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Analyzing the ecological behaviour of women in Ahwaz city

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Abstract

The purpose of research was analyzing the ecological behaviour of women in Ahwaz city. Ecological behaviour is actions which contribute towards environmental preservation and/or conservation. The research has conducted using a surveying method. The data collection tool was a structured questionnaire. Sample size based on Cochran equation, was 120 people. Based on the results the women are not well-performance of the ecological behaviour on their activities. This result revealed that the item located on first rank (To wash the vegetables, I am using detergent " (M=3, sd=0.79)) had moderate level. Majority of women had not well-performance of the ecological behaviour (n=44, 36.67%). Also Findings showed that the majority of the studied persons (37.5 percent) believed that the effect of individual and psychological factors on the ecological behaviour is moderate and 29.17 and 52.8 percent respectively believed that the effect of social and cultural-educational factors on the ecological behaviour is much. Based on regression environmental attitude (x_1) has the highest effect on the ecological behaviour. Cultural and educational factor (x_2) was the second variable entered in the equation meaning that this variable has the suitable effect on the ecological behaviour. At the third stage, variable of social factor (x_3) was entered in the equation. The correlation coefficient and the adjusted coefficient of determination were R=0.765 and R^2=0.585, respectively. Based on the findings, these variables have explained 58.5% of the dependent variable's changes.

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Introduction

Ecological behaviour is defined as "actions which contribute towards environmental preservation and/or conservation" (Axelrod & Lehman, 1993, p. 153). Global warming, the disappearance of the ozone layer, large-scale exploitation of natural resources such as fossil fuels, and increasing strain on the essentials of air, water, and soil all point towards a change in humankind's ecosystem, a change that places our present way of living into question and threatens humankind's future existence (Kaiser, 2003 and 1998).

Consequently, the assertion that something must be done to alleviate this predicament is unchallenged (Stern, 1992). Human impact on biodiversity is significant, humans have caused the extinction of many species, including the dodo and, potentially, large megafaunal species during the last ice age. Though most experts agree that human beings have accelerated the rate of species extinction, the exact degree of this impact is unknown, perhaps 100 to 1000 times the normal background rate of extinction. Some authors have postulated that without human interference the biodiversity of this planet would continue to grow at an exponential rate(May,1988; Sahney *et al*, 2010).

Ecological behaviour includes recycling, energy and water conservation, political activism, consumerism, commitment to environmental organizations, and so forth (Kaiser, 2003). Human survival depends on the health of the ecosystem. An ecosystem is comprised of communities of plants, animals and other organisms in a particular area that interact with each other and their surrounding environment. Both living and non-living things are considered part of an ecosystem. Humans threaten ecosystems by producing waste, damaging habitats and removing too many species without giving the ecosystem time to naturally regenerate. Based on these issues, the study was aimed at analyzing the performance of women in Ahwaz city regarding ecological behaviour and identifying affecting factors.

Material and method

Method of research

The research has conducted using a surveying method. The data collection tool was a structured questionnaire. Statistical population consisted women in Ahwaz city in March-August 2014. Sample size based on Cochran equation, 120 people determined. Sampling method was simple random sampling.

Study tool

A questionnaire, as the main study tool, was designed in six sections. Validity of the research questions was verified by a panel of experts. Reliability of the questionnaire was done by calculating Cronbach's Alpha (α= 0.89). Data processing and outputs analyzing was done by SPSS software. Data analysis was done by two parts of descriptive and analytic method. In descriptive section statistics such as mean, percent, variance, and standard deviation were used. In analytic section, both Spearman and Regression were used.

Results

Description of personal characteristics

According to results, average age of the studied women was 36.4 years; the youngest was 21 and the oldest was 53 years. Based on educational levels, a greater proportion of them had diploma educational level (Table 1).

