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Study on the Relationship Between Nutritional Awareness and Dietary Behavior of Thai Muslim Older Adults in Watthana District, Bangkok

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Abstract

Objectives: This study investigates the relationship between nutritional awareness and dietary behavior among Thai-Muslim older adults in the Watthana district of Bangkok.

Methods: Utilizing a cross-sectional design, we sampled 400 individuals aged 60 and above (mean age = 68.70±5.64 years) through simple random sampling across five communities. The study is framed within the Mixed Model of Emotional Intelligence, focusing on emotional awareness, accurate self-assessment, and self-confidence as key components. Data were collected through structured interviews and analyzed using Pearson's correlation and multiple linear regression techniques.

Results: Pearson's correlation analysis revealed significant relationships between emotional awareness, accurate self-assessment, self-confidence, and dietary behavior, with correlation coefficients of 0.29, 0.55, and 0.57, respectively (p<0.01). Multiple linear regression analysis further identified that the constant (β = 2.00), accurate self-assessment (β=0.21, p<0.01), and self-confidence (β=0.22, p<0.01) were significant predictors of improved dietary behaviors.

Conclusions: The findings of this study underscore the critical role of emotional awareness, accurate self-assessment, and self-confidence in shaping dietary behaviors among older adults. These factors were significantly associated with healthier dietary patterns (p<0.01). Based on these results, it is recommended that targeted educational interventions aimed at enhancing emotional intelligence and self-assessment skills could play a pivotal role in improving dietary behaviors and overall health outcomes for older adults in this population.

Keywords: awareness, behaviors, dietary, emotional, nutritional

Introduction

Good nutrition is essential for maintaining health and enhancing quality of life among older adults. Educating this demographic and encouraging the application of sound nutritional principles in daily life can significantly reduce the risk of chronic diseases[1], strengthen the immune system[2], preserve muscle mass[3], and improve brain function and nervous system health.[4] Furthermore, adequate nutrition is critical in preventing malnutrition, a prevalent concern among older adults.[5] Therefore, understanding and adhering to proper nutritional practices is crucial in older adults' healthcare.

Muslim older adults, however, face distinct nutritional challenges that can impact both their health and overall well-being. A key issue is the difficulty in accessing halal food, which adheres to specific Islamic dietary standards. This limitation can lead to nutrient deficiencies.[6] Additionally, cultural and traditional food practices among Muslims may sometimes conflict with optimal nutritional guidelines, potentially affecting dietary behavior.[7] Many Thai-Muslim older adults also face a range of chronic health conditions, including diabetes, hypertension, and cardiovascular disease, which require specific dietary modifications for effective management.[8] These challenges are consistent with findings from previous studies conducted in Thailand.[9,10]

Similar studies in other global contexts have highlighted comparable concerns. For instance, research by Norman *et al*.,[11] in Germanyfound that older adults with limited access to food were more likely to experience malnutrition and associated health problems. Likewise, Nazri *et al*.,[12] reported that insufficient dietary intake significantly increased the risk of chronic diseases among older adults with low socioeconomic status. Leung *et al*.,[13] also demonstrated that restricted access to nutritious food correlates with higher rates of malnutrition and related health issues.

A cross-sectional descriptive study by Rungsiyanont and Sakoolnamarka (2023) examined older adult populations in Samut Prakan[14] and Nakhon Nayok.[15] Their findings highlighted those personal factors such as income, education level, and cohabitation with family members positively influenced dietary behaviors. In a related study, Vaudin *et al*.,[16] explored the role of awareness and the use of nutrition information in predicting diet quality among older adults. Their research emphasized that accurate self-assessment and heightened nutritional awareness are key factors in making healthier food choices.

Furthermore, emotional awareness-the ability to recognize and understand one's own emotions-along with self-assessment and self-confidence, plays a critical role in shaping dietary behavior. These psychological factors influence motivation, attitudes, and beliefs about food, which ultimately guide healthier eating patterns.

Emotional awareness refers to the ability to identify and comprehend one's emotions, while accurate self-assessment involves objectively evaluating one’s strengths and weaknesses. Confidence, in this context, is the belief in one’s capacity to successfully navigate tasks and challenges. Dietary behavior encompasses the choices and patterns individuals adopt concerning food intake and eating habits. Research indicates that these psychological components significantly impact older adults' dietary decisions by shaping their motivation, attitudes, and beliefs about nutrition.

