Evaluation of the Families' Attitudes toward Environment Pollution

تقويم اتجاهات الاسرة تجاه تلوث البيئة

Wissam J. Qassim, PhD*
Rajaa I. Abed, PhD **

*** Instructor, Community Health Nursing Department, College of Nursing, University of Baghdad, drwissamjk @ yahoo.com**
**** Instructor, Instructor, Adult Nursing Department, College of Nursing, University of Baghdad, Dr.rajaaia @ yahoo .com**

المستخلص:
الهدف: تقويم اتجاهات الأسرة تجاه تلوث البيئة , وايجاد العلاقة مابين اتجاهات تلك الاسر نحو تلوث البيئه والخصائص الديموغرافية من العمر,مستوى التعليم, نوع الاسرة والحالة الاقتصادية للعائلة.
المنهجية: دراسة وصفية لتقويم اتجاهات الأسر تجاه تلوث البيئة للفترة من ٥ من أكتوبر٢٠١٣ إلى ٧ من مايو ٢٠١٤ مايو. تم اختيار العينة غير الاحتمالية "هادفة" من (١١٠) أسرة. وتتألف العينة من مجموعتين. (٧٥) أسرة في المناطق الحضرية و (٣٥) منها في المناطق الريفية. تم تصميم أداة التقييم وشيدت لغرض الدراسة. ويتألف من (٤) أجزاء رئيسية. البيانات الديموغرافية والمواقف تجاه تلوث البيئة، والمواقف تجاه العوامل المنتجة للتلوث بيئة المنزل، وطريقة ترتيب بيئة المنزل. ويتم تحديد صلاحية المحتوى والموثوقية لأداة الدراسة من خلال دراسة تجريبية. يتم جمع البيانات من خلال استخدام أداة الدراسة وهيكلة المقابلة كوسيلة لجمع البيانات. وتم تحليل البيانات من خلال تطبيق منهج تحليل البيانات الوصفية، والتي تشمل التكرار، النسبة ,والوسيط.
النتائج : نتائج هذه الدراسة تشير إلى أن الغالبية العظمى من الأسر شهد مستوى عال من المواقف تجاه تلوث البيئة، ومعرفة عوامل تلوث البيئة المنزل، وطريقة ترتيب بيئة المنزل.
التوصيات : توصي الدراسة باعداد برنامج تعليمي يقدم إلى الأسر فيما يتعلق بالقضايا المتعلقة بتلوث البيئة من أجل زيادة وعيهم، يعزز اتجاهاتهم، وتغيير إيجابي في سلوكهم الصحي.

Abstract:
Objectives: To evaluate the families' attitudes toward environment pollution, and determine the relationship between families' attitudes towards environment pollution and their demographic characteristics of age, education, type of family, and socioeconomic status.
Methodology: A descriptive design is carried throughout the present study to evaluate families' attitudes toward environment pollution for the period of October 5th2013 to May 7th2014. A non-probability "purposive" sample of (110) families' is selected. The sample is comprised of two groups; (75) urban families' and (35) rural ones. An evaluation tool is designed and constructed for the purpose of the study. It is consisted of (4) main parts; demographic data, attitudes toward environment pollution, attitudes toward producing factors for house environment pollution, and method of house environment arrangement. Content validity and internal consistency reliability are determined for the study instrument through a pilot study. Data are collected through the use of the study instrument and structured interview as means of data collection. Data are analyzed through the application of descriptive data analysis approach, which includes frequency, percent and mean of scores.
Results: The results of the study indicate that the vast majority of families' has experienced high level of attitudes toward environment pollution, producing factors for house environment pollution, and method of house environment arrangement.
Recommendations: The study recommends that education program by mass media can be forwarded to families' with regard to issues related to environment pollution in order to increase their awareness, improves their attitudes, and positively change their behaviors.
Keywords: Evaluation, Families' Attitudes, Environment Pollution

Introduction:

Most people today spend (80%) to (90%) of their time indoors. stated that environmental protection agency (EPA) studies show that many important pollutants are for more concentrated inside the home [1].

The families' attitudes toward Environment pollution are not regulated by the same laws that apply to farm. Less strict regulations allow disposal of families' attitudes toward environment pollution in approved sanitary landfills [1].

The environment plays a key role in the ultimate fate of pollutants. The environment consists of soil surface water and the atmosphere; all sources of pollution are initially released or dumped into one of these phases of ecosystem as pollutants interact with the environment, they undergo physical and chemical changes and are ultimately incorporated into the environment [2].