Ecological behaviour of women

With regard to the assessment of the ecological behaviour of women in Ahwaz city, was used ecological behaviour model that present by KAISER *et al* (1999). The results in Table 2 show the performance of women on the ecological behaviour. As can be seen the highest mean score is 2.242 and it shows that the women are not well-performance of the ecological behaviour on their activities. As can be seen from Table 2, the highest ecological behaviour of women rank refers to the " To wash the vegetables, I am using detergent " (M=3, sd=0.79).

Table 1. Demographic profile of corn farmers.

variables	Frequency	Percentage	Cumulative Percentage	
Age				
20-30	23	19.17	19.17	Max=53
30-40	35	29.17	48.33	Mean=36.4
40-50	33	27.50	75.83	Sd= 8.43
50-60	29	24.17	100.00	Min=21
Educational level (Year)				
Elementary	28	23.33	23.33	
High school degree and Diploma	43	35.83	59.17	
Bachelor's degree	33	27.50	86.67	
Master's degree	12	10.00	96.67	
Doctorate	4	3.33	100	

Table 2. Ecological behaviour items.

Items	Ecological behaviour Mean[1]	sd	CV	Rank
To wash the vegetables, I am using detergent.*	3	0.79	0.263	1
I use fabric softener with my laundry.*	2.8	0.77	0.275	2
I'm ordering family to conserve water.	3.1	0.89	0.287	3
I prefer to shower rather than to take a bath.	2.8	0.88	0.314	4
I collect and recycle used paper.	3.1	0.98	0.316	5
In the winter, I leave the windows open for long periods of time to let in fresh air.*	3	0.98	0.327	6
I usually buy milk in returnable bottles.	2.7	0.91	0.337	7
I usually drive on freeways at speeds under 100 Km	2.7	0.95	0.352	8
I use an oven-cleaning spray to clean my oven.*	2.7	0.96	0.356	9
to open the sewer pipe, I use the acid.*	2.5	0.89	0.356	10
I've got the necessary information on the effects of detergents on the environment.	2.6	0.96	0.369	11
I often talk with friends about problems related to the environment.	2.4	0.9	0.375	12
I use the water for watering flowers.*	2.4	0.93	0.388	13
I bring empty bottles to a recycling bin.	2.5	0.98	0.392	14
When possible in nearby areas around 30 km, I use public transportation.	2.3	0.94	0.409	15
For shopping, I prefer paper bags to plastic ones.	2.3	0.95	0.413	16
Usually I do not drive my automobile in the city.	1.8	0.78	0.433	17
I use phosphate-free laundry detergent.	2.4	1.07	0.446	18
I use a cleaner made especially for bathrooms rather than an all-purpose cleaner.*	1.9	0.91	0.479	19
I use detergent to clean the yard.*	1.9	0.93	0.489	20
I use detergent to wash the car. *	1.9	0.94	0.495	21
I bring unused medicine back to the pharmacy.	1.98	0.98	0.495	22
I use a chemical air freshener in my bathroom.*	1.9	0.95	0.500	23
In supermarkets, I usually buy fruits and vegetables from the open bins.*	1.6	0.89	0.556	24
I am a member of an environmental organization.	1.4	0.79	0.564	25
If I am offered a plastic bag in a store I will always take it.*	1.7	0.96	0.565	26
If there are insects in my apartment I kill them with a chemical insecticide.*	1.7	0.98	0.576	27
I'll buy Coca-Cola in plastic bottles.*	1.6	0.96	0.600	28
I use chemical toilet cleaners.*	1.3	0.96	0.738	29
I sometimes contribute financially to environmental organizations.	1.3	0.97	0.746	30

1=(min = 1, max = 5), * Negatively formulated items.

This result revealed that the item that located on first rank had moderate level. Thus situation of ecological behaviour has not suitable situation. Table 3 shows based on the number of items (n = 30), and minimum and maximum acquisition score (min = 1, max = 5), range scores between 30 and 150 will vary. This range was divided into 5 categories. People who score was 30 to 54 in very low group, who had scored 54 and 78

in the low group, people who 78 to 102 were in the moderate group, who had a score of 102 to 126 in the high group, and those who score 126 to 150 were in the very high group. Table 3 categorizes women in five groups. Majority of women had not well-performance of the ecological behaviour (n=44, 36.67%).

