

Environmental awareness analysis: effect of father's qualification

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Abstract

Youths are effected by various intrinsic and extrinsic factors, however parents have major influence on them. Awareness about environment can make them live a better life with a better life style. As per fieldwork conducted one observation was that elders act as demotivating force for extra-curricular activities and rather want youths to focus on study. Hence, environmental initiatives are discouraged in youths. This study was conducted for analyzing the effect of father's qualification on boy's awareness. Sample was collected from secondary school students of age group 14 to 20 from Bikaner city of Rajasthan. Primary data was collected using questionnaire method. Awareness was measured on the environmental issues such as water, light, L.P.G., fuel, air, tree, plastic and global warming. Boys were divided as per father's qualification into following categories- (1). Not educated, (2). Till 8th class, (3) 9th to 12th class and (4) Graduation and above. Chi-square or z-test was used for analysis at significance level 0.05 for testing two-tailed hypothesis. Results depicted that the difference in the awareness level of boys about various environmental issues with difference in father's qualification was not significant. Hence, it may be concluded that there is no effect of father's qualification on boy's awareness. However there is impact of father's qualification on overall awareness level of boys. It means it is not necessary that impact of father's qualification can be seen on one, two or few questions however when overall awareness level is calculated impact of father's qualification can be seen on boy's awareness. Parents are concerned about education however other dimensions too need to be developed in youths like awareness about environment so that they could lead an efficient healthy life mutually beneficial for man and nature.

Key Words: Awareness, parents, youths

Introduction

Youth's awareness level is increasing because they are updated with latest gadgets, technologies, sophisticated instruments etc. However, these things distance them from the realistic world and cause an irreparable damage in their lives which their ancestors enjoyed. Parents have major influence on youths and when it comes to environmental awareness, they are influenced by parents rather than the learning process. Activities and life-

style is however molded by many factors but parents seem to influence child since birth. Youths learn at home and coordinate with other family members generally. Hence, this study is conducted to see the effect of father's qualification on boy's awareness.

As per study of knowledge, awareness and attitude about environment conducted by me, I came to the conclusion that one of the biggest barriers in environmental programs conducted in city are the elders who are following a set pattern of life-style. Parents are generally concerned about study of their children without realizing importance of awareness in daily lives. Hence, this study was conducted to check the effect of father's qualification on boy's awareness.

Materials and Methods

The present investigation was carried out in the secondary schools of Bikaner city of Rajasthan in India. The target population comprised of boys aged in between 14 to 20. Primary data was collected using pre-tested questionnaire. Out of 541 students, of which 150 boys formed the sample. These boys were further divided into groups as per father's qualification of which 95 boys were considered for analysis. Rests of the boys were dropped as they were not aware of their father's qualification. Cluster sampling procedure was followed.

Hypothesis

H₀- There is no difference in the awareness level of boys about environmental issues divided as per father's qualification.

H₁- There is difference in the awareness level of boys about environmental issues divided as per father's qualification.

Descriptive Statistics

Father's qualification	Boy's sample Size (Total-95)
1 Not educated	5
2 Till 8 th class	13
3 9 to 12th class	50
4 Graduation and above	27

Boys were divided into categories as per father's qualification.

Results and Discussion

The results of the survey work are presented in detail.

Analysis using chi-square test or z-test

(Significance level 0.05)

Two-tailed test

Q.1	Scarcity of water in town	Yes	No	No response
1	Not educated	1	4	0
2	Till 8 th class	8	5	0
3	9 to 12th class	27	23	0
4	Graduation and above	18	9	0

Level of response.	Till 8th class	9th to 12th class	Graduation and above	Row total
Yes	8 (7.66) [0.02]	27 (29.44) [0.20]	18 (15.90) [0.28]	53
No	5 (5.34) [0.02]	23 (20.56) [0.29]	9 (11.10) [0.40]	37



<i>Column total</i>	13	50	27	90 (Grand total)
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The chi-square statistic was 1.206. The p -value was 0.547174. H_0 was accepted which means that the difference in the awareness level of boys about environmental issues did not find any significant relation with father's qualification.

