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ORIGINAL ARTICLE

A Study on the Fish Consumption According to Health Education Models Constructs in 2012

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ABSTRACT
Cardiovascular diseases are nowadays determined as the first cause of mortality in Iran. Nutrition and dietary intake have been known as the first and most important factor in the incidence of these diseases. This means that from 800 cases of daily mortality in the country, 300 cases are directly related to poor nutrition, and fish is considered as a healthy food and its consumption in a balanced diet is recommended twice a week. But unfortunately, fish consumption per capita in Iran is estimated to be between7.5-9 kg a year and in most provinces the rate is less than 4 kg. Identifying the factors influencing fish consumption is the first stage to increase fish intake. Conducted studies have revealed the effects of some factors such as smell and taste of fish, the fear of tiny fish bones, the ability to prepare and cook and its perceived benefits. The Impact of individual attitudes on fish consumption is undeniable. The Health Education Models determine the components which are effective in creating or changing of a behavior and emphasize on weight coefficients of each of these components and constructs in different societies.
Analyzing the behavior factors is one of the duties of health education models. Patterns and models which consider the person responsible for the behavior are theory of planned behavior, health belief model, the reason action and stages of change . This review seeks to explain the factors influencing the fish consumption based on the Health Education Models.
Keywords*: Fish Consumption, Models of Health Education, Nutritional Behavior, Attitude, Subjective Norm,*

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INTRODUCTION

Fish is one of the healthiest dishes that can be an important part of nutritional plan [1], and its consumption has marvelous benefits for health [2]. For women in fertility age, milch women and pregnant, fish consumption for the purpose of maintaining Docosahexaenoic acid (DHA) and Omega 3 is very important becausein addition of ensuring mothers' nutritional needs, effects on breast-feds' health. Also Omega 3 is critical for new borns' brain growth [3]. Omega 3 which was exists in fish helps to reduce blood pressure and decrease heartbeat, is effective in brain stroke deduction and helps to prevention of brain demons and depression deduction [3].Percapita fish consumption estimated between 7.5 to 9 Kg in Iran. Iran fisheries department reports marines consumption in the neighbor 7 Kg in 1385 [4].Many researches show that 73 percentage of Iranians' diet needs to change and correction [6]. Also accomplished researches show that Iranian women' nutritional status was not in a desired conditions [7]. Unsuitable nutritional behaviors in Asia enjoys of a prevalence of equivalent to 70 percentage and nutritional insufficiency nearly comes to 73 percentage [9-10].

Life style change and increasing metropolitan citizenship change diseases' plenty into chronic disease [11]. One of the most important factors in nutritional behaviors and patterns is a collection of nutritional habits and culture. Women play the most important role in family food preparation, but unfortunately not followed an appropriate nutritional behavior. The witness of this claim is obesity prevalence and 42 percentage metabolic syndrome [12].This behavior modification followed multiple benefits, women health and family mess correction of its results.

Nutritional behavior is of related discussions to health which has multiple purposes and has important influences on health [13].Contento (2007)browses nutrition's education researches in nutrition's education and behavior journal between 1998- 2007. He introduced this decade as an educational development decade because of using theory and model in nutritional education programs. He surveyed various subjects related to nutrition with referring to nutrition educational studies and according to planning behavior, cognitive theory, change steps theory, self-efficiency theory and ecological models. He supposed personal, interpersonal, organizational and social theories important to pay to settle in order to nutrition education [14].Some of effective factors on nutritional behaviors on fish consumption includes attitude toward food and fish- benefits and obstacles- smell and taste – social manners especially family- intention, skill and perceived ability in selection and preparation- price- fear of small bones-Some of their positive effects established through presented educations in order to behavior modification and promotion [15-16].