Table 3. Frequency based on ecological behaviour levels.

ecological behaviour levels	Frequency	Percent	Cumulative Percent
Very low	19	15.83	15.83
Low	44	36.67	52.50
High	43	35.83	88.33
Very high	10	8.33	96.67
Total	120	100	

Description effect of individual and psychological factors on the ecological behaviour

10 items, in the Likert scale, were used to identify the effect rate of individual and psychological factors on the ecological behaviour, scores were classified as 10-18 (very little), 18-26 (little), 26-34 (moderate), 34-42 (much) and 42-50 (very much). Findings showed that the majority of the studied persons (37.5 percent) believed that the effect of individual and psychological factors on the ecological behaviour is moderate (Table 4).

Table 4. The rate influence of psychological factors on ecological behaviour (n=120).

Rate of influence	Frequency	Percent	Cumulative percent
Very little	21	17.50	17.50
Little	18	15.00	32.50
Moderate	45	37.50	70.00
Much	23	19.17	89.17
Very much	13	10.83	100.00
Total	120	100	

Mode: Moderate

Description effect of social factors on the ecological behaviour

5 items in the form of Likert scale, were used to identify the effect rate of social factors on the ecological behaviour, then, all items were classified as 5-9 (very little), 9-13 (little), 13-17 (moderate), 17-21 (much) and 21-25 (very much). Findings showed that the majority of the studied persons (29.17 percent) believed that the effect of social factors on the ecological behaviour is much (Table 5).

Table 5. The rate influence of social factors on ecological behaviour (n=120).

Rate of influence	Frequency	Percent	Cumulative percent
Very little	16	13.33	13.33
Little	21	17.50	30.83
Moderate	23	19.17	50.00
Much	35	29.17	79.17
Very much	25	20.83	100.00
Total	120	100	

Mode: Much

Description effect of economic factors on the ecological behavior

5 items in the form of Likert scale, were used to identify the effect rate of social factors on the ecological behaviour, then, all items were classified as 5-9 (very little), 9-13 (little), 13-17 (moderate), 17-21 (much) and 21-25 (very much). Findings showed that the majority of the studied persons (42.5 percent) believed that the effect of social factors on the ecological behaviour is moderate (Table 6).

Table 6. The rate influence of economical factors on ecological behaviour (n=120).

Rate of influence	Frequency	Percent	Cumulative percent
Very little	15	12.50	12.50
Little	34	28.33	40.83
Moderate	51	42.50	83.33
Much	12	10.00	93.33
Very much	8	6.67	100.00
Total	120	100	

Mode: Moderate

Description effect of cultural and educational factors on the ecological behavior

7 items in the form of Likert scale were used to identify the effect rate of educational factors on the ecological behaviour, all items were classified as 7-12.6 (very little), 12.6-18.2 (little), 18.2-23.8 (moderate), 23.8-29.4 (much) and 29.4-35 (very much). Findings showed that the majority of the

studied persons (52.8 percent) believed that the effect of cultural and educational factors on the ecological behaviour is much (Table 7). Prioritizing the items based on the mean statistic, the maximum effect of cultural and educational factors on the ecological behaviour with the averages of 3.87, 3.69, and 3.61 includes the lack of enough educational programs about effect of chemical materials, lack of ecological education in schools and lack of appropriate television programs in this field.

Table 7. The rate influence of cultural and educational factors on ecological behaviour (n=120).

