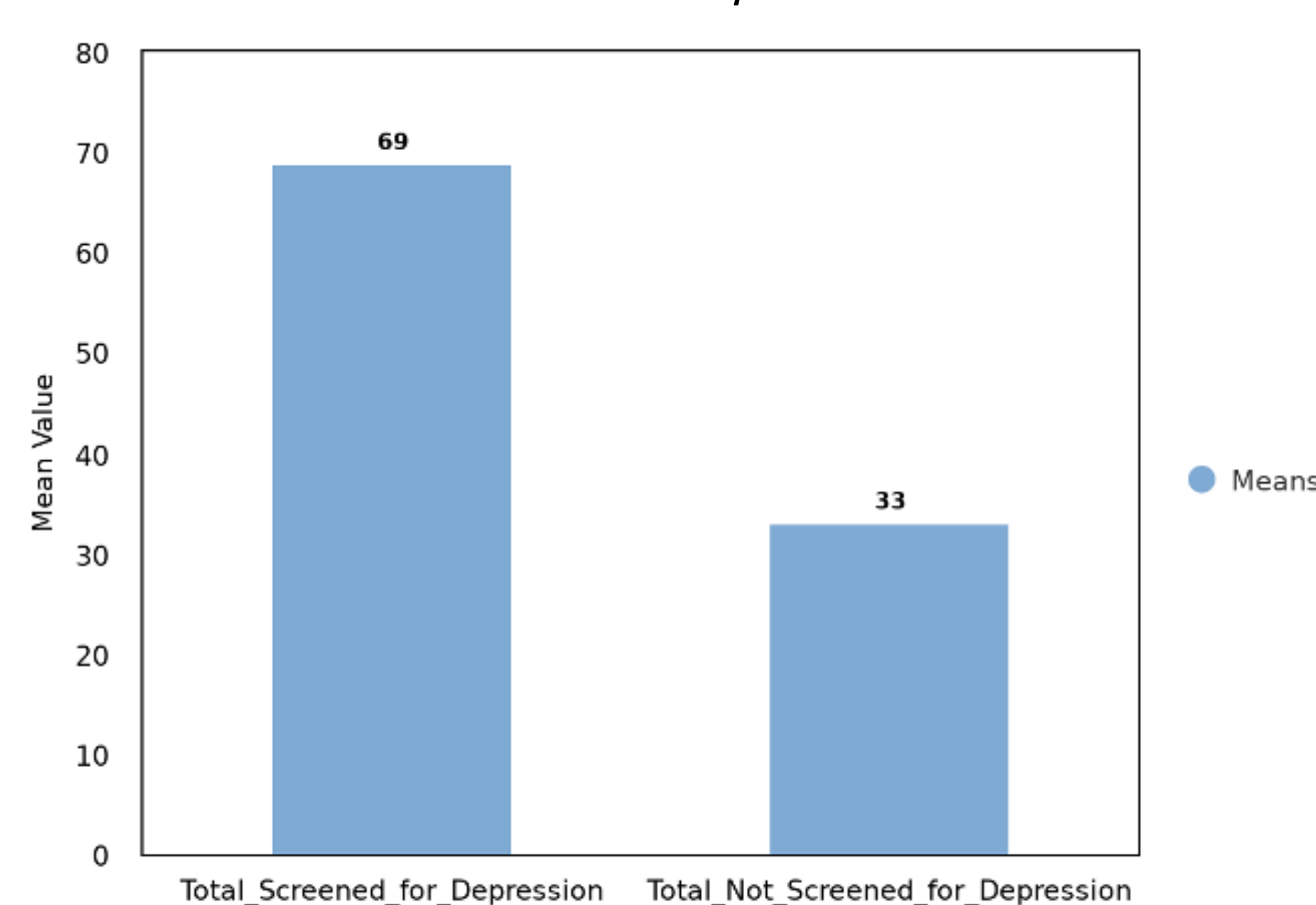
Pie Chart of Patients' Sex



Variable	n	%
Sex		
F	21	72.41
M	8	27.59
Missing	0	0.00

Note. Due to rounding errors, percentages may not equal 100%.

