Parental Modeling; A Determinant of Pro-Environmental Attitude and Behavior in Youth

Lubna Nazneen[1] and Madiha Asghar[2]
Islamia College Peshawar

The purpose of this research was to study the effects of parental modeling on the pro environmental attitude and behavior of youth. Sample of the study consisted of (N= 692) adolescents, including both male and female genders of ages (18-25) years having education of Intermediate, BS and Masters, from Peshawar Khyber Pakhtunkhwa. A demographic sheet and self constructed Environmental Attitude Questionnaire, was administered to the subjects selected through convenient sampling method. Results showed that parental modeling plays a significant role in shaping youth's pro environmental attitude and behavior. This impact is greater for females as compared to males, for adolescents as compared to young adults and for rural youth as compared to urban youth.

Keywords: role of parents, pro-environmental attitude, and behavior

Most of the scientific society now believes that the present environmental catastrophe is an outcome of human actions i.e. most of the environmental problems have not raised just because of the shortcomings of technology but actually are due to humans' inappropriate use of the environmental resources. (Chawla &Derr; 2012; Gifford, 2011; Schultz & Kaiser, 2011). Keeping in view this tendency of humans, towards environment it has become more important to educate our children

[1]Lecturer, Department of Psychology, Islamia College Peshawar
[2]Assistant Professor, Department of Psychology, Islamia College Peshawar

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regarding environmental cleanliness and conservation in order to attain a more sustainable future.

There are many significant figures surrounding children which act as leading models, for them such as parents, characters presented by media, friends and teachers. (McLeod, 2016).Out of all these agencies parental modeling has the top most influence on children and ultimately on youth's behavior. On account of social development theories (Bandura, 1986; Hoffman, 2000; Rogoff, Paradise, Arauz, Correa-Chavez, & Angelillo, 2003) role models greatly effect and modify children's behaviors and attitudes that prevail till later life. The effect of parental modeling on youth's behavior in various domains of life is thoroughly researched but the area of pro environmental attitudes and behaviors is totally neglected especially in Pakistan. Latif, Saleem and Abedien (2011) found that parental models have a significant influence on teen purchase behaviors. In fact, most of the studies in this domain on green consumerism in adolescents as well as children showed that parents always has an important function in transmitting pro-environmental knowledge to the subsequent generation (Matthies & Wallis, 2015). Through social influence processes, parents influence their teenage (Grønhøj & Thøgersen, 2012) and younger children's (Matthies, Selge, & Klöckner, 2012) environmental values and attitudes. Home environment has a vital role in creating environment friendly behaviors in children belonging to different cultures (Ando, Yorifuji, Ohnuma, Matthies, & Kanbara, 2015). According to Chawla (2009), the culture in which a child grows affects his bond with the nature as well. In most of our cultures, females have learned to focus on others desires; are more accommodating, selfless and empathetic as compared to males (Dietz, Kalof, & Stern, 2002). This also shows that women would be more helpful for others including nature and natural objects, as compared to men (McCright, 2010).

Having similar findings, Tam (2013) concluded that the higher levels of empathy in females for nature than men had a positive relationship to pro environmental behavior in them. Moreover, it was found that females were comparatively more open to the views of significant others than men (Brinzendine, 2006). All these factors, as a result can, cause a different effect of the social agents on males and females. For instance, Casaló and Escario (2016) found that parental concern for environment has a greater effect on girls as compared to boys.

The theoretical perspective of the present study is based on "parenting in terms of transmission of social norms in a social learning or modeling tradition" (Bandura, 1977). Children as well as adolescents are greatly influenced by parental values and behaviors at home as well as in the community. If parents take care of the surrounding environment, its beauty and cleanliness, their children also show the same preferences.

Aim of the present study is to find out the effect of parental modeling on Pakistani youth, in the learning of environment friendly behaviors.

Objectives

- To investigate the gender differences in acquisition of environment friendly behaviors as a result of parental modeling.
- To study the role of parental modeling in the attainment of environmental friendly Attitude and behavior across different age groups.
- To find out the impact of parental modeling on the pro environmental attitude and behavior of youth from different residential backgrounds.

Hypotheses

- Girls will be highly influenced by their parents' pro-environmental attitude as compared to boys.
- Pro environmental attitude of the parents will be more predictive of environmental friendly attitude and behavior in adolescents as compared to young adults.
- Youth from urban areas will be more influenced by their parental pro-environmental attitude and behavior as compared to those living in rural areas.

Method

Sample

The sample of the study consisted of six hundred and ninety two university students. Their age ranged from 16 to 25 years having, mean of 20.86 and standard deviation of 1.822. Youth with age range of 16 to 19 years were considered to be in adolescents group whereas youth with age range of 20 to 25 years were considered to be in young adults group. Thus in terms of age 225 were adolescents and 467 were young adults. On the

basis of gender, 377of the subjects were males and 315 were females. 319 subjects were from rural areas and 373 were from urban areas. They were selected through convenient sampling method.