Rate of influence	Frequency	Percent	Cumulative percent
Very little	17	14.17	14.17
Little	25	20.83	35.00
Moderate	29	24.17	59.17
Much	41	34.17	93.33
Very much	8	6.67	100.00
Total	120	100	

Mode: Much

Determination of effective factors on ecological behaviour

Spearman coefficient of correlation and multiple regression analysis were respectively used to determine the relationship between the independent variables on the dependent one; results are illustrated below. Study's data showed that there is a positive and significant relationship at 0.99% level (sig 0.000) between the ecological behaviour and the social, cultural and educational factors (Table 8). Using stepwise regression, to identify the explaining variables, two variables of cultural, educational and social factors were entered in the stepwise regression, respectively. Environmental attitude (x_1) was the first variable entered in the equation meaning that this variable has the highest effect on the ecological behaviour. In this stage, the correlation coefficient and the coefficient of determination were 0.698 and R^2 0.487, respectively. Cultural and educational factor (x_2) was the second variable entered in the equation meaning that this variable has the highest effect on the ecological behaviour. In this stage, the correlation coefficient and the coefficient of determination were 0.712 and R^2 0.506, respectively. Considering the coefficient of determination, this variable has determined 50.6% of the dependent variable's variance. At the third stage, variable of social factor (x_3) was entered in the equation. The correlation coefficient and the adjusted coefficient of determination were R=0.765 and R^2=0.585, respectively. Based on the findings, this variable has explained 58.5% of the dependent variable's changes (Table 9).

Table 8. Correlation between variables.

Variable 1	Variable 2	r	Sig
Environmental attitude	ecological behaviour	0.865**	0.000
Cultural and educational factors		0.761**	0.000
Economical factors		0.112	0.187
Social factors		0.694**	0.000
Individual and psychological factors		0.108	0.215

**: relationship at 0.99% level

Table 9. Stepwise regression of ecological behaviour (n=120).

Variables	R	R^2	R^2 Adjust
Environmental attitude	0.698	0.487	0.461
Cultural and educational factors	0.712	0.506	0.449
Social factors	0.765	0.585	0.561

Discussion

This study showed that the ecological behaviour of the studied person's majority was in moderate level. This is due to several factors, especially cultural, educational and social factors. In addition, the educational and social factors had the major role in explaining the ecological behaviour. Environmental attitude is the most important variable affecting the ecological behaviour in conservation of natural resources Ahwaz city. Kaiser *et al* (1999) establishes environmental attitude as a powerful predictor of ecological behaviour. Cultural and educational factor for increase of ecological knowledge is the second important variable affecting the ecological behaviour in conservation of natural resources Ahwaz city. Multiple studies considered the education as the main core of ecological behaviour process. Considering

training course and implementation of cultural programs can improve the capabilities of clientele to have a optimize ecological behavior. Knowledge can help to overcome psychological barriers, such as ignorance and misinformation (Gardner & Stern, 1996). This claim neither reveals how knowledge affects ecological behavior, nor promotes ways to handle non-psychological, situational influences theoretically or methodologically. Social factor is the third important variable affecting the ecological behaviour in conservation of natural resources Ahwaz city.

Conclusion

Based on the results the women are not well-performance of the ecological behaviour on their activities. The highest ecological behaviour of women rank refers to the " To wash the vegetables, I am using detergent " (M=3, sd=0.79). This result revealed that the item that located on first rank had moderate level. Majority of women had not well-performance of the ecological behaviour (n=44, 36.67%). Findings showed that the majority of the studied persons (37.5 percent) believed that the effect of individual and psychological factors on the ecological behaviour is moderate. Also findings showed that the majority of the studied persons respectively (29.17 and 52.8 percent) believed that the effect of social and cultural-educational factors on the ecological behaviour is much. Environmental attitude (x_1) was the first variable entered in the equation meaning that this variable has the highest effect on the ecological behaviour. In this stage, the correlation coefficient and the coefficient of determination were 0.698 and R^2 0.487, respectively. Cultural and educational factor (x_2) was the second variable entered in the equation meaning that this variable has the highest effect on the ecological behaviour. In this stage, the correlation coefficient and the coefficient of determination were 0.712 and R^2 0.506, respectively. Considering the coefficient of determination, this variable has determined 50.6% of the dependent variable's variance. At the third stage, variable of social factor (x_3) was entered in the equation. The correlation coefficient and the adjusted coefficient of determination were R=0.765 and R^2=0.585, respectively. Based on the findings, this variable has explained 58.5% of the dependent variable's changes.

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