To support healthier eating practices, the "Nine Dietary Guidelines"[17] were introduced by the Nutrition Division of the Department of Health, Ministry of Public Health, and the Institute of Nutrition at Mahidol University. These guidelines provide a structured framework to assist individuals in making more informed dietary choices.

The findings of these studies can be further contextualized through Daniel Goleman’s Emotional Intelligence framework[18], which underscores the importance of self-awareness and emotional understanding in shaping individual behaviors and decision-making. Goleman’s model outlines three key components: 1) Emotional Awareness-he ability to recognize and understand one’s own emotions and those of others; 2) Accurate Self-Assessment-the realistic evaluation of one’s strengths and weaknesses; and 3) Self-Confidence—the belief in one’s abilities to succeed.

The research team is also interested in exploring underrepresented ethnic groups in Thailand. With appropriate funding, they plan to begin their study with ethnic populations in Bangkok. According to the National Statistical Office[19], the Thai-Muslim population aged 15 and older in Thailand is 2,731,810, with approximately 338,219 residing in Bangkok. These communities are concentrated along the 55-mile Saen Saeb Canal, which connects the city to the Bang Pakong River. The area

is home to several important waterways, including the Maha Nak Canal and both the upper and lower Saen Saeb Canals, where Muslim communities have established mosques, cemeteries, and Islamic schools since the reign of King Rama III, contributing to the historical development of the canal.

The lower Saen Saeb Canal is a major waterway in the Wattana district, which is home to a significant Thai-Muslim community. The area contains six mosques, and the population of Thai Muslims over the age of 60 is estimated to be approximately 3,700, according to unofficial community registry data. The community preserves traditional lifestyles across 16 neighborhoods, reflecting their rich cultural heritage and practices.

Objective

The objective of this study was to investigate the relationship between nutrition awareness and the dietary behavior of Thai-Muslim older adults in the Watthana district of Bangkok.

Importance of the study

Thai-Muslim older adults play a vital role in strengthening and sustaining the Thai-Muslim community. Addressing their nutritional challenges can create a solid foundation for improving their quality of life and health in a sustainable manner. The findings from this research will provide valuable insights for developing nutrition programs and policies that are culturally and religiously aligned with the needs of Thai-Muslim older adults. This approach will not only enhance the relevance of health interventions but also improve the long-term effectiveness of healthcare for older adults in this community.

Materials and Methods

Study design

This study was a cross-sectional study and has been approved by the Ethics Committee for Research on Humans and Animals, Srinakharinwirot University, with the approval number SWU-EC096/2566E, prior to data collection.

Sample size calculation

The study population consisted of older adults' individuals aged 60 years or older who have resided in the area for no less than six months, both male and female, who can communicate and remember normally. According to the 2017 data from the Department of Health Strategy and Environmental Health (SIA), there are 16,278 older adults' individuals in the Watthana district, Bangkok. The sample size was calculated using the formula by Krejcie & Morgan (1970)[20], resulting in a sample size of 374 individuals.

Sampling method

Simple random sampling was conducted across 16 communities, leading to the selection of 5: Mee Suwan Sam, Cham Chan, Klong Tan Bridge, Bandon Mosque, and Ban Sam In Development. A sample size of 374 was deemed necessary, with each selected community announcing a call for volunteers to recruit 80 participants from their members. To account for potential non-responses, the total sample size was increased to 400.

Data collection procedure

Before data collection, the researcher trained interviewers on data collection methods and the use of the interview form. A preliminary test was conducted with a group similar to the sample to refine the questionnaire. Data collection involved direct interviews with the sample, coordinated through public health volunteers (PHVs) in Watthana district. The researcher, accompanied by village PHVs, conducted 20-minute interviews. The questionnaire was designed using culturally appropriate language and terminology to ensure participants fully understood and accurately responded. Questions included foods and dietary behavior specific to the Thai-Muslim culture, such as halal dietary laws and traditional foods, ensuring relevance and accuracy.

Instruments

Data collection utilized an interview questionnaire developed in Thai, divided into three main sections:

Personal factors: Closed-ended questions were used to gather basic general information such as gender, highest education level, family income, and living arrangements with family (5 items).

