

The Influence of Healthy Lifestyle Behaviors on Cognitive Functioning of Older Turkish Women

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Disclosure

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Background

- Global increase in aging population.
- The rise in late-life cognitive disorders such as dementia.
- A heavy burden on societies.
- 46.8 million worldwide population are living with dementia and this number will double every 20 years (Prince,2015).
- The incidence of dementia has declined in higher income Western countries (Langa et al., 2007).
- 68 % of the estimated increase in the global prevalence of dementia will be in low-and-middle income countries by 2050 (Prince et al., 2016).

Background – Turkey at a Glance

- Limited research on the prevalence of cognitive impairment and dementia as well as associated risk factors and interventions.
- Older women in Turkey have been particularly susceptible to cognitive decline due to fewer opportunities in life such as educational and professional attainment.
- Prevalence of cognitive impairment and associated lifestyle factors have been focal points for nurse researchers in Turkey.

Background – Turkey at a Glance

Population	Percentage
Age (65 years old and above) in general population	8.5%
Education	
Non-literate women	31.1%
Non-literate man	7.5%
Marital Status	
Widowed women	49.8%
Widowed mand	12.5%
Occupation	19.9%
Man in the workforce	5.5%
Women in the workforce	
Cause of Death	
Cardiovascular Diseases	45.6%
Alzheimer`s Disease	4.5%

Table is prepared based on the data provided Turkish Statistic Institution (TUIK, 2017)

Significance

- Treatment for cognitive impairment and associated disorders is elusive.
- There is an increasing interest among researchers to find out the effects of health lifestyle factors on cognitive impairment.
- Early detection on cognitive decline opens a window for potential therapies through modifiable factors.
- Healthy life style including physical, cognitive, and social engagement is associated with decreased risk of cognitive impairment in late life (Beydoun et al., 2014; Clare et al., 2017).

Conceptual Framework

- Health Promotion Model (Pender, 1996)
A person has an active role in self health behavior. She/he can self-reflect, actively seek to regulate behavior, and initiate behaviors that modify the environment.
- Cognitive Reserve Theory (Stern, 2002)
The inherent characteristics such as intelligence or genetic as well as life-long experiences such as education and occupational attainment may support cognitive abilities, allowing some people to cope with cognitive decline better than others.

Purpose

The purpose of this study was to investigate the prevalence of cognitive impairment, and the impact of healthy lifestyle behaviors on cognitive functioning of older Turkish women.

Methods

- **Design:** cross-sectional, correlational study
- **The initial sample:** 116 community-dwelling older women aged between 65 and 91.
- **The sample size** was determined based on a priori effect size calculation of (.30) with a power size (.80) and an alpha level (.05).
- Participants were recruited in two family health centers in Sivas, using convenience sampling method.
 - **Inclusion criteria:** to be at least 65 years old community-dwelling woman, be able to speak Turkish, be able to commute to family health center.
 - **Exclusion criteria:** has depression symptoms, has been using anti depressive medication, has cancer or has been on chemotherapy.

Methods

- The study was approved by the Sivas Cumhuriyet University Ethical Review Board (ID: 2016-11/23).
- Data collection was completed on September 2017.
- Analysis: 100 participants were included in the final analysis.
 - Descriptive statistics were used to analyze the demographic data and the prevalence of cognitive impairment.
 - Pearson Correlation.
 - Multiple Linear Regression.

Variables and Measures

Variable	Measure	# of items/ dimensions	Level of measurement	Internal consistency (α)	Test-Retest $\text{\textcircled{R}}$
Cognitive Functioning	MMSE scale	30	5	.95	.78
H. Promoting Lifestyle Factors	HPLP-II	52	6	.91	.75

Results - Demographics

Age*	Percent
65 - 70	60
70 – 80	30
> 80	10
Education	
Non-literate	61
Elementary	29
Middle-High School	7
University	3
Occupation	
Home-maker	93
Retired	7
Marital Status	
Married	62
Widowed/divorced	38
*the mean age was 69.58 ±,4.98	

Results - Prevalence of Cognitive Impairment

Scores*	Freuency	Percent	Cumulative percent
14	1	1.0	1.0
16	2	2.0	3.0
17	2	2.0	5.0
18	3	3.0	8.0
19	4	4.0	12.0
20	7	7.0	19.0
21	10	10.0	29.0
22	5	5.0	34.0
23	13	13.0	47.0
24	9	9.0	56.0
25	8	8.0	64.0
26	8	8.0	72.0
27	12	12.0	84.0
28	3	3.0	87.0
29	6	6.0	93.0
30	7	7.0	100.0
Total	100	100.0	

* The mean MMSE score was 23.85 ± 3.71

Results - Correlations between Lifestyle Dimensions and Cognition Functioning

	1	2	3	4	5	6	7	8
1. MMSE	-							
2. Total HPLP-II	.362**	-						
3. Health Responsibility	.153	.773**	-					
4. Physical Activity	.249*	.777**	.630**	-				
5. Nutrition	.262**	.847**	.624**	.654**	-			
6. Spiritual Growth	.391**	.892**	.526**	.620**	.684**	-		
7. Interpersonal Relations	.367**	.813**	.497**	.423**	.625**	.761**	-	
8. Stress Management	.373**	.859**	.530**	.575**	.646**	.823**	.697**	-

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Results - Regression Analysis Summary for Lifestyle Dimensions Predicting Cognitive Functioning

Predictors	<i>B</i>	<i>SE</i>	<i>β</i>	<i>t</i>	<i>p</i>
Intercept	16.38	2.13		7.70	.000**
Health Responsibility	-0.11	0.10	-0.14	-1.09	.279
Physical Activity	0.09	0.13	0.10	0.68	.497
Nutrition	-0.04	0.14	-0.04	-0.29	.773
Spiritual Growth	0.12	0.15	0.16	0.83	.411
Interpersonal Relations	0.15	0.12	0.20	1.25	.213
Stress Management	0.13	0.15	0.15	0.87	.386

Note. ** $p < .01$, [$F(6,93)=3.47$, $p=.004$ $R^2=.183$]

Future Directions

- The early detection of cognitive impairment is important.
- There is an urgent need to address healthy lifestyle behaviors in primary care services and multi-faceted public health interventions.
- Equal opportunities in early and mid-life promote the cognitive health of women in late life.
- More research needed to inform practice and policy.

Future Directions

- Priorities for nurses are:
 - Providing opportunities for intellectual, social and physical stimulation to support cognitive health of women.
 - Identification of what matters the most for a person.
 - Transforming these healthy lifestyle behaviors to meaningful daily life activities per individual`s unique needs.

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Thank you...