The environment thus acts as a continuum into which all waste materials are placed the pollutants, in turn obey the second law of thermodynamics: matter cannot be destroyed it is merely converted from one to another .Thus taken together the way in which substances are added to the environment, the rate at which these waste are added, and the subsequent changes that occur determine the impact of the waste on the environment [3].

Environmental attitudes are conceptualized in terms of attitude theory as being composed of beliefs and affect toward an object. The environment as an object is difficult to define and this has implications for the study of general environmental attitudes. Attitudes are based on values, have horizontal and vertical structure and tend from general to specific. The overall affect statement is the summary of this structure. From research done in the United States, it seems possible to measure global environmental attitudes since five general environmental attitude scales have reasonable reliability and show some evidence of validity [4].

Environmental concern appears to be a specific belief which is largely embedded in cognitive structure and should be considered an opinion rather than attitude. While changes in this opinion have been documented, it is not clear that environmental attitudes or values have shifted, although attitudes have most probably become more differentiated over the last decade. In the United States positive environmental attitudes tend to show consistency with related beliefs and behaviors. It is concluded that research on environmental attitudes has largely been a theoretical and noncumulative. While it is possible to measure these attitudes, little is known about the basic beliefs, affect or the organization of these components [5].

Environmental attitudes are fundamentally important, widely discussed, frequently measured, and poorly understood. In spite of better than 40 years of systematic inquiry into the nature of attitudes by social psychologists, little of this theory has found its way into research on environmental attitudes. In some ways, it is too easy to gather data on environmental attitudes [6].

The current rapid growth in the economy and the patterns of consumers' consumption and behavior worldwide are the main cause of environmental deterioration. As the environment continues to worsen, it has become a persistent public concern in the developed countries and has recently awakens developing countries to the green movement [7].

In an exploratory study gender with attitudes towards the environment is compared and the relationship between attitudes toward the environment is investigated. Results indicated that there were no significant differences between genders in their environmental attitudes. Environmental attitudes were found to be classified into three major dimensions (environmental protection, government's role, and personal norm). Further investigation revealed that personal norm was the most important contributor to the attitudes. However, environmental protection did not

contribute significantly to consumers' attitudes [8].

An attitude can be defined as a positive or negative evaluation of people, objects, event, activities, ideas, or just about anything in your environment, but there is debate about precise definitions. An attitude is defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor. Though it is sometimes common to define an attitude as affect toward an object, affect (i.e., discrete emotions or overall arousal) is generally understood to be distinct from attitude as a measure of favorability [9].

This definition of attitude allows for one's evaluation of an attitude object to vary from extremely negative to extremely positive, but also admits that people can also be conflicted or ambivalent toward an object meaning that they might at different times express both positive and negative attitude toward the same object. This has led to some discussion of whether individual can hold multiple attitudes toward the same object [10].

Whether attitudes are explicit (i.e., deliberately formed) versus implicit (i.e., subconscious) has been a topic of considerable research. Research on implicit attitudes, which are generally unacknowledged or outside of awareness, uses sophisticated methods involving people's response times to stimuli to show that implicit attitudes exist (perhaps in tandem with explicit attitudes of the same object). Implicit and explicit attitudes seem to affect people's behavior, though in different ways. They tend not to be strongly associated with each other, although in some cases they are. The relationship between them is poorly understood [11].

Methodology:

In order to reach the objectives of the present study, a descriptive design is carried out to evaluate families'' attitudes toward environment pollution for the period of October 5th2013 to May 7th 2014.

The study is carried throughout Baghdad governorate, which is divided into urban and rural areas in Karkh and Rusafaas focal points to initiate the sample selection of the families'.

A purposive sample of (110) principal families' is selected throughout the non-probability sampling approach. The whole sample is representing two groups of (75) urban families' and (35) rural families' with respect to their residential distribution in Baghdad governorate sectors.

An evaluation tool is designed and constructed through extensive review of relevant literature to the problem, which is underlying the study. The tool is comprised of (4) main parts, which are presented as follows.

This part is concerned with the assessment of the families' demographic characteristics of age, education, residential area, type of family and socioeconomic status.

The families' socioeconomic status is measured with regard to families'' education, monthly income, crowding index and properties as they are listed in the socioeconomic scale (England, 1975). Such status is scored as low (18-37), moderate (38-57), and high (58-75) relative to the maximum and minimum total scores of the scale.