Considering healthy nutritional behavior complexity and anxiety about creation, protection and promotion of this behavior, appropriate scientific patterns, theories and models must be used .From the patterns which was designing for human' behavior explanation and explained hygienic behavior and behavior's change with emphasis on personal characteristics are hygienic belief pattern, logical action theories, stages of change, social learning [18], and theory of planned behavior [17], which seems to be effective on protection and promotion of healthy nutritional behavior. Health belief pattern is of the first theories that take into account personal factors in appearing behavior.HBM based on perceived sensitiveness structures, perceived usefulness and perceived benefits and costs, directories for action and independence predicts a behavior. Social learning theory turns to account persons' imitation and withdrawal from the environment, the effect of external on internal, and factors such as knowledge, expectations and values which was results of behavior and independence. stage of Change theory (TTM transtheoretical model model)emphasis on the steps such as pre contemplation, contemplation, preparation, action and maintenance . This theory used by awareness structures and self-assessment.

reason action theory and theory of planned behavior claimed that we can predict behavior through behavioral intention and perceived behavior control. So, person's behavioral intention depends on his attitude on behavior conclusion, abstract norms and perceived control of behavior [19-20].

With the attention to the matter that there is not any published article about effective factors on fish consumption in order to totalize various studies results, in this article try to review effective factors on fish consumption according to health education models factors.In table 1 some of effective factors on fish consumption in various areas and nations according to health models constructs mentioned.

SURVEY METHOD

The aim of this systematic review is to determine effective factors on fish consumption according to the health education models' factors which was occurred with the hypothesis that effective factors on fish consumption are not equaled. Research questions include A) what are the most effective impacts on each society? And B) How about the relation between factors and fish consumption?Whit using databases and search engines such as Pubmed, ProQuest, Elsevier and keywords such attitude, sea food consumption, fish consumption, sea food consumption ,attitude,

Subjective norms , barrier, culture, papers and data has been selected. Articles searched and reviewed with educational models' factors and fish consumption. Articles' input criteria to survey includes publication year from 15 years ago, samples' age up to 65 years and factors measurement or educational intervention. Article selected with qualitative and quantitative designing. For Persian resources Iranmedex, Magiran, Medlib, Irandoc and SID had been used. For data extraction and results analysis descriptive statistics criteria had been used.

Various studies about surveyed cases conforming to health educational patterns and models' factors mentioned in table 1.

Table 1- Studies which was occurred conforming to health educational patterns and models' factors in fish consumption

Source and author	Article publication year	Type of study	Study samples	Surveyed cases conform to models' factors and interpersonal patterns
Petrenya N(52)	2011	profile	166 urban samples and 134 rural samples	Income, job, literacy, family dimension, sociological and economic factors
Rortveit Aw-(39)	2007	profile	1100 persons	Knowledge and attitude
Asbjorn (37)	2009	profile	1630 persons	Attitude, perceived belief, result evaluation
Pawlak-(21)	2009	profile	57 American African origin	Benefits, barriers, self- efficiency, believes, children's concerns
bose(68)	1997	profile	100 family	Barriers, belief, quality, taste, nutritious value, preparedness ease, cost, health reasons
Huytuu(15)	2008	profile	612 persons- 352 persons fromhochi and 260 persons from nhatrang	theory Planned behavior
Torbjørn(1)	2003	profile	4907 women from 45 to 69 years	Perceived barriers,socio-economic position, income
Verbeke(2)	2005	profile	429 persons	Health awareness, nutritious habits, costs, studies intention, gender, age (income, personal and sociological factors)
spink(69)	2002	profile	500 questionnaires that 60 percentage of them complete and received	Belief, attitude, personal and social factors, quality, taste, availability, nutritious value, easy cooking
bruns(16)	2009	Qualitative research	Qualitative data which was collected from 6focus groups, 3 in Australia and 3 in Belgium	Taste, cost, smell, barriers, benefits, evaluation ability in fish selection
verbeke(8)	2007	profile	580 women from 20 to 50 years	Attitude, awareness, benefits, nutritious value, taste, disability in
Salehi (4)	2008	profile	144 from nutrition experts	Attitude, Nutritious habits and roles, personal characteristics, barriers, Propagations role
Olsen (67)	2007	Cultural descriptive	4786 persons, 1110 from Denmark, 1015 from Poland, 852 from Belgium, 1000 from Spain and 809 from Netherlands	Attitude, consumption usefulness, Planning for preparation and cooking, time
Adeli et al. (70)	2008	Analytical descriptive	295 families	Fish quality, taste, Smell, having high amount of protein