Nutrition awareness: The Nutrition Awareness questionnaire was based on Goleman's Mixed Model of Emotional Intelligence Theory[18], adapted from research by Sakoolnamarka and Rungsiyanont.[14,15] The questions

focus on three key areas: Emotional Awareness (10 items), Accurate Self-Assessment (9 items), and Self-Confidence (7 items). Each item used a scoring criterion with 5 levels as follows: Very Much = 5, Much = 4, Moderate = 3, Little = 2, Very Little = 1, Not at All = 0. For negatively worded questions, the scores will be reversed, with the negative questions marked with an asterisk (*).

Dietary behavior: The dietary behavior questionnaire was designed to assess behaviors aligned with the "Nine Food-Based Dietary Guidelines" from the Department of Nutrition, Ministry of Public Health, and the Institute of Nutrition at Mahidol University (1999).[17] This ensured a relevant and thorough evaluation of the sample's dietary behavior. Culturally appropriate language and terminology were used to help participants fully understand the questions, which included foods and dietary practices specific to Thai-Muslim culture, such as halal dietary laws and traditional foods, enhancing the assessment's relevance and accuracy. The questionnaire consisted of 12 items, including 6 items reflecting positive behaviors and 6 items reflecting negative behaviors. It measured the frequency of dietary behavior among older adults over a specified period.

The questions measure the frequency of consumption with 10 items reflecting positive behavior. The scoring criteria are as follows: Consumed Daily (7 days/week) = 5, Consumed Frequently (4-6 times/week) = 4, Consumed Moderately (1-3 times/week) = 3, Consumed Rarely (1-3 times/month) = 2, Consumed Very Rarely (less than once/month) = 1, Never Consumed = 0. For negatively worded questions, the scores will be reversed. with the negative questions marked with an asterisk (*).

The scoring interpretation for nutrition awareness and dietary behavior consists of 5 levels as follows: Very Low=0-1, Low=1.01-2, Moderate=2.01-3, High=3.01-4, Very High=4.01-5

Data analysis

The normal distribution of the mean scores representing nutritional awareness and dietary behavior was tested using Skewness and Kurtosis statistics. Nutritional awareness scores for all three aspects showed Skewness and Kurtosis values between -1.00 and 1.00, indicating a normal distribution.

Statistical methods used:

Descriptive statistics: Percentage: Used to describe the proportion of the sample in each category of data.

Mean: Used to calculate the average scores for each item, providing an overview of the data.

Inferential statistics:

Independent T-test: Used to test differences in mean scores between independent groups, such as gender, living with family and dietary behavior.

One-Way ANOVA: Used to test differences in mean scores between groups with more than two categories, such as highest education level, total family income, and dietary behavior.

Pearson correlation: Used to analyze the relationship between two variables, specifically the relationship between the three components of nutritional awareness and dietary behavior.

Multiple regression analysis: Used to analyze the relationship between multiple independent variables and the dependent variable to study the impact of several independent variables on the dependent variable using the multiple regression equation.

Data quality control

The internal consistency reliability of the questionnaire was assessed. Content validity and appropriateness of wording were verified by three experts, ensuring an Index of Item-Objective Congruence (IOC) of at least 0.50 for all items. Reliability was further tested by administering the questionnaire to a similar population aged 50-59 years, involving 30 individuals. The Cronbach's alpha coefficient for each section was greater than 0.70 indicating good reliability. Additionally, trained interviewers underwent a calibration process to ensure consistent administration of the questionnaire. This included standardized training sessions to familiarize them with the content and structure, enabling effective and uniform interviews.

Results

From the sample of 400 older adults individuals aged 60 years and above 154 were male (38.5%) and 246 were female (61.5%), with an average age of 68.70 (±5.64 years) The majority had a highest education level of primary school (218 individuals, 54.5%), and most had a monthly income between 6,000-10,000 THB (144 individuals, 36.0%). Additionally, 364 individuals (91.0%) were living with family members, as shown in Table 1.

Table 1: Personal factors of the population.