This part is concerned with the evaluation of the families' attitudes toward environment pollution –producing factors through (12) item .These items are rated on 3-level dichotomous responses of agree, not sure and disagree, and scored as (3 for agree) and (2 for not sure) and (1 for disagree) [12].

House environment pollution is evaluated through (13) item, which are included in this part. These items are rated on 3-level dichotomous responses of agree, not sure and disagree, and scored as (3 for agree) and (2 for not sure) and (1 for disagree).

This part of the evaluation tool is constructed to assess the house environment arrangement through (10). These items are rated on 3-level dichotomous responses of agree, Not sure and disagree, and scored as (3

for agree) and (2 for not sure) and (1 for disagree) [12].

Data are collected through the use of the evaluation tool and employment of the structured interview with each family's on individual basis when home-visit is taking place. The data collection process is initiated from January 15th 2014through March 31st 2014.It is including that of the pilot study.

A pilot study is carried out from November 15th 2013 to December 15th 2013 to determine the content validity and internal consistency "split-half" reliability of the study instrument, as well as to achieve the following objectives:

1. To evaluate the instrument clarity, relevancy, consistency and content adequacy.
2. To determine the time that is needed for each interview.

Internal consistency reliability is determined through the computation of Cronbach alpha correlation coefficient. Data are collected from (30) urban families' and (20) rural ones through the application of the study instrument. Results indicate that the Reliability coefficient for the urban families' is r=0.92 and that for rural ones is r=0.88. These coefficients reveal that the instrument is adequately reliable measure for the evaluation of the families' attitudes. The reliability estimate is computed through:

$$R = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{[n\sum x2\ (\sum x)2][n\sum y2(\sum y)2]}}$$

Content validity of the instrument is determined through a panel of (6) experts. They are five faculty members from the Department of Community Health Nursing, College of Nursing, University of Baghdad; One faculty member from the Department of Community Medicine, College of Medicine, University of Baghdad .

The data of the present study are analyzed through the application of descriptive statistical methods that include:

1. Frequency: f
2. percent: $\% = \frac{\text{frequancy}}{\text{samples size}} * 100$
3. Mean of scores:

$$m.s = \frac{f\ 1 \times \text{score } 1}{n\ 1} + \frac{f\ 2 \times \text{score } 2}{n\ 2}$$

f = Frequency

n = Number of cases

4. Families' Socioeconomic status

Such variable is measured on 3-level scale of high (58-75), moderate (38-57), and low (18-37). Mean of scores less than 2 is considered not significant; equal to 2 is considered significant; and greater than 2 is considered highly significant.

5. Families' attitudes toward environment pollution

This variable is evaluated on 3-level scale of high (31-39), moderate (22-30), and low (13-21) for attitudes toward producing factors for environment pollution. High (28-36), moderate (20-27), and low (12-19) for attitudes toward environment pollution, and high (24-30), moderate (17-23), and low (10-16) for method of house environment arrangement.

Results:

Table 1. Distribution of the Families' Demographic Characteristics of Urban area

Demographic characteristics	Frequency	Percentage
1. Age (years)		
20 - 29	**12**	**34.3**
30 - 39	**6**	**17.1**
40 – 49	**11**	**31.4**
50 and more	**6**	**17.2**
Total	**35**	**100**

Table 1. Continues

2. Families' Education		
- Unable to read and write	**5**	**14.3**
- Able to read and write	**7**	**20**
- Primary school graduate	**4**	**11.4**
- Intermediate school graduate	**2**	**5.7**
- High school graduate	**7**	**20**
- Institute graduate	**3**	**8.6**
- Collage graduate	**7**	**20**
- Post graduate	**0**	**0**
Total	**35**	**100**
3. Type of family		
- Nuclear	**6**	**17.14**
- Extended	**29**	**82.85**
Total	**35**	**100**
4. Socio – economic status		
-Low (18-37)	**11**	**31.4**
-Moderate(38-57)	**17**	**48.6**
-High (58-75)	**7**	**20**
Total	**35**	**100**

This table reveals that the large number of families' of urban area is accounted for middle age (33.3%) (40-49) years, high school graduate (24%), living with extended family (52%) and having moderate socioeconomic status (44%).