Relationship between self-efficiency and ability with fish consumption

Bruns et al. [16] in a qualitative research entitled in "motives, barriers and high quality fish selection ability" survey and compare high and low fish consumption persons. The aim of this study was to survey abilities, motives, barriers and cultural differences between persons who consume much and who consume less. Data collected through discussion groups from Spain and Belgium. In each country, 3 groups were surveyed, one group is high consumption and 2 other groups were low fish consumption. Although fish consumption between groups was different but consumption reasons related to health properties and its taste. Barriers composed of fish cost and smell and that fish like meat does not create fullness. The main differences between countries and groups areabout preparedness and cooking skills and ability to high quality fish selection. High amount consumption especially in Spain had good ability and skill in high quality fish selection but low amount users especially in Belgium had not ability to select high quality fish.

Pawlak [21] in a research entitled in "benefits, barriers, perceived self-efficiency and awareness of healthy dishes" on 57 American African base demonstrated high role and impact of self-efficacy on purchasing and eating healthy dishes. In this research, the average age was 50 years old that 58.1 percentage of them were women,75 percentages of them had academic educationand 96 percentages had excess weight.Scores about benefits is higher than barriers so that the minimum average of benefits is higher than barriers' score. "4.2 against 3.68". For example healthy dishes will help to protect my body gets 4.79 but the healthy dish is too expensive gets 3.68 which are the highest score in barriers.

People were aware about food's role in diseases prevention but had less awareness about fruit and vegetables consumption. The highest score is related to benefits, perceived self-efficacy and awareness.

But this is not the meaning of perceiving healthy dish. Most of contributors' belief that they have not eating enough healthy dishes.

Individual's imagining of doing ability and perceived behavior control are of the most important factors in accomplishing a behavior's intention creation.

Hosseinnejad *et al*. [22] in a survey entitled in "self-efficacy role in predicting nutritious behaviors of female students in kerman schools" which was occurred on 812 students determines that there is a positive and meaningful relationship between nutritious mean score and self-efficacy. This research's results confirmed the predicting role of self-efficacy sense on nutritious behavior.

Haji kazemi et al. [23] in a research entitled in "awareness of women about cooking methods at home" showed that 56 percentages of women did not aware of fish cooking methods. Researchers suggested that according to the women's' little information about fish and vegetables cooking, it is obvious that effective method for increasing skill, awareness and incorrect believes modification must be used.

Polta et al. [24] in surveying related factors to decrease suffering from cardio-vascular diseases in middle-aged and old women danger showed that skills for food preparation must be educated to women. One of the main barriers against healthy nutrition and fish consumption in conzas city is fish availability because in this city there is just one fresh fish store but in the other city, arconzas, fresh fish easily and daily available. They said that these skills should be educated to them. Practical interventions about social interactions- appropriate food preparation method- occurred.

Results of the researches showed that person's nutritional self-efficacy through dictation him about his abilities in well-being nutritional behaviors and following healthy nutritious behaviors are important factors in nutritious behaviors' prediction. There was positive and meaningful relationship between nutritional self-efficacy, weight control behaviors and nutritious selections [25].

In a research entitled in "students nutritional behavior based on Rogers referenced based theory "relevance scales between imagination of himself and health securing was 37 percentages and the relationship between comprehension and health ensuring with nutrition behavior was 90 percentages [26].