Q.2	River or lake near	Yes	No	No response
1	Not educated	3	2	0
2	Till 8 th class	5	8	0
3	9th to 12th class	13	36	1
4	Graduation and above	7	20	0

Level of Response	9th to 12th class	Graduation and above	Row Totals
Yes	13 (12.89) [0.00]	7 (7.11) [0.00]	20
No	36 (36.11) [0.00]	20 (19.89) [0.00]	56
<i>Column Totals</i>	49	27	76 (Grand Total)

The chi-square statistic is 0.0033. The p -value is 0.954311. The H_0 was accepted means that the difference in the awareness level of boys about environmental issues with respect to their father's qualification was not significant.

Q.3	Know about LED bulb	Yes	No	No response
1	Not educated	5	0	0
2	Till 8 th class	11	0	2
3	9th to 12th class	48	2	0
4	Graduation and above	27	0	0

Z test for 2 Population Proportions

Individuals from sample Population 2 (with father's qualification till 8th)

11

Total sample Population 2

13

Individuals from sample Population 3 (with father's qualification from 9 to 12th class)

48

Total sample Population 3

50

The Z-Score was -1.4996. The p -value was 0.13362. The proportion of Yes responses for Observation 1 was 0.846. The proportion for Observation 2 was 0.96. The H_0 was accepted means that the difference in the awareness level of boys about environmental issues with respect to their father's qualification was not significant.

Individuals from sample Population 3 (with father's qualification from 9 to 12th class)

48

Total sample Population 3

50

Individuals from sample Population 4 (with father's qualification graduation and above)

27

Total sample Population 4

27

The Z-Score was -1.053 and the p-value was 0.29372. The proportion of 'Yes' response for observation 1 was 0.96. The proportion for observation was 2:1. The H_0 was accepted means that the difference in the awareness level of boys about environmental issues with difference in father's qualification was not significant.

Q.4	LPG imported	Yes	No	No response
1	Not educated	4	1	0
2	Till 8 th class	7	4	2
3	9 th to 12 th class	25	22	3
4	Graduation and above	9	16	2

Level of response	Till 8 th class	9 th to 12 th class	Graduation and above	Row total
Yes	7 (5.43) [0.45]	25 (23.22) [0.14]	9 (12.35) [0.91]	41
No	4 (5.57) [0.44]	22 (23.78) [0.13]	16 (12.65) [0.89]	42
Column total	11	47	25	83 (Grand total)

The chi-square statistic was 2.9581 and p-value was 0.227859. The H_0 was accepted means that the difference in the awareness level of boys about environmental issues with difference in father's qualification was not significant.

Q.5	Aware about price of petrol/diesel	Yes	No	No response
1	Not educated	4	1	0
2	Till 8 th class	10	3	0
3	9 th to 12 th class	39	11	0
4	Graduation and above	23	4	0

Level of response	9 th to 12 th class	Graduation and above	Row total
Yes	39 (40.26) [0.04]	23 (21.74) [0.07]	62
No	11 (9.74) [0.16]	4 (5.26) [0.30]	15
Column total	50	27	77 (Grand total)

The chi-square statistic was 0.5771. The p-value was 0.447469. The H_0 was accepted means that the difference in the awareness level of boys about environmental issues with difference in father's qualification was not significant.

Q.6	Air quality index	Yes	No	No response
1	Not educated	2	3	0
2	Till 8 th class	4	7	2
3	9 th to 12 th class	22	24	4
4	Graduation and above	15	9	3

Level of response	Till 8 th class	9 th to 12 th class	Graduation and above	Row total
Yes	4 (5.57) [0.44]	22 (23.28) [0.07]	15 (12.15) [0.67]	41
No	7 (5.43) [0.45]	24 (22.72) [0.07]	9 (11.85) [0.69]	40
Column total	11	46	24	81 (Grand total)

total *total*

The chi-square statistic was 2.3932 and *p*-value was 0.302226. The H_0 was accepted means that the difference in the awareness level of boys about environmental issues with difference in father's qualification was not significant.

Q.7	Trees reduce pollution	Yes	No	No response
1	Not educated	5	0	0
2	Till 8 th class	10	2	1
3	9 th to 12 th class	42	7	1
4	Graduation and above	26	1	0

Z test for 2 Population Proportions

Individuals from sample Population 2(with father's qualification till 8th)

Total sample Population 2

Individuals from sample Population 3(with father's qualification from 9th to 12th class)

Total sample Population 3

The Z-Score was -0.5988. The *p*-value was 0.5485. The proportion of 'Yes' response for Observation 1 was 0.769. The proportion for Observation 2 was 0.84. H_0 was accepted means that the difference in the awareness level of boys about environmental issues with difference in father's qualification was not significant.