Instrument

A demographic sheet and a self-constructed environmental attitude questionnaire measuring attitude and behavior towards environment were used. It consisted of 20 items.10 items measured the attitude, 8 items measured the behavior towards environmental cleanliness and conservation and 2 items measured perceived parental attitude and behavior towards environment. A four and five point likert scale was used for different items, for which the responses ranged either from 1-4 or from 1-5 showing increasing level of agreement.

Procedure

Before initiating the formal research permission was taken from the head of each department of the university. The subjects were contacted in groups. After establishing rapport and getting the informed consent, demographic information sheet and an environmental attitude questionnaire constructed by the researcher herself were administered on the present sample. Subjects were asked to fill all the questionnaires completely and honestly. The subjects were properly guided and all their questions regarding any difficulty in questioners were full answered.

Results

Table 1

Psychometric Properties of Scale in the Study (N=692)

Scale	No of items	Mean	SD	α	Range		Skew
					Potential	Actual	
PPA	2	8.61	1.70	0.69	2-10	2- 10	-1.34
ATECC	10	36.68	4.46	0.74	10-50	19-42	-1.40
BTECC	8	28.95	5.54	0.77	8- 40	10-40	-.042

Note: PPA: Perceived Parental Attitude, ATECC: Attitude Towards Environmental Cleanliness and Conservation, BTECC: Behavior Towards Environmental Cleanliness and Conservation

Table 2

Simple Regression Analysis of Perceived Parental Attitude, Predicting Attitude towards Environmental Cleanliness and Conservation on the Basis of Gender.

	Male n=377			Female n=315		
	B	SE(B)	B	B	SE(B)	β
Constant	27.52	1.03***		25.40	1.22***	
PPA	1.05	.12***	.410	1.31	.13***	.47

Note: Male = R^2 = .16, Female R^2=.29,=p<.05, **=p<.01 & ***=p<.001*

Table 2 shows regression analysis of perceived parental attitude towards environment predicting attitude towards environment of male and female youth. The proportion of variance in attitude towards environmental cleanliness and conservation that can be predicted from PPA is greater for females (R^2=.29) as compared to males (R^2=.16)

Table 3

Simple Regression Analysis of Perceived Parental Attitude, Predicting Behavior towards Environmental Cleanliness and Conservation among Males and Females.

	Males (n=377)			Females (n=315)		
	B	SE(B)	β	B	SE(B)	β
Constant	18.55	1.36***		17.05	1.49***	
PPA	1.21	0.15***	.367	1.37	0.16***	0.42

Note: Male=R^2 = .13,Female R^2=.17,=p<.05, **=p<.01 & ***=p<.001*

Table 3 shows regression analysis of perceived parental attitude towards environment predicting behavior towards environment of male and female youth. The proportion of variance in behavior towards environmental cleanliness and conservation that can be predicted from PPA is greater for females (R^2=.179) as compared to males (R^2=.135).

Table 4

Simple Regression Analysis of Perceived Parental Attitude, Predicting Attitude towards Environmental Cleanliness and Conservation across different Age groups.

	Adolescents (n= 225)			Young Adults (n= 467)		
	B	SE(B)	β	B	SE(B)	β
Constant	24.76	1.29***		28.06	0.99***	
PPA	1.32	0.15***	0.50	1.03	0.11***	.39

Note: PPA= Perceived Parental Attitude, Adolescents = R^2= .25, Young Adults R^2=.15,=p<.05, **=p<.01 & ***=p<.001*

Table 4 shows regression analysis of (PPA) perceived parental attitude towards environment predicting attitude towards environment of adolescents and young adults. The proportion of variance in attitude towards environmental cleanliness and conservation that can be predicted from PPA is greater for adolescents (R^2=.25) as compared to for urban residents (R^2=.15).

Table 5

Simple Regression Analysis of Perceived Parental Attitude, Predicting Behavior Toward Environmental Cleanliness and Conservation Across Different Age Groups.

	Adolescents n=225			Young Adults n= 467		
	B	SE(B)	β	B	SE(B)	β
Constant	16.97	1.50***		18.72	1.33***	
PPA	1.35	0.17***	.46	1.20	0.15***	.34

Note=Adolescents R^2.216= Young Adults R^2=.120=p<.05,**=p<.01 &***=p<.001*

Table 5 shows regression analysis of (PPA) perceived parental attitude towards environment predicting behavior towards environment of adolescents and Young adults. The proportion of variance in behavior

towards environmental cleanliness and conservation that can be predicted from PPA is greater for adolescents (R^2=.21) as compared to young adults (R^2=.12).