DM2 Patients Screened Versus Not Screened for Depression



Statistic	Value
Mean	52.82759
Standard Error	2.440458
Median	51
Mode	66
Standard Deviation	13.14227
Sample Variance	172.7192
Kurtosis	-0.99559
Skewness	0.217097
Range	48
Minimum	30
Maximum	78
Sum	1532
Count	29
Q1	41
Q3	64

Implications for Practice

Is there a benefit to using the PHQ-9?

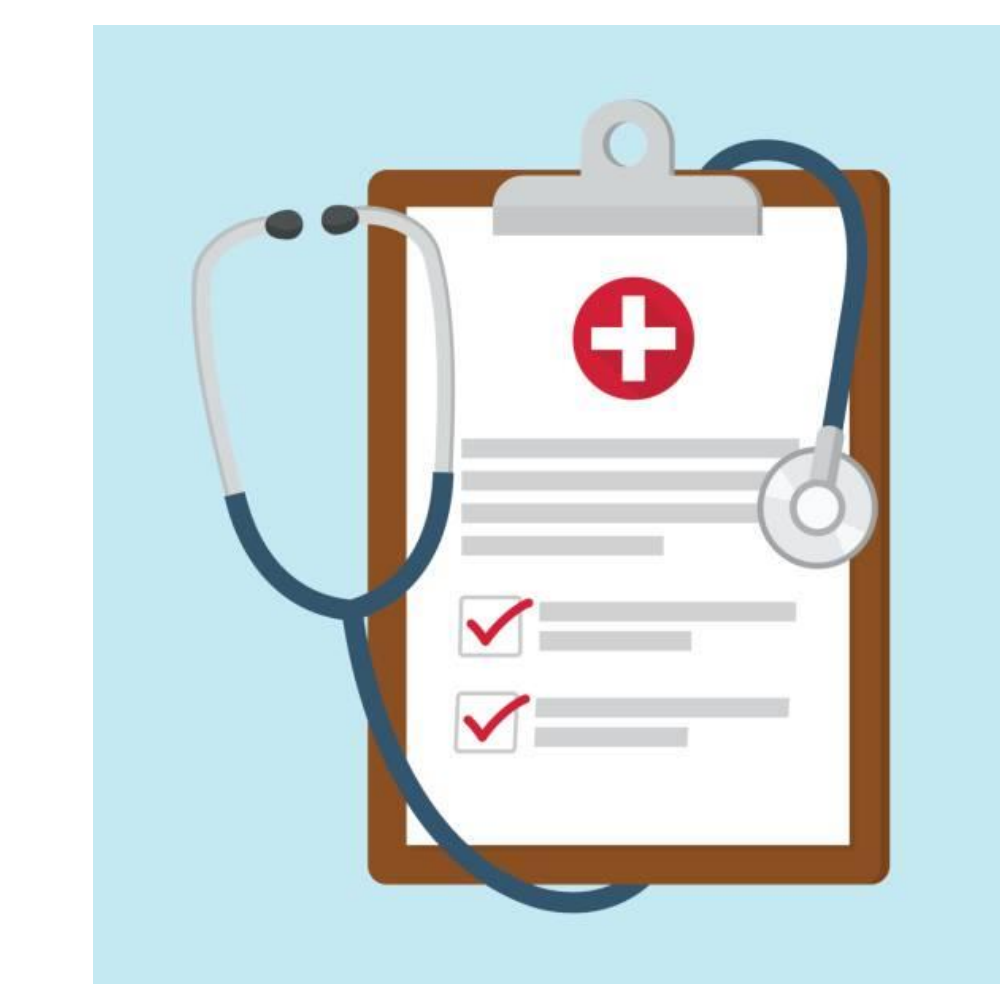
- More research is needed!

Many Confounding Variables

- Clinic participation
- Access to screening tool
- Time constraints

Recommendations for Future Studies

- Larger sample size
- Examine other variables
 - Patient ethnicity
 - Insurance type
 - Age at initial DM2 diagnosis
 - Hemoglobin A1c
 - PHQ-2 or PHQ-9 scores
 - Treatment Plan



Recommendation for Practice

- Educate providers on the use of Depression Screening Tools
- Retrain staff to perform screening on patients during each visit

References

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