ORIGINAL ARTICLE

Self-Efficacy for Oral Health Behavior among High School Female Students

FARAH F. YOUNIS[1], AYSEN K. MOHAMMED[2]

[1]MSN, Clinical Nurse Specialist, Ministry of Health, Baghdad, Iraq
[2]Instructor Doctor, Department of Community Health Nursing, College of Nursing, University of Baghdad, Baghdad, Iraq
Correspondence to: Farah F. Younis, E-mail Farah.Fakhri1206a@conursing.uobaghdad.edu.iq

ABSTRACT

Background: Infections and tooth loss are common side effects of mouth and dental illnesses, as can paralyzing pains and trouble eating and speaking. Another important consideration is that persistent oral infections have been linked to cardiovascular disease, diabetes, and stroke, all of which, along with other noncommunicable and chronic diseases, could be avoided by improving oral health literacy.

Objectives(s): The aim of this study is to assess the self-efficacy for oral health behavior among high school female students.

Methodology: This study guided by a descriptive correlational strategy. The predictive correlational design is used to predict the value of one variable based on the value of another (s) by determining the intensity and course of relationships between or among variables. This study conducted from September 20, 2021, to May 31, 2022. A non-probability convenience sample of (380) female high school students that are registered in the directorate of education. When subjects appear to be at the right place at the right time, they are used in convenience sampling research. Before the required sample size is met, researchers simply add relevant people to the study. A margin of error of 5%, a confidence level of 95%, a population size of 18.000, and a response distribution of 50% were used to establish the sample size. As a result, 377 people should be included in the sample. The total number of participants is 380.

Results: There are statistically significant differences in Self-Efficacy for brushing behavior and Self-Efficacy for oral health behavior among living arrangements groups (p-value = 0.000, 0.010) respectively.

Conclusion: The better the oral health value, the greater the Self-Efficacy for brushing behavior. The better the oral health value, the greater the Self-Efficacy for daily life habits.

Recommendations: There is a need for the community health nurses to establish health promotion activities that target high school students; particularly the fourth graders with the goal of raising and their oral health awareness.

Keywords: Self-efficacy, Oral Health, High School, Female, Students.

INTRODUCTION

The link between oral and general health is significant because oral health is considered an intrinsic component of general health, and oral health disorders can negatively impact overall general health and quality of life (Brennan & Teusner, 2015).

Physical, psychological, and social aspects all have an impact on one's quality of life. Oral health is one of the most crucial considerations. Oral health has a significant impact on people's health, particularly in adolescents. A significant increase in dental and periodontal alterations in teenagers has been seen, particularly in developing nations (Kane, 2017).

Knowledge of the negative impact of these behaviours on oral health can encourage students to stop, resulting in the early prevention of a variety of oral disorders. Secondary school students have severely poor levels of oral health knowledge, attitudes, and practices, which should be investigated. As a result, the purpose of this research was to assess secondary school students' oral health knowledge, attitudes, and practices (Al-Tayar et al., 2019).

Gingivitis and periodontitis are common periodontal diseases that affect up to 90% of the global population. Heart disease, diabetes, respiratory disorders, rheumatism, metabolic syndrome, and other systemic ailments have all been linked to them. Gingival bleeding, one of the most common symptoms of periodontal disease, has been linked to a variety of systemic disorders in children and adolescents. As a result, periodontal disease prevention and treatment are more critical than ever (Abe et al., 2020).

Infections and tooth loss are common side effects of mouth and dental illnesses, as can paralyzing pains and trouble eating and speaking. Another important consideration is that persistent oral infections have been linked to cardiovascular disease, diabetes, and stroke, all of which, along with other noncommunicable and chronic diseases, could be avoided by improving oral health literacy (Broadbent, 2003).

The mouth is essential for flavor creation and eating enjoyment. However, during an oral examination, the importance and evaluation of a patient's flavor perception, as well as the incorporation of flavor-influencing aspects into the creation of a treatment plan, are rarely explored. Dental practitioners and academics should be at the forefront of biomedical science in terms of understanding and promoting flavor and its importance to patients' health (Ellender & Moynihan, 2021).