Olson et al. [67] in a research entitled in "relevance survey between ease and fish consumption "which was occurred with the aim of cultural differences in comfort accessibility to fish and its relevance to consumption attitude in 5 European countries. In this survey 4786 persons contributed, 1110 persons from Poland, 852 persons from Belgium, 1000 persons from Spain and 809 persons from Netherlands, randomly selected. From each family, the person who was responsible for food purchasing and cooking was to be questioned, 77 percent of samples were women and age, education, social characteristics, demographic information and city extent were of variables. Tendency to ease of fish usage in Spain and Poland was of important factors and had less impact on Poland and Denmark [67].

Spinks et al. (2002) in a research entitled in "effective factors on sea food preparations inoklandian (Newzeland) families" showed that quality, ease of cooking, cost, related benefits to health had the most impact on sea food consumption [69].

Adeli et al [70] in a research entitled in "identifying main factors on domestic consumers' attitude about trained fishes in Tehran" which was occurred on 295 families in Tehran showed that quality, taste, smell and protein sources were the main factors on fish purchase and consumption in the families in tehran.

Relationship between subjective norms with fish consumption

HuytuuHo (2008) in a research entitled in "the role of norms in attitude and intention of fish consumption in vietnam"by using planning behavior theory in fish consumption tries to realize norms' role in fish consumption intention, also prove factors' role such as attitude, social norms and control perceived behaviors and abstract norms which are effected on fish consumption. They were surveyed 612 consumers and their results showed that attitude- social and subjective norms and control perceived behaviorhave marvelous positive effects on behavior intention and finally intention and control perceived behavior have been showed high relevance with fish consumption times.Research samples were people who were responsible for food purchasing or cooking at home and 59.3 percent of them were women that their average age was 32 years old. Attitude mean score according to fish consumption was 5.18, social norms mean score was 5.06, control perceived behavior mean score was 4.67, intention mean score was 3.92 and probability of fish consumption repetition mean score was 5.23 that according to the fact that score's measure were from 1 to 7, these scores presents the effect of each of this theory's factors in fish consumption. Very positive attitude and supportive subjective norms had the most important impact on people's intention [15].

Story [27] in his studies showed that socio-cultural norms especially family and friends, media publicities, family nutritious patterns and personal factors such as attitude, tendencies, nutritious resources accessibility impact on nutritious patterns and nutritional behavior .

Abstract norms and perceived social pressures are effective on fish consumption. Abstract norms include subjective norms, recognizance to health consumption and promote and publicity commercial and non-commercial [28]. Effective abstract norms education such as family, friends, colleagues [29] or teachers and family girls [30] caused to increase collaboration through persons' behavior change process [31].
Pressures from family members, for purchasing fish categorized in the form of social pressures. When one or some of family members did not like fish, they play an important role in fish consumption in the family. Studies showed that especially children and tanagers influenced domestic fish consumption [32].
Recognizance and faith on fish consumption may be caused to family discussions especially when some of family members do not like fish. Verbek (2003) explains that even if housekeepers women perceive responsible about healthy and nutritive foods preparation, may be confront problems because of social pressures. Verbek et al. [32] in fish consumption survey in Belgium showed that social norms and recognizance to consumption had positive correlation.
Salehi et al. [14] in nutritional specialists tendency to fish consumption survey in Iran, which was occurred on 144 specialists showed that 84 percent of research society believed on high impact of culture on fish consumption [4].
Various studies showed that family expectations have the same role as attitude and taste on sea food consumption [32].