Individuals from sample Population 3(with father's qualification from 9th to 12th class).

Total sample Population 3

Individuals from sample Population 4(with father's qualification graduation and above)

Total sample Population 4

The Z-Score and *p*-value was -1.6025 and 0.1096 respectively. The proportion of Yes response for Observation 1 was 0.84. The proportion for Observation 2 was 0.963. Here too H_0 was accepted like previous occasions.

Q.8	Forests receding	Yes	No	No response
1	Not educated	5	0	0
2	Till 8 th class	13	0	0
3	9 to 12 class	46	4	0
4	Graduation and above	24	2	1

Z test for 2 Population Proportions

Individuals from sample Population 2(with father's qualification till 8th)

Total sample Population 2

Individuals from sample Population 3(with father's qualification from 9th to 12th class)

46

Total sample Population 3

50

The Z-Score was 1.0538. The p-value was 0.29372. The proportion of 'Yes' response for observation 1 was 1. The proportion for Observation 2 was 0.92. H_0 was accepted.

Individuals from sample Population 3(with father's qualification from 9th to 12th class).

46

Total sample Population 3

50

Individuals from sample Population 4(with father's qualification graduation and above)

24

Total number of individuals in sample Population 4

27

The Z-Score was 0.4531 and p-value was 0.65272. The proportion of 'Yes' response for observation 1 was 0.92. The proportion for Observation 2 was 0.889. H_0 was accepted means that the difference to the awareness level of boys about environmental issues to father's qualification was not significant.

Q.9	Plastic cause pollution	Yes	No	No response
1	Not educated	5	0	0
2	Till 8 th class	12	1	0
3	9 th to 12 th class	49	1	0
4	Graduation and above	26	0	1

Z test for 2 Population Proportions

Individuals from sample Population 2(with father's qualification till 8th)

12

Total sample Population 2

13

Individuals from sample Population 3(with father's qualification from 9 to 12th class)

49

Total sample Population 3

50

The Z-Score was -1.0429 and p-value was 0.29834. The proportion of 'Yes' response for observation 1 was 0.923. The proportion for observation 2 was 0.98. H_0 was accepted means that the difference in the awareness level of boys about environmental issues to father's qualification was not significant.

Individuals from sample Population 3(with father's qualification from 9th to 12th class)

49

Total sample Population 3

50

Individuals from sample Population 4(with father's qualification graduation and above)

26

Total sample Population 4

27

The Z-Score was 0.4485. The p-value was 0.65272. The proportion of 'Yes' response for observation 1 was 0.98. The proportion for Observation 2 was 0.963. The H_0 is accepted means that the difference in the awareness level of Boys about environmental issues with difference in father's qualification is not significant.

Q.10	Very thin plastic do not recycle	Yes	No	No response
1	Not educated	3	2	0
2	Till 8 th class	5	7	1
3	9 th to 12 th class	27	23	0
4	Graduation and above	16	8	3

	Till 8 th class	9 th to 12 th class	Graduation and above	Row Totals
Yes	5 (6.70) [0.43]	27 (27.91) [0.03]	16 (13.40) [0.51]	25
No	7 (5.30) [0.54]	23 (22.09) [0.04]	8 (10.60) [0.64]	50
Column Totals	50	25		75 (Grand Total)

The chi-square statistic was 2.1868. The p-value was 0.335079. The H_0 was accepted means that the difference in the awareness level of boys about environmental issues was not significant to father's qualification.

Q.11	Global warming makes difference	Yes	No	No response
1	Not educated	5	0	0
2	Till 8 th class	10	3	0
3	9 th to 12 th class	44	5	1
4	Graduation and above	26	0	1

Z test for 2 Population Proportions

Individuals from sample Population 2(with father's qualification till 8th).

10

Total sample Population 2.

13

Individuals from sample Population 3(with father's qualification from 9th to 12th class).

44

Total sample Population 3

50

The Z-Score was -1.0168 and p-value was 0.30772. The proportion of 'Yes' response for observation 1 was 0.769. The proportion for observation 2 was 0.88. H_0 was accepted like the previous ones.

Individuals from sample Population 3(with father's qualification from 9th to 12th class)

44

Total sample Population 3

50

Individuals from sample Population 4(with father's qualification graduation and above)

26

Total sample Population 4

27

The Z-Score was -1.2084 and p-value was 0.22628. The proportion of 'Yes' response for observation 1 was 0.88. The proportion for observation 2 was 0.963. H_0 was accepted.