The senses fluctuate during life, influencing food enjoyment, selection, and intake, as well as nutritional status. Aging is connected with a minor decline in taste and somatosenses in healthy adults, as well as a notable decline in olfaction, which is often unnoticed by the subject. All senses can be affected in a medically challenged patient to varied degrees, either as a result of the disease or as a side effect of treatment (Ellender & Moynihan, 2021).

Periodontal disease can be avoided by practicing good oral hygiene habits like cleaning your teeth, flossing your teeth, and getting regular dental exams. Furthermore, oral health behavior is associated to dental knowledge, attitude, lifestyle, stress, education level, socioeconomic status, sense of coherence, and self-efficacy (Taniguchi-Tabata et al., 2017).

Defining and emphasizing the size of the economic impact of dental illnesses on society or on different demographic groups will give valuable data for public health policymakers to assess the necessity of managing oral disorders. However, data on the economic effects of disease in the context of oral health and care has been scarce thus far (Listl et al., 2015).

Long has been researched the impact of socioeconomic status on both general and dental health. The preponderance of evidence demonstrates that oral health status is associated to socioeconomic disparities, whether measured subjectively (self-rated oral health) or objectively (oral health status) (clinically confirmed dental illnesses). Monitoring social inequalities in oral health is critical for gathering data on population differences in oral health care needs, preventative practices, and system goals. Oral health and dental illness are adversely related to socioeconomic class, which means that the higher one's socioeconomic status, the better one's sense of oral health and the fewer experience with clinically confirmed dental problems (Mejia et al., 2018).

METHODOLOGY

Study Design: This study will be guided by a descriptive correlational strategy. The predictive correlational design is used to predict the value of one variable based on the value of another (s) by determining the intensity and course of relationships between or among variables. This study conducted from September 20, 2021, to May 31, 2022.

Setting of Study: The study was carried out at Baghdad / Al-Karkh second directorate of education.

Sample of the Study: A non-probability convenience sample of (380) female high school students that are registered in the directorate of education. When subjects appear to be at the right place at the right time, they are used in convenience sampling research. Before the required sample size is met, researchers simply add relevant people to the study.

A margin of error of 5%, a confidence level of 95%, a population size of 18.000, and a response distribution of 50% were used to establish the sample size. As a result, 377 people should be included in the sample. The total number of participants is 380.

Ethical Considerations: The Department of Community Health Nursing Scientific Committee examined and approved the research proposal first. After getting approval from the College of Nursing, the researcher sought approval from the Ministry of Education and discussed the study's contents with them. The researcher explained the study's main purpose as well as how to complete the questionnaire. The researcher informed participants that their data would be kept private and secure throughout and after their participation in the study. The researcher also told study participants that their identities would be kept anonymous throughout the study's presentation, reporting, and/or final publication.

Data collection: The information was acquired through a direct interview with each of the study's student participants, as well as the Oral Health Value and Self-Efficacy for Oral Health Behavior instrument.

The data collection process was done between January 26th and February 8th, 2022. Each respondent was given approximately 10 to 30 minutes to complete filling the questionnaire format.

Data Analyses: Data were analyzed using the statistical package for social science (SPSS) for windows Version 28 (Chicago, IL).

RESULTS OF THE STUDY

Table 1: Differences in Self-Efficacy for oral health behavior among age groups

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
SEBB	Between Groups	3.443	2	1.721	.041	.960
	Within Groups	15868.084	377	42.090		
	Total	15871.526	379			
SEDLH	Between Groups	58.092	2	29.046	.611	.543
	Within Groups	17910.042	377	47.507		
	Total	17968.134	379			
SEPC	Between Groups	19.807	2	9.903	.500	.607
	Within Groups	7461.380	377	19.791		
	Total	7481.187	379			
SETC	Between Groups	3.541	2	1.771	.067	.935
	Within Groups	9995.014	377	26.512		
	Total	9998.555	379			
Self-Efficacy for Oral Health Behavior	Between Groups	261.687	2	130.844	.143	.866
	Within Groups	343804.995	377	911.950		
	Total	344066.682	379			

df: Degree of freedom; F: F-Statistics; SEBB: Self-Efficacy for brushing behavior; SEDLH: Self-Efficacy for daily life habits; SEPC: Self-Efficacy for psychological control; SETC: Self-Efficacy for dental check-up; Sig.: Significance

There is no statistically significant difference in Self-Efficacy for oral health behavior among age groups.