The relationship between attitude and fish consumption

One of the effective factors on fish consumption is attitude toward fish consumption and that people like or do not like to eat fish and if they enjoy and satisfy by eating fish or not.
In spite of all efforts that occurred in Sweden, it seems that youth had negative attitude toward fish consumption. Although fish can be a good nutritious source for future but children in school age in Sweden have the least fish consumption (71).
Positive attitude toward fish consumption refer to the consumer's desired comprehension. Mental norms, good sense and positive attitude with behavioral beliefs about fish consumption result in fish consumption. Many researches about fish consumption and its relation to attitude occurred in Europe [33-34]. Studies showed that fish consumption is a companion in the way with attitude and tendency to a various diet [35]. Belief on fish remedy properties and have a tendency to a various diet is the main key on fish consumption [36].
Asbjorn et al. [37] in a research entitled in " Compound role of attitude and ease of accessibility on fish consumption in Norway", which was occurred on 1630 Norwegian persons with the aim of advertisement actions in order to absorb people's attractions alongside ease of fish accessibility, showed that attitude toward fish had marvelous impact on consumption times. Difficult accessibility also was a main variable that had substantial impact on attitude and consumption times. Disaffection and inconvenience of product had negative impact consumption volume and times. They emphasized on this fact that sea food industry in order to get improvement and success needs people's beliefs change about fish consumption in order that they do not construe fish as an odd product.
Attitude toward fish consumption benefits such as decrease the danger of cardio-vascular diseases and cancer, recovery bone compression, increase memory and long age are of effective factors on fish consumption [36].
Rortveit [38] in his doctoral thesis entitled in "effective factors on fish consumption and attitude, knowledge and comfort role" showed that decision for consumption is effected by variables such as perceived attitude, knowledge, barriers and benefits. Also this study showed that how situational factors such as accessibility, variety, steadiness about fish exist in market and ease of preparation effected on decision's prerequisites [38].

The relationship between awareness and education with fish consumption:

Rortveit et al. [39] in a research entitled in "knowledge and beliefs related to consumers' health" with a survey on 1100 fish consumers on Denmark and with the help of Lisrel model showed that awareness more than attitude is effective on fish consumption.
Mitchel et al.[40] estimated middle class pregnant' nutritional awareness in a weak extent.
In Sajadi' research [41] the relationship between nutritional awareness level with women education was meaningful.
Khajavi *et al*. [42] in Tehran reported that 60 percent of surveyed women had low awareness toward nutrition in pregnancy period and only 10.5 percent of them had appropriate awareness. But Kozlowska et al. [43] showed that majority of women have effective awareness about daily diet .
Reshidkhani et al. [44] proved a reverse relationship between education and unhealthy nutritious patterns [44]. Studies supposed that persons in higher education levels usually have healthier nutritious habits than people who are with low education [23, 45].

Anberson et al. [46] showed that women who had more information about nutrition in pregnancy, had been in a higher education.
Yang et al. [47] showed that fruit and vegetables nutritious patterns related positively with Korean origin women's education in America.
In a survey on Italian men and women with higher education supposed the highest score for a healthy nutritious pattern [48].
Equivalent in group study showed that fruits, vegetables and milk nutritious patterns had positive relationship with higher education [49].
Rashidkhani [44] in a survey entitled in "prevailing nutritional patterns relationship with socio-economic status and population status in women between 20 to 50 years old" showed that family academic study had negative relationship with non-healthy nutritional pattern.
In Spaniard women who were resident of America non-healthy pattern "rice which was enriched with corns" related to low education [50].
Women excess weigh with educational level decreases, decreased and with marriage, metropolitan citizenry, increase life potentialities and privately-owned their house increases [51].

Relationship between economic factors with fish consumption

Petrenya *et al*. (2011) in a study entitled in "fish consumption and its relationship with economic and social factors in Arkhangelesh citizens and Nents rural region" that occurred in Russia, proved income and permanent job role on fish consumption. This study achieved with the aim of economic and social factors in 2 European populations in north Russia. In this research 166 persons in urban region that 83.1 percent of them were women and 134 persons in rural region that 80.6 percent of them were women selected.
Societies which were studied, differed by socio-economic factors. In rural region persons with low literacy level, less full time job, low income and high number of children, daily fish consumption mean score was 27.1 gr. for each one. This figure in urban region was 48.8 gr. For each one. Kind of consumed fishes by rural persons was different from urban persons. Amount of fish consumption showed positive relationship with monthly income. Villagers' fishing times appoint fish consumption amount [52].
Whole family income amount and expense's amount, family dimension, residence region, house taking possession status, food expense's percent from the parasite face expense amount and house area are of the factors which could have statistical relationship with nutrition status and patterns [44].
Income scale could be related to nutritional behaviors and patterns. Studies which had been occurred in America shows that high quality diets relates to high level income and poor diets relates to low level income [53].
Reversed relationship between whole family income and unhealthy nutritional pattern acquired in Lin study [54].
Johansson [55] in a study entitled in "relationship between healthy nutritional habits, social determinants and life style factors" confirmed the relationship between articles of food with income.
Zerafati et al. [44] confirmed the meaningful correlation between vegetables, fruits and dairy products with salary income.
Sajadi's results [41] in evaluation of awareness scale in pregnant with monthly income showed adverseness in relationship between income and nutritional awareness. In this study there was no meaningful correlation between monthly income and nutritional awareness.
Socio-economic and population statusplay important role in women nutritional patterns [44].
People with high socio-economic status showed higher flexibility in nutritional selectionsin comparison with people with lower socio-economic status, they had limited selections [56-57].