Note: If expected frequency is less than 5 that class is not considered for analysis.

A brief outline of the response output is narrated in the below mentioned table.

	Issues raised in the questionnaire	Chi square or Z-test result
1	Scarcity of water	Not Significant
2	River or lake near	Not significant
3	Know about L.E.D. bulb	Not significant
4	LPG imported	Not Significant
5	Price of petrol/diesel	Not Significant
6	Air quality index	Not Significant
7	Trees reduce pollution	Not significant
8	Forests receding	Not significant
9	Plastic cause pollution	Not Significant
10	Very thin plastic do not recycle	Not significant
11	Global warming makes difference	Not significant

H_0 was accepted as no significant difference was observed between the awareness level of boys about environmental issues vis-a-vis father's qualification. Hence, father's qualification has nothing to do with boy's awareness of the above mentioned issues.

Awareness Index = $\left\{ \left[\frac{\text{(Scores for different items)}}{\text{Number of respondents}} \right] \div \text{Number of options} \right\} \times 100$

Boys of "fathers not educated"

$$AI = \left\{ \frac{(42 \div 5)}{11} \right\} \times 100$$

$$\text{Or } AI = \left\{ \frac{(8.4)}{11} \right\} \times 100$$

$$\text{Or } AI = (0.7636) \times 100$$

$$\text{Or } AI = 76.36$$

Boys of "fathers studied till 8th class"

$$AI = \left\{ \frac{(95 \div 13)}{11} \right\} \times 100$$

$$\text{Or } AI = \left\{ \frac{(7.3076)}{11} \right\} \times 100$$

$$\text{Or } AI = (0.6643) \times 100$$

$$\text{Or } AI = 69.43$$

Boys of "fathers studied 9th to 12th class"

$$AI = \left\{ \frac{(382 \div 50)}{11} \right\} \times 100$$

$$\text{Or } AI = \left\{ \frac{(7.64)}{11} \right\} \times 100$$

$$\text{Or } AI = (0.6945) \times 100$$

$$\text{Or } AI = 69.45$$

Boys of "fathers graduate or above"

$$AI = \left\{ \frac{(217 \div 27)}{11} \right\} \times 100$$

$$\text{Or } AI = \left\{ \frac{(8.037)}{11} \right\} \times 100$$

$$\text{Or } AI = (0.7306) \times 100$$

$$\text{Or } AI = 73.06$$

Although when overall awareness level is calculated for all the four categories shows overall awareness level of boys is affected by father's qualification. In this awareness level of boys increased with increase in level of father's qualification.

Hence even though there is no impact of father's qualification on boy's awareness about various topics however there is impact of father's qualification on overall awareness level of boys.

Note: - Sample size of boys of "not educated" fathers category is very small hence result drawn from that are not reliable and thus are neglected for drawing result based on that.

Not much work has been done on this topic of study shows the originality of primary data based research conducted. However similar kind of studies which sparked the research are- Hampel, Holdsworth, and Boldero (1996) studied the impact of parental work experience and education on environmental knowledge, concern and behaviour among adolescents. For boys, the most significant correlations were father's education ($r = 0.51$) and mother's education ($r = 0.41$). Gambro and Switzky (1999) studied the distribution of knowledge about environmental issues related to energy and pollution in America. The amount of formal education a student's parent received was significantly related to the student's level of knowledge concerning environmental issues. Makki et al. (2003) conducted a study to assess Lebanese secondary school student's environmental knowledge and attitudes. The study found that participants with —more educated fathers had significantly higher environmental knowledge scores. J.M. Muola (2010) conducted a study on —Relationship between academic achievement motivation and home environment on 8th class students. Results indicated:- Positive relation between six home's factors namely father's occupation, mother's occupation, father's education, mother's education, family size and learning facilities at home and academic achievement motivation.

Same kind of result has been obtained which shows there is significant relation between father's qualification and boy's awareness however it's not mandatory to see impact of father's qualification on awareness about each topic or question.

Parents act as guide and source of inspiration to children however it is generally seen that they are concerned about child's education only. However, there are other dimensions too which needs to be developed and one such is awareness. Awareness about environment can help a child live better life. Hence, informative and motivating sessions may be held for the entire family members in which parents should be encouraged to act as source of inspiration and guide their children in a befitting manner about the role of awareness to lead a better life style in this ever-changing world.

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