Table 2: Differences in Self-Efficacy for oral health behavior among grade groups

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
SEBB	Between Groups	121.673	2	60.836	1.456	.234
	Within Groups	15749.854	377	41.777		
	Total	15871.526	379			
SEDLH	Between Groups	40.379	2	20.189	.425	.654
	Within Groups	17927.756	377	47.554		
	Total	17968.134	379			
SEPC	Between Groups	116.997	2	58.499	2.995	.051
	Within Groups	7364.190	377	19.534		
	Total	7481.187	379			
SETC	Between Groups	5.298	2	2.649	.100	.905
	Within Groups	9993.257	377	26.507		
	Total	9998.555	379			
Self-Efficacy for Oral Health Behavior	Between Groups	1625.117	2	812.558	.895	.410
	Within Groups	342441.565	377	908.333		
	Total	344066.682	379			

df: Degree of freedom; F: F-Statistics; SEBB: Self-Efficacy for brushing behavior; SEDLH: Self-Efficacy for daily life habits; SEPC: Self-Efficacy for psychological control; SETC: Self-Efficacy for dental check-up; Sig.: Significance

There is no statistically significant difference in Self-Efficacy for oral health behavior among living arrangements groups.

Table 3: Differences in Self-Efficacy for oral health behavior among living arrangements groups

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
SEBB	Between Groups	1017.226	4	254.307	6.420	.000

	Within Groups	14854.300	375	39.611		
	Total	15871.526	379			
SEDLH	Between Groups	349.947	4	87.487	1.862	.116
	Within Groups	17618.187	375	46.982		
	Total	17968.134	379			
SEPC	Between Groups	101.059	4	25.265	1.284	.276
	Within Groups	7380.128	375	19.680		
	Total	7481.187	379			
SETC	Between Groups	68.762	4	17.190	.649	.628
	Within Groups	9929.793	375	26.479		
	Total	9998.555	379			
Self-Efficacy for Oral Health Behavior	Between Groups	11949.706	4	2987.426	3.373	.010
	Within Groups	332116.976	375	885.645		
	Total	344066.682	379			

df: Degree of freedom; F: F-Statistics; SEBB: Self-Efficacy for brushing behavior; SEDLH: Self-Efficacy for daily life habits; SEPC: Self-Efficacy for psychological control; SETC: Self-Efficacy for dental check-up; Sig.: Significance

There are statistically significant differences in Self-Efficacy for brushing behavior and Self-Efficacy for oral health behavior among living arrangements groups (p-value = 0.000, 0.010) respectively.

Table 4: Differences in Self-Efficacy for oral health behavior among socioeconomic class groups

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
SEBB	Between Groups	569.366	4	142.341	3.488	.008
	Within Groups	15302.160	375	40.806		
	Total	15871.526	379			
SEDLH	Between Groups	488.679	4	122.170	2.621	.035
	Within Groups	17479.455	375	46.612		
	Total	17968.134	379			
SEPC	Between Groups	11.247	4	2.812	.141	.967
	Within Groups	7469.940	375	19.920		
	Total	7481.187	379			
SETC	Between Groups	48.055	4	12.014	.453	.770
	Within Groups	9950.500	375	26.535		
	Total	9998.555	379			
Self-Efficacy for Oral Health Behavior	Between Groups	7294.826	4	1823.707	2.031	.089
	Within Groups	336771.855	375	898.058		
	Total	344066.682	379			

Df: Degree of freedom; F: F-Statistics; SEBB: Self-Efficacy for brushing behavior; SEDLH: Self-Efficacy for daily life habits; SEPC: Self-Efficacy for psychological control; SETC: Self-Efficacy for dental check-up; Sig.: Significance.

There are statistically significant differences in Self-Efficacy for brushing behavior and Self-Efficacy for daily life habits among socioeconomic class groups (p-value = 0.008, 0.035) respectively.