Demographic data	Amount	Percentage (%)
Gender		
Male	154	38.5
Female	246	61.5
Education		
Under primary school	36	9.0
Primary school	218	54.5
Secondary school	68	17.0
High school /Certificate	48	12.0
Bachelor's degree or above	30	7.5
Family income		
Under 6,000 THB	108	27.0
6,000 - 10,000 THB	144	36.0
10,001 -25,000 THB	94	23.5
25,001 - 50,000 THB	52	13.0
50,000 THB or above	2	0.5
Living status		
Live alone	36	9.00
Live with others	364	91.0
Total	400	100

Nutritional awareness

1.1 Emotional awareness

The survey results indicated that the overall emotional awareness score was at a moderate level (2.99 points), with a high level of emotional awareness in several aspects. Respondents expressed that they loved to eat with others (3.78 points), were not guilty about finishing their drink after a meal at a restaurant (3.47 points), and felt alright about eating unhealthy food that they liked (3.11 points). They also felt guilty when eating unhealthy food (3.04 points) but did not feel guilty about having leftover meals (3.02 points). At a moderate level, they felt alright about not eating meals on time (2.88 points), felt good about drinking soda when they wanted or were thirsty (2.80 points), and did not feel guilty about not finishing their food (2.75 points). Additionally, they felt good about eating as much as they wanted (2.72 points) and did not feel guilty for eating junk food (2.37 points), as detailed in Table 2.

Table 2: Emotional awareness in population.

Items	mean	SD	Interpret
You are not guilty for not finishing a meal.*	2.75	1.05	moderate
You feel good when finishing drinks after a meal.	3.47	1.13	high
It's alright not to eat the meal on time.	2.88	1.15	moderate
You are not feeling guilty after consuming unhealthy food.*	3.04	1.21	high
You are not feeling guilty for having a leftover meal.*	3.02	1.35	high
You feel good when get to eat as much as you like.	2.72	1.34	moderate
You are contented when having soft drinks as when you feeling thirsty/hungry.	2.80	1.63	moderate
You love to eat with others.	3.78	1.44	high
It's alright to eat unhealthy food which you like.*	3.11	1.47	high
You are not feeling guilty for eating junk foods.*	2.37	1.30	moderate
Total	**2.99**	**1.31**	**moderate**

1.2 Accurate self-assessment

The survey results indicated that the overall accurate self-assessment score was at a high level (3.46 points). The older adults had the highest level of accurate self-assessment in their ability to gauge their own fullness while eating (4.10 points). Following closely, they were able to evaluate their ability to handle spicy food (3.91 points) and assess the amount of nutritious food they consumed in a day (3.88 points). They could also gauge the amount of non-nutritious food they consumed in a day (3.70 points). At a moderate level, they estimated the energy they received after eating (2.82 points) and, even if they knew their blood sugar was high, they would still eat their favorite dessert if it was included in the meal (2.75 points), as detailed in Table 3.

1.3 Self-confidence

The survey results revealed that the overall self-confidence score was at the highest level (4.07 points). The highest level of self-confidence among the older adults was in their ability to prepare appropriate meals for their family members (4.27 points). They were also highly confident that the food they ate every day was beneficial (4.16 points), that they could confidently choose suitable menu items for themselves (4.15 points), and that they could confidently share their knowledge about the benefits and drawbacks of various foods with others (4.10 points). Closely following, they expressed strong confidence in the belief that they should eat a large number of vegetables and fruits daily to ensure sufficient fiber for good health (3.95 points). They also believed they could control the amount of food they consumed each day (3.93 points) and were confident that the energy they received from their daily food intake was appropriate (3.90 points), as detailed in Table 4.

Dietary behavior

The assessment of dietary behavior was divided into positive and negative questions to evaluate good and poor dietary behavior, respectively. Negative behavior scores were reversed for the calculation of average scores. Therefore, a higher score indicates the presence of healthy dietary behavior, while a lower score indicates unhealthy dietary behavior. The results showed that the overall

Table 3: Accurate self-assessment in population.

Items	mean	SD	Interpret
You will not stop consuming until you feel full even though you have already had a lot.*	3.18	1.07	high
You do realize that you are not able to chew on hard food.	3.33	1.34	high
You eat tempting desserts even when you recognize that it is not good for your health.*	2.75	0.95	moderate
You are willing to eat dislike vegetables.	3.47	1.27	high
You are able to recognize when you are full.	4.10	0.91	highest
You do recognize your ability to consume spicy food.	3.91	1.09	high
You are able to indicate the healthy food portions in your daily consumption.	3.88	1.12	high
You are able to indicate the unhealthy food portions in your daily consumption.	3.70	1.15	high
You are able to estimate the energy from each meal.	2.82	1.14	moderate
Total	**3.46**	**1.12**	**high**

Table 4: Self-confidence in population.