Table 6

Simple Regression Analysis of Perceived Parental Attitude, Predicting Attitude towards Environmental Cleanliness and Conservation in Urban and Rural Youth

	Urban (n=233)			Rural (n= 455)		
	B	SE(B)	B	B	SE(B)	β
Constant	26.42	1.09***		26.68	1.14***	
PPA	1.17	0.12***	0.44	1.18	0.13***	0.45

*Note: PPA=Perceived Parental Attitude, Urban R^2=.19, Rural R^2 =.20, *=p<.05,**=p<.01&***=p<.001*

Table 6 shows regression analysis of (PPA) perceived parental attitude towards environment predicting attitude towards environment of urban and rural youth. The proportion of variance in attitude towards environmental cleanliness and conservation that can be predicted from PPA is greater for rural residents (R^2=.20) as compared to for urban residents (R^2=.19) .

Table 7

Simple Regression Analysis of Perceived Parental Attitude, Predicting Behavior towards Environmental Cleanliness and Conservation in Urban and Rural Youth.

	Urban n=233			Rural n= 455		
	B	SE(B)	B	B	SE(B)	β
Constant	17.71	1.38***		18.163	1.45***	
PPA	1.30	0.16***	0.40	1.260	0.17***	.39

Note: PPA= Perceived Parental Attitude, Urban = R^2= .16, Rural R^2=.15,=p<.05, **=p<.01 & ***=p<.001*

Table 7 shows regression analysis of perceived parental attitude towards environment predicting behavior towards environment of urban and rural youth. The proportion of variance in behavior towards environmental cleanliness and conservation that can be predicted from PPA is greater for urbanites (R^2=.16) as compared to for rural residents (R^2=.15).

Discussion

The aim of this research was to investigate the extrapolative role of parental modeling in the acquisition of pro environmental attitude and behavior of youth. Few other suppositions were made in accordance to the main aim of the research. First hypothesis of the study was that, girls will be more influenced by their parents' environment friendly attitudes as compared to boys. Results of the simple regression analysis have confirmed this hypothesis. Same results were obtained from earlier studies with teen agers (Casaló & Escario, 2016). Results from present research are also similar to the prototype most of the time encountered in past researches, girls are found to be more environment friendly than boys (Coertjens, Boeve-de Pauw, de Mayer, & Van Petegem, 2010).

Collado, Evans & Sorrel, (2017) also found that the environment friendly behavior of parents and peers had a great influence on children's environmental attitudes and behaviors but the effect seems to be more powerful for females than for males. In the present study this impact is greater on attitude as compared to behavior.

Second hypothesis of the present study was that the pro environmental attitude of parents will be more predictive of environmental friendly attitude and behavior in adolescents as compared to young adults. Present results show that the influence of parents on Youth's environment friendly attitude and behavior seems to be stronger for adolescents. These findings support the proposition that children's developmental contexts change with their age (Larson & Richards, 1991; Wigfield et al., 2006), with an increase of the influence from peers than family during their adolescent period (Bronfenbrenner & Evans, 2006).

Third hypothesis was that youth from rural areas will get a greater impact from their parental attitudes and behavior towards environment as compared to those living in urban areas. This hypothesis is also proved by simple regression analysis and these results are somewhat in line with some past studies i.e students in the UK from rural areas had more

positive attitude towards natural environment than students from urban areas(Hinds & Sparks, 2008). Norwegian farmers were found to be more protective for nature (mainly for the reason that it could fulfill human needs), than other groups of people including wildlife managers and research biologists (Bjerke & Kaltenborn, 1999).

Apart from all the above findings it is an interesting observation that there seems to be a gap between attitude and behavior in all our results. This is in accordance with some previous findings that attitude is not a direct determinant of behavior; rather it persuade behavioral intentions which then modify our actions. In addition to attitudes social pressures also affect our behavioral intentions. Thus 'the final determinants of behavior are the beliefs about behavioral consequences and already established social norms for that behavior (Ajzen&Fishbein,1980,p.239).

Summary and Conclusion

The aim of the present study was to find out the impact of parental modeling on the development of pro environmental attitudes and behaviors in youth. A sample of N=692 Youth ages 16-25 years were selected from a public sector university of KP using convenient sampling method. It is concluded from the present study that parental modeling plays a significant role in shaping youth's pro environmental attitude and behavior. This impact is greater for girls as compared to boys and for adolescents as compared to young adults. For the age group, 16-18 year-olds, Grønhøj and Thøgersen (2012) also found support for the parental influence assumption in relation to sustainable household activities, proper waste disposal, buying environment friendly products and electricity conservation. Similarly, in rural youth this impact is greater than in urban youth. These results show that parents can inculcate pro environmental attitudes and behavior in their children by showing the very same behaviors themselves.

Limitations and recommendations

Population chosen for the present research was quite grown-up therefore it would be rather appealing to extend this study to younger groups in order to get important knowledge regarding the impact of parental modeling on children's attitude and behavior as well. Significant, unanswered questions comprise, for example, whether young children also learn environment friendly attitude and behavior by observing their

parent's attitude towards environment. Furthermore, longitudinal research studies can be helpful in finding out, that if, 'parenting can play a significant role with respect to the issues of sustainability in long term.

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