DISCUSSION

There was a statistically significant positive correlation between students' oral health value and their Self-Efficacy for brushing behavior. This finding implies that the greater the health value, the better the Self-Efficacy of oral health behavior. People's oral health behavior is important for the prevention and treatment of oral illnesses. Their views on how to manage oral health behavior relate to actual brushing, interdental lavage, and dental visits. According to Bandura's Self-Efficacy Theory, (Bandura, 1977), individuals perform activities they find they can manage but avoid those they believe they are unable to cope with (Bandura, 1982). Self-Efficacy perception has been linked to a variety of other health behavior behaviors in addition to oral health (Martinelli, 1999; Pinto et al., 1999). This finding is congruent with that obtained by Vakili et al., (2011) who concluded that Self-Efficacy was significantly related to oral health behaviors.

There was a statistically significant positive correlation between students' oral health value and their Self-Efficacy for daily life habits. This finding implies that greater the oral health value, the better the Self-Efficacy for daily life habits.

There was a statistically significant positive correlation between students' oral health value and their Self-Efficacy for psychological control (Kakudate et al. 2008, 2010, 2011) stated that patients with periodontal conditions who enjoy better Self-Efficacy demonstrated better adherence to oral hygiene instruction and periodontal treatment (Kakudate et al. 2008, 2010, 2011).

There was a statistically significant positive correlation between students' oral health value and their Self-Efficacy for dental check-up. This finding implies that the greater the health value, the greater the Self-Efficacy for dental check-up. In other words, students who devote a great deal of attention to their oral health would feel themselves more confident of visiting the dentist for performing periodic dental check-up.

There was a statistically significant positive correlation between students' oral health value and their Self-Efficacy for oral health behavior. This finding implies that the greater the health value, the greater the Self-Efficacy of oral health behavior. That is, students who recognize the worth of oral health would develop and adhere to habits that take better care of their mouth including regular teeth brushing, interdental flossing, using mouth wash, and avoid habits harmful to their teeth, periodontium, and tongue.

There was a statistically significant difference in oral health value among age groups. Further post hoc analysis demonstrates that students who age 17-18-years exhibited greater oral health values than those who age 19-20-years and those who age 15-16-years. Further cross-tabulation analysis displayed that less than a half of students who age 17-18-years are of families of upper middle socioeconomic class. Better socioeconomic class can enable people to take better care of their oral health via buying the supplements necessary for oral health, visit the dentist periodically, and buy foods that are healthy to their oral health.

There were statistically significant differences in Self-Efficacy for brushing behavior and oral health behavior among living arrangements groups. Further post hoc analysis displays those students who live with their mothers demonstrated better Self-Efficacy for brushing behavior. This finding could be explained as those students can be more precious for their mothers who in turn

could take better care of them such as encourage them for adopting oral health behaviors.

There was a statistically significant difference in Self-Efficacy for brushing behavior among socioeconomic class groups. Further post hoc analysis exhibits those students who are of families of lower socioeconomic class enjoy greater Self-Efficacy for brushing behavior. This finding could be explained as that those students strive for adhering to teeth brushing with the goal of avoiding further consequences and/or cost of neglecting oral health care.

There was a statistically significant difference in Self-Efficacy for daily life habits among socioeconomic class groups. Further post hoc analysis exhibits those students who are of families of upper socioeconomic class enjoy greater Self-Efficacy for daily life habits. This finding could be explained as that families whose socioeconomic class is higher enable them to take better care of their oral health via buying the supplements necessary for oral health, visit the dentist periodically, and buy foods that are healthy to their oral health.

CONCLUSION

The better the oral health value, the greater the Self-Efficacy for brushing behavior. The better the oral health value, the greater the Self-Efficacy for daily life habits. The greater the oral health value, the greater the Self-Efficacy for psychological control. The greater the oral health value, the greater the Self-Efficacy for dental check-up. The greater the oral health value, the greater the Self-Efficacy for oral health behavior.

Recommendations: There is a need for the community health nurses to establish health promotion activities that target high school students; particularly the fourth graders with the goal of raising and their oral health awareness.

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