Items	mean	SD	Interpret
You assure that you have ability to make healthy food choices for yourself.	4.15	0.93	highest
You assure that you have ability to make healthy food suggestions for your family.	4.27	0.81	highest
You assure that you eat with confident that your meals are healthy.	4.16	0.81	highest
You assure that you consume enough fruits and vegetables on a daily basis.	3.95	0.84	high
You assure that you have ability to guide others on risk and benefits of their meals.	4.10	1.05	highest
You assure that you have ability to control food portions in each meal.	3.93	1.11	high
You mistrust of the food taste which was cooked by others.*	3.90	1.04	high
Total	**4.07**	**0.94**	**highest**

dietary behavior score was at a high level (3.62 points). The older adults had a low level of consumption of whole grains and whole grain products (1.73 points). They had a high level of consumption of vegetables root vegetables, crunchy snacks (chips, potato chips, dried fruits), protein foods, rich cheesy, mellow or savory foods, a variety of foods from each of the five food groups, more than three meals a day, desserts and baked goods, and drinks like soda and soft drinks (3.99, 3.57, 3.55, 3.51, 3.44, 3.37, 3.36, and 3.35 points, respectively). The highest levels of behavior were seen in consuming properly washed and cooked food, drinking clean water from trustworthy sources, and drinking alcoholic beverages (4.72, 4.45, and 4.45 points, respectively), as detailed in Table 5.

Subsequently, the personal factors data were analyzed alongside the average scores representing nutritional awareness in three areas: emotional awareness, accurate self-assessment, and self-confidence, as well as the dietary behavior of the older adults. The analysis was conducted using independent t-test and One-way ANOVA. The results indicated that the personal factors of the older adults in this study did not significantly affect dietary behavior, Similarly, the analysis of personal factors against the average scores for the three areas of nutritional awareness and dietary behavior using independent t-test and One-way ANOVA found no significant relationship between personal factors and the dietary behavior of the older adults.

The data were then analyzed to determine the relationships between the variables using Pearson's Correlation. The average scores representing personal awareness of nutrition in the three areas-emotional awareness, accurate self-assessment, and self-confidence-and the dietary behavior of the older adults were examined. The analysis revealed that all three aspects of nutritional awareness were significantly correlated with the dietary behavior of the older adults at the $p<0.01$ level. The correlation coefficients (r) ranged from 0.29 to 0.57, indicating a low to moderate positive correlation, as shown in Table 6.

The statistical analysis indicates that the three sub-

Table 5: Dietary behavior in population.

Items	mean	SD	Interpret
Eat desserts; Thai traditional dessert, cake and pastries*.	3.36	1.08	high
Eat more than 3 meals a day.*	3.37	1.53	high
Drink Soda and soft drink.*	3.35	1.15	high
Drink alcohol beverages.*	4.45	0.95	highest
Eat vegetables and root vegetables.	3.99	1.07	high
Eat crunchy snacks; chips, potato chips, dried fruits*.	3.57	1.25	high
Eat variety of foods that provide the five major nutrients.	3.44	1.00	high
Eat whole grains and whole grain products.	1.73	1.53	low
Eat protein foods; egg(s), nuts, meat.	3.55	1.06	high
Eat rich cheesy, mellow or/and savory food.*	3.51	1.02	high
Drink water and drinks from trustworthy sources.	4.45	0.70	highest
Eat properly washed and cooked food.	4.72	0.58	highest
Total	**3.62**	**1.08**	**high**

Table 6: The relationship between nutritional awareness and dietary behavior, analyzed using Pearson's correlation to identify influencing factors within the population.

		Emotional Awareness	Accurate Self-assessment	Self-confidence	Dietary Behavior
Emotional awareness	Pearson Correlation Sig (2-tailed)	1	0.41**	0.46**	0.29**
Accurate self-assessment	Pearson Correlation Sig (2-tailed)	0.41**	1	0.67**	0.55**
Self-confidence	Pearson Correlation Sig (2-tailed)	0.46**	0.67**	1	0.57**
Dietary behavior	Pearson Correlation Sig (2-tailed)	0.29**	0.55**	0.57**	1
	N	400	400	400	400
** $p<0.01$					

areas of nutritional awareness are significantly related to the dietary behavior of the older adults. Thus, it can be concluded that these three sub-areas of nutritional awareness are significantly associated with the dietary behavior of older adults' individuals in Watthana district, Bangkok. Specifically, emotional awareness, accurate self-assessment, and self-confidence are positively correlated with better dietary behavior. This suggests that higher levels of nutritional awareness among the older adults are likely to result in better dietary behavior.