Table 2. Distribution of the Families' Demographic characteristic of rural area

Demographic characteristics	Frequency	Percent
1. Age (years)		
20 – 29	**24**	**32**
30 - 39	**18**	**24**
40 – 49	**25**	**33.3**
50 and more	**8**	**10.7**
Total	**75**	**100.0**
2. Families' Education		
. Unable to read and write	**5**	**6.6**
. Able to read and write	**12**	**16**
. Primary school graduate	**8**	**10.6**
. Intermediate school graduate	**13**	**17.3**
. High school graduate	**18**	**24**
. Institute graduate	**7**	**9.3**
. Collage graduate	**8**	**10.6**
. Post graduate	**4**	**5.3**
Total	**75**	**100.0**
3. Type of family		
. Nuclear	**36**	**48**
. Extended	**39**	**52**
Total	**75**	**100.0**
4. Socio – economic status		
. Low (18-37)	**20**	**26.7**
. Moderate (38-57)	**33**	**44**
. High (58-75)	**22**	**29.3**
Total	**75**	**100**

This table reveals that the large number of families' of rural area accounted for (34.3%) (20-29) year , equal in able to read and write , high school & collage graduate (20%) , living with extended family (82.8) and having moderate socioeconomic status (48.6%) .

Table 3. Mean of Scores for Items of Families' Attitudes toward environment pollution

3.1: Attitudes toward Environment Pollution

No.	Domain	Agree	Not sure	Disagree	M.S
1	I believe in choosing products least dangerous	110	0	0	3
2	I feel that the use of reserved products in containers made from recycled materials or industry could be reprocessed	105	5	0	2.95
3	Do not believe the purchase of chemicals that can be recycled	45	55	10	2.32
4	I do not believe usually read the instruction label to make sure the product meets the required purpose and feel safe after use	37	64	9	2.26
5	I believe we shop or buy only what we need	100	10	0	2.91
6	I feel safe when the note storage location of the goods to reduce the occurrence of accidents	95	15	0	2.86
7	I believe in observing each potential leak and spill and spread routinely sources to reduce pollution occurrence	87	23	0	2.79
8	I think that the purchase of materials in containers to prevent leakage to reduce pollution at home	91	15	4	2.79
9	I feel safe when we store and use the material near the areas to avoid spilled during transport	88	15	7	2.74
10	I think the development of a centralized shopping to get rid of non-essential purchases to make sure to reduce waste	32	78	0	2.29
11	I believe in the participation of non-used products with friends and neighbors to reduce the pollution of the environment	17	90	3	2.29
12	am use dinnerware made from stele, aluminum and glass	99	9	2	2.88

MS=Mean of score

This table presents that mean of scores is highly significant on all items of attitudes toward environment pollution.

3.2: Attitudes toward producing factors for house environment

No.	Domain	Agree	Not sure	Disagree	M.S
1	I think that the use of wood for heating torches in our house helps home pollution	99	8	3	2.87
2	I believe that the use of wooden torches for cooking in our house leads to contamination of the house	100	8	2	2.89
3	I think that the use of the oil heater for cooking in our house helps the home environment pollution	55	50	5	2.45
4	I feel uncomfortable from the use of oil heaters for cooking in our house	89	19	2	2.79
5	I believe that the use of light oil in our house leads to air pollution in the home	90	18	2	1.89
6	believe that the use of hazardous waste containers for foods leads to the occurrence of pollution and poisoning problems	85	25	0	2.77
7	I believe that the use of deadly insects, pests and rodents helps to pollution	10	93	7	2.03
8	I feel that the use of dyes containing lead in our house help to pollution	37	63	10	2.25
9	I believe that the breeding or presence of pets in our house to help the home environment pollution	88	18	4	2.76
10	I think that the presence of all kinds of plants in our house to help house pollution	75	30	5	2.68

Table 3.2. Continues

11	I do not think the use of Ba fresheners Flyer inside our house leads to air pollution inside the home	42	63	5	2.38
12	believe that smoking cigarettes inside the house hurt others and helps to indoor air pollution	110	0	0	3
13	I think that the use of the electric generator that works with fuel and oil in our house helps home pollution	107	3	0	2.97

MS=Mean of score

This table depicts that mean of scores is highly significant on all items of attitudes toward producing factors for house environment except that of item 5.