DISCUSSION

The strength point of the most discussed studies is to pay to settle fish consumption behavior cases and factors. In health education practices, the emphasis is on obtain of effective factors on behavior according to the existing models and theories which might be of the first duties of this scope experts. To neglect of effective factors in health promotion is of the most common failures in educational programs. Social effective determinants on behavior- which mostly out of health systems authorities-play role in behavior appearing and stabilization, more than educational factors.
Obvious weak points in most of these studies were negligence of weight factor and each items effect's scale in behavior appearing .Non usage of an appropriate pattern or model in these surveys was of the weaknesses in these researches. In most studies does not pay to settle hidden indignant or Intensity increasing property of two or more indignant.
Studies show that some of these effective factors on nutritional behavior and fish consumption are includes of attitude towards food and fish- smell and taste- social norms especially family- perceived

intention, skill and ability in selection and preparation- cost- fear of small bones- that through presented educations their positive effect of some of these factors in behavior promotion and correction proved.O'Dea [58] in his research showed that one of the healthy dish adoption barriers was its taste [58], also Story [27] in his research reports that one of the important factor in food selection as a priority is its taste .

Spinks *et al.* (2002) in a research entitled in "effective factors on sea food preparation in oklandean families in new Zeeland" showed that quality- ease of cooking- cost- benefits related to health- had the most impact on sea food consumption. In this survey 500 questionnaires distributed randomly. Data collection occurred through house referring approach and 60 percent of questionnaires received.

Questionnaires consist of two parts. One related to attitude- beliefs related to intention and decision about fish purchase and also effective factors on quality- cost- taste- benefits related to health- availability and cooking- nutritious value and religious and cultural factors and also variety of fish presentation to market (canned- fresh fish- freeze). The second part of the questionnaire related to socio economic characteristics.

This research determined that the most effects related to quality- cooking easiness- cost and related benefits [68].

Perceived benefits, fish cost, hardship of preparation and consumption, dangers of consumption and internal and external evaluation consequent of fish consumption, determine one's attitudes [36].

Consumption adhere is a personal emotion and powerful factor that organized a behavior such as fish consumption [59].

Attitude- awareness and preparation easiness is of the important cases which was affecting on food selection decision.

Consumption decision is affected by variables such as perceived attitude, knowledge, barriers and benefits.

Situational factors such as availability, variety, constancy about fish existence in market and preparation easiness effected on the decision prerequisites [38].

Concerning to fish benefits, most people attendant themselves to its consumption because it is useful for their health [2].

Accessibility, appropriate apprehension, variety and comfort and satisfaction feeling have mediation role on sea food consumption and of effective factors on decision and intention [60].

Academic education, family expenses and income, business, age, family dimension, ethnicity, residence period in a specific area, accommodations, domestic taking possession status, food costs percent of the whole expenses, and house substratum are of the factors that could have statistical relationship with nutritional pattern and status.

Family dimension and membership is of the effective factors on nutritional habits and pattern [44].

Bose et al. [68] in a research entitled in "effective factors preliminary survey on sea food consumption in Inland and Casel areas in Australia" demonstrates the life geographical locality role.