The mean difference test across different groups did not show statistically significant results.

The impact of certain factors on dietary behavior is analyzed using the following regression equation: $Y=\beta0+\beta1X1+\beta2X2+\beta3X3+\epsilon$. Where:

Y = Dietary behavior of Thai-Muslim older adults in Wattana district.

β 0 = Intercept (the value of Y when all independent variables are zero) = 2.00

β1, β2, β 3 = Regression coefficients of the independent variables

X 1 = Emotional awareness, X 2 = Accurate self-assessment, X3= Self-confidence, ϵ = Error term (unexplained variation)

β 1 (Emotional awareness) = 0,β 2 (Accurate self-assessment) = 0.21, β 3 (Self-confidence) = 0.22.

A multiple linear regression equation for the dietary behavior of Thai-Muslim older adults in the Watthana district of Bangkok is =2.00+(0.21×Accurate self-assessment) +(0.22×Self-confidence)+ϵ

These results indicate that higher levels of nutritional awareness are associated with better food consumption behaviors among the older adults. The analysis supports the alternative hypothesis (HA), demonstrating that nutritional awareness significantly influences the food consumption behaviors of the older adults in Watthana district, Bangkok.

Discussion

This study aimed to explore the relationship between nutritional awareness and dietary behavior in Thai-Muslim older adults, demonstrating that nutritional awareness significantly influenced dietary behavior across all measured aspects at the 0.01 level. These findings align with global literature, such as Chin *et al*.,[21] which also found that older adults with greater nutritional knowledge made healthier food choices. Consistent with these studies, our findings show that greater self-assessment accuracy was linked to increased confidence in food choices, contributing to healthier dietary behaviors. This highlights the critical role of nutritional knowledge in shaping dietary habits among older adults.

However, our study deviates from other research, such as that by Woodruff and Hanning (2011)[22], which highlighted the role of family meals in promoting healthier dietary behaviors. In this study, no such relationship was observed among the Thai-Muslim older adult population. This absence could be attributed to cultural differences; while family meals are a common social practice in some cultures, the dietary habits and social dynamics of Thai-Muslim older adults may not emphasize family meal settings in the same way. As such, interventions targeting this population may need to explore other strategies more suited to their social and cultural contexts.

Further comparison with studies from Thailand's Eastern ($p<0.01$)[23] and Central ($p<0.01$)[24] regions reveals that the Thai-Muslim older adults exhibited stronger correlations between nutritional awareness and dietary behavior. Specifically, the correlation between self-assessment accuracy and dietary behavior was notably higher in the Thai-Muslim group (r=0.55) than in the Eastern (r=0.24) and Central (r=0.48) groups. This finding suggests that self-assessment plays a more prominent role in guiding healthier dietary behaviors in the Thai-Muslim community. Additionally, the Thai-Muslim group exhibited

Table 7: Result summary of multiple linear regression analysis.

Variable	Unstandardized Coefficient (β)	Std. Error	Standardized Coefficient (beta)	t	sig
Constant	2.00	0.15		13.13	$p<0.01$
Accurate self-assessment. (X2)	0.21	0.44	0.34	4.90	$p<0.01$
Self-confidence. (X3)	0.22	0.54	0.30	4.03	$p<0.01$

a stronger correlation between confidence in food consumption and dietary behavior (r=0.57) compared to the Eastern (r=0.29) and Central (r=0.08) groups, suggesting that greater self-efficacy in food choices is a key factor in promoting healthier eating patterns. These results indicate that cultural and community-specific factors, including the religious and social environment of Thai-Muslim older adults, may enhance self-awareness and self-confidence in making dietary decisions.