3.3. Methods of House Environment Arrangement

No.	Domain	Agree	Not sure	Disagree	M.S
1	I think that does not let the dyes and colors and varnishes to dry before disposal leads to environmental pollution	22	75	3	1.99
2	I believe that the burning of hazardous waste buried in the garden leads to the home environment pollution	99	10	1	2.89
3	I believe that poured hazardous waste sites in the street drainage water or heavy water stream leads to environmental pollution	110	0	0	3
4	I think the need to use a car to throw waste collection of families' hazardous waste	110	0	0	3
5	I think that throwing drugs ended with the effect of families' waste helps the environment pollution	34	70	6	2.26
6	I believe that the failure to store families' chemicals in a safe place and helps to spread contamination home	100	9	1	2.9
7	I feel that the failure to use a central point for the collection of waste in the home contributes to the occurrence of chaos and pollution	108	2	0	2.98
8	I think that we carry and do away with no attention from the compressed gaseous materials in containers leads to environmental pollution	77	30	3	2.67
9	I Do not feel neglected when we keep products in their original containers	110	0	0	3
10	I think and believe that the non-use of disinfectants leads to pollution	104	6	0	2.95

MS=Mean of score

This table reveals that mean of scores is significant on all items of method of house environment arrangement except that of item 1.

Table 4. Evaluation of families' attitudes toward environment pollution

1. Attitudes toward Environment pollution					
High 36 – 28		Moderate 27 – 20		Low 19 – 12	
Frequency	Percent	Frequency	Percent	Frequency	Percent
102	92.7	8	7.3	0	0
2. Attitudes toward producing factor for house environment pollution					
High 39–31		Moderate 30– 22		Low 21– 13	
Frequency	Percent	Frequency	Percent	Frequency	Percent
100	90.9	10	9.1	0	0

Table 4. Continues

3. Method of house Environment Arrangement					
High 30–24		Moderate 23–17		Low 16– 10	
Frequency	Percent	Frequency	Percent	Frequency	Percent
103	93.6	7	6.4	0	0

This table depicts that families' have experienced high level of attitudes relative to environment pollution; producing factor for house environment pollution and method of house environment arrangement.

Discussion:

Part I: Evaluation of the families' attitudes toward environment pollution

Throughout the course of data analysis, such evaluation is determined. The findings have revealed that the families' attitudes are evaluated with high level relative to environment pollution, producing factors for house environment pollution, and method of house environment arrangement (Table 4).

Such high level attitudes for the families' toward environment pollution is very obvious with respect to highly significant mean of scores for items of early stated aspects of families' attitudes toward environment pollution (Tables 3.1,3.2,and 3.3). This has been confirmed by that the important factor in the contamination of the home environment, in particular causing pollution of the environment in general, as we know that contamination of the home environment is an important factor of environmental pollution factors [(3)].

The significant items for the attitudes toward environment pollution are indicated that the families' appropriately feel, think, and perceive the phenomenon of environment pollution (Table 3.1).

Relative to items of attitudes toward producing factors for house environment pollution, the highly significant mean of scores is on all items except that of item 5. These findings revealed that families' are well oriented toward the influence of such factors (Table 3.2).

Regarding the significant items of method of house environment arrangement, the mean of scores is highly significant on all items except that of item 1. These findings depict that the families' are capable to apply adequate methods for the arrangement of the house environment (Table 3.3). Results of the study have coincided with that of a study that the family can arrange home environment to maintain the home environment from pollution by taking special measures lead to preserve the environment and reduce the risk of environmental pollution [(11)].

Part II. The distribution families' attitudes toward environment pollution and their demographic characteristics

Generally speaking about the families' attitudes demographic characteristics, the study reveals that most of the families' is (40-49)years old, high school graduate (24%), living in extended family (52%) and (33.3%) having moderate socioeconomic status (44%)in the urban area (Table 3). in contrast, most of those in the rural area are young adult (20-29) years old (34.3%), high school graduate (31.4%), living in extended family (82.85%) and having moderate socioeconomic status (48.6%) (Table 2).

Families' of both urban and rural areas have presented that they have expressed high attitudes toward environment pollution in general. But middle age (40-49) years old, high school graduate, living in extended family with moderate socioeconomic status families' have experienced higher attitudes in the urban.

In the rural area, young age (20-29) year's old, high school graduate, living in extended family with moderate socioeconomic status families' have experienced higher attitudes than other. It is confirmed that the extended family, which often live in rural areas are more susceptible to contamination of the home environment of those who live in urban areas [(6)].

Recommendations:

Based on the early stated conclusion, the study can recommend that:

1. Education program can be forwarded to families' with respect to issues related to environment pollution in order to increase their awareness, improves their attitudes, and positively change their behaviors.
2. Further research can be carried out on large sample size and wide- range of environment pollution issues.

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