In this survey 100 families randomly selected from Inland and Casel . The main destination was opinions and attitudes detection of these two region's inhabitants about sea food consumption. Questionnaire checked the existence barriers and consumption believes. Some of considerate items in questionnaire are taste, quality, nutritional value, cost, doctors' recommendation, accessibility, cooking easiness and family dimension. In Inland region taste and season had the most relationship with sea food consumption. In Casel region, family quality and dimension had the most important effect [68].

In a survey entitled in "the relationship between dominant food patterns with socio-economic and demographic status in 20-50 years old women in north place of tehran" Rashidkhani (2008) showed that academic education and family income had negative relationship with unhealthy nutritional pattern. House substructure had positive relationship with healthy nutritional pattern. Women with lower age level and with fewer children had unhealthier nutritional pattern. 7 region occupancy had unhealthier nutritional pattern than 3 region occupancy. Tehran Residence period also had negative relationship with unhealthy nutritional pattern [44].

Lin et al. [54] results showed that persons with unhealthy nutritional pattern "enriched with filtered grains and fat" had a larger family dimension than the appropriate pattern of "complete grains and fruits". Also age is of demographic and personal factors affected nutritional habits and behaviors diverted through unhealthy nutritional pattern to healthy pattern according age accession [49, 61-64].

Social norms also play an important role in behavior demonstration. Hillevi et al. (2002) in a survey entitled in "why did not youth feed fish?" determined effective factors in fish consumption. In this research 162 persons with 14 years average age complete a questionnaire which was designed according to the planning behavioral theory. The results showed that schoolmate and friends' behavior and

perceived behavioral control were the most forecasters in fish consumption. Barriers includes negative attitude toward fish smell and also fear of small and acute bones.
Fish consumers agreed with its taste and thought that higher fish consumption is useful for health [5].
Attention to various and effective factors in appearing such behavior includes of economic social norms, attitude, awareness, and perceived benefits, existence barriers which were surveyed in detail and of the powers of this study.

CONCLUSION

Various studies in European countries about fish consumption and motives and barriers occurred but the problem of no researches in non -European countries about fish consumption are exists yet .
The importance and characteristics of the activities related to health education depending on its effects and problem decrease or removes. This goal which was related directly to creating or changing healthy does not obtain behaviors accidentally and through routine methods and its evidence are health education current systems. The effective main factors on health education diverted from behavior sciences and health promotion deeply embodied in the mould of social sciences and borrowed from behavior sciences.
Nutritional behavior is of related discussions to health which was a multi causal discussion and had important effects on health and according to effecting on it, we should recognize and strength effective factors on such behavior and the barriers should be lighter, then the other interventions by determining a definite weight factor and in an appropriate and harmonious way to health programs used in order to nutritional behavior promotion.
Current classic educational programs in health systems did not have the ability for desired effects on nutritional behaviors and need basic interventions such as usage of educations based on theory view and appropriate pattern and models. Theories have the enormous potential in the increasing of health education programs effectiveness. Survey on models' factors in various societies (model testing) in order to determine attention focus of health education interventions is essential. Today various theories, patterns and models have been used in order to solve health scope problems. Each pattern should be used through theory base in order to intervention, target community, considered subject, current politics and previous studies.
Today abundant focus on awareness in health science is not a confidence subject because most of people awarded about positive behaviors benefits such as fish consumption, but various factors caused weakness in crystallization and materialize of their knowledge. Recognition of these factors is of the arts of health education science. Some of these factors includes of potent, reinforces and prepares. Nutrition and health education scientists should attend the items together. Awareness measurement and learner's information bombardment in order to create a behavior in many contexts abolished because knowing lonely could not cause behavior.
Propose that for decreasing deficiencies, appropriate models and patterns which were appropriated to behavior and community will be used. Effect scale of each factor in various communities should be attended and we should not forget about the effects of hidden factors and variables and co-increasing of these variables.

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