The relationship between confidence in food consumption and emotional awareness was also stronger in the Thai-Muslim group (r=0.46) than in the Eastern (r=0.10) and Central (r=0.08) groups. This finding implies that emotional awareness plays a significant role in food-related decision-making for Thai-Muslim older adults. Emotional awareness, the ability to recognize and manage emotions related to food choices, may support the development of a healthier, more balanced approach to eating. It is possible that this emotional dimension is more pronounced in this population, due to cultural or religious factors that emphasize mindfulness and self-control in food consumption. In terms of overall dietary behavior, the Thai-Muslim group demonstrated better dietary outcomes, with an average score of 3.62 compared to the Eastern (3.22) and Central (3.06) groups.[23,24]

This suggests that, despite facing similar challenges in managing health outcomes, Thai-Muslim older adults, due to their higher levels of nutritional awareness, self-assessment, and emotional awareness, tend to exhibit healthier dietary practices. However, despite these positive correlations, some health challenges persist among this group. These challenges are likely due to the inconsistency between nutritional knowledge and actual food practices. For example, although participants showed high awareness, issues such as portion control and selecting foods high in fat and sugar may undermine the benefits of their nutritional knowledge. Additionally, factors such as physical activity levels, exercise habits, and genetic predispositions may also contribute to suboptimal health outcomes despite better dietary behaviors.

The correlation analysis in this study indicated that all aspects of nutritional awareness-emotional awareness, self-assessment, and confidence in food consumption-were significant predictors of dietary behavior. However, in the multiple linear regression analysis, emotional awareness did not have a significant impact on dietary behavior. This suggests that while emotional awareness may be important in correlating with dietary behaviors, its influence might be more indirect compared to self-assessment and self-confidence. Given this, health programs targeting Thai-Muslim older adults should prioritize enhancing skills related to accurate self-assessment and boosting self-confidence in food choices, as these factors showed the strongest influence on dietary behaviors.

Improving self-assessment skills could help individuals recognize and correct unhealthy eating patterns, while enhancing self-confidence could empower older adults to make informed food choices, even in the face of dietary temptations or challenges. Incorporating these areas into health interventions could potentially lead to more sustainable improvements in dietary practices, thereby enhancing overall well-being and health outcomes for Thai-Muslim older adults.

In conclusion, while Thai-Muslim older adults exhibit strong nutritional awareness and healthy dietary behaviors, challenges remain in translating knowledge into consistent practice. By focusing on improving self-assessment and self-confidence, targeted interventions can be designed to support better dietary outcomes in this community. These interventions should be culturally sensitive and reflect the unique dietary patterns, religious practices, and social dynamics of the Thai-Muslim older adult population. By doing so, healthcare providers can enhance the long-term effectiveness of nutrition programs and contribute to the improvement of health outcomes in this demographic

Recommendations for improving dietary behavior among Thai-Muslim older adults

To enhance dietary behavior, focus on increasing nutritional awareness through educational programs that teach older adults to assess and improve their dietary choices. Workshops on nutrition, meal planning, and balanced diets can empower them to make healthier decisions. Building self-confidence in food choices can be supported through community initiatives and positive reinforcement, such as encouraging the exploration of new foods and sharing dietary experiences. By prioritizing accurate self-assessment and self-confidence, a supportive environment can be created, fostering healthier choices and improving quality of life.

Limitations

While the sample size of 400 in Bangkok is substantial, it may not fully represent the broader Thai-Muslim elderly population, potentially overlooking sub-groups with varying socio-economic or educational backgrounds. The cross-sectional design limits causal inferences, highlighting the need for longitudinal studies for deeper insights. Additionally, reliance on self-reported data may introduce biases, as responses reflect participants' self-assessment rather than direct observation. Lastly, the findings are specific to Thai-Muslim older adults in the Watthana district, limiting their generalizability to other populations or regions.

Recommendations for further study

Future studies should expand sample size and diversity by using stratified random sampling based on demographic factors to improve representativeness. Longitudinal designs are needed to track changes in nutritional awareness and dietary behavior over time, helping to establish causal relationships. Incorporating qualitative methods, such as interviews, can offer deeper insights into the factors influencing dietary choices. Additionally, comparative studies across different ethnic groups in Thailand, including indigenous communities and migrant workers, will help identify unique challenges and effective strategies, ensuring inclusive and equitable health interventions.

Conclusions

The factors of nutritional awareness-emotional awareness, accurate self-assessment, and self-confidence-were all found to be significantly correlated with dietary behavior among Thai-Muslim older adults ($p<0.01$). These findings suggest that enhancing nutritional awareness in these key areas may lead to improved dietary choices, thereby promoting healthier eating patterns and contributing to the overall well-being of Thai-Muslim older adults.

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