

THE ROLE OF FAMILY ENVIRONMENT AND CLASSROOM ENVIRONMENT ON THE DEVELOPMENT OF TYPE A BEHAVIOR PATTERN[#]

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The study is an attempt to understand the contribution of family environment, classroom environment, and the intelligence level of adolescents in the development of Type A Behavior Pattern (TABP). A sample of 200 adolescents (100 boys and 100 girls) was administered the Type A Behavior Scale (Wolf et al., 1982) Family Environment Scale (Moos & Moos, 1986), Classroom Environment Scale (Joshi & Vyas, 1997), and Standard Progressive Matrices (Raven, 1960). Results of step-wise Multiple Regression Analysis revealed that greater cohesion, expressiveness, control, organization, intellectual-cultural orientation of the family, moral-religious emphasis within the family are significant contributors towards lesser TABP. Greater conflicts within the family and early independence given to adolescents may increase TABP. Within the classroom environment excessive competition and innovativeness brings greater anxiety and henceforth greater TABP. Proper organization, encouragement, control, greater involvement of the teacher in the classroom activities reduces their vulnerability towards TABP. Intelligence has been found to be an insignificant contributor. Gender differences in variables contributing towards TABP have also been found.

The evidence has accumulated in recent years that implicates a behaviour pattern, designated as Type A, as a risk factor for coronary heart diseases (CHD). The attempt to define and empirically test the concept of Type A Behavior Pattern (TABP) was the pioneering work of two cardiologists, Friedman and Rosenman (1959). They reported that majority of CHD patients showed a set of behavioral characteristics that they labeled as TABP. Since then this relationship has generated considerable interest among medical and psychological researchers. Friedman and Rosenman described TABP as characterized by extremes of impatience, aggressiveness and

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hostility, competitive achievement striving, and time urgency that are evoked by a variety of environmental situations. The individuals who evidently show a relative absence of these characteristics are exhibiting the TABP.

The growing scientific and public interest in this concept has raised questions about how this behavior pattern develops. Researchers in this area have evaluated the possible contribution of genetics vs. those of environment. As is often the case, the controversy of nature vs. nurture will probably remain subject to debate. The origins probably lie in a dynamic combination of both nature and nurture. In the present study an attempt has been made to focus on the nurture issue.

Researchers over the years have confirmed the importance of home environment and family in the development of the child. It is within the family that a child learns the fundamentals of social interactions and acquires the behavior patterns and basic personality structures (Becker, 1964; Kessler, 1966). It would, thus, not be wrong to assume that parent-child interactions may play an influential role even in the development of TABP. Various studies have been carried out to investigate this possible relationship (Bracke, 1986; Essan & Coates, 1988; Fukunishi & Fujito, 1992; McCraine & Simpson, 1986; Yamasaki, 1994). It has been reported that parents of high Type A children were more critical of their children's actions, praised more, and exhibited more tension. They used social comparison to other children (Bracke, 1986). High Type A boys perceived that their fathers would use more physical and punishing methods for discipline. Greater use of parents power-assertive punishment has been associated with the development of anger and hostility while the use of induction procedures has been related to conscience development (Baumrind, 1971). McCraine and Simpson (1986) suggested that Type A children were significantly more likely to describe both parents as paying high emphasis on achievement, expecting competence in a wide variety of areas and always demanding better performance. Yamasaki (1994) and Raikonen (1993) suggested that there is an association between TABP of parents and their children. However, studies by other researchers have ruled out the effects of family environment on TABP (Pederson, Liettenstein, Plomin, & DeFaire, 1989; Sweda & Jacob, 1986).

The evidence pertaining to parent-child interactions is quite conflicting and non-conclusive regarding the significance of the role played by parents, the within family relationships, the child rearing

practices, etc. Furthermore, it may even be pertinent to point out that the environment which the child is getting in his school significantly influences the development of the child. The dynamic climate of the school/classroom may be an ideal ecology for the child's overall personality development. According to Johnston and Bachman (1976), school functions as a sharpener and shapes the personality of the students of which the foundation has already been laid at home by the quality of psychological nourishment that provides the material on which schooling works further. The school provides real opportunities for the experience of cooperation and competition for children. Therefore, it is equally important to assume that besides the family environment the school environment also contributes to the process of development.

METHOD

Sample

The sample comprised of 200 adolescents (100 boys and 100 girls) ranging in age from 15 to 18 years with a mean age of 16.33 years for girls and 16.03 years for boys. The data was collected from an English medium public schools of Amritsar (Punjab, India).

Instruments

Following tests were used to achieve the objectives of the present study. These tests were adapted and standardized in accordance with the local context.

Family Environment Scale

The family environment scale comprises of 10 subscales that measures the social environmental (Moos, & Moos, 1986) characteristics of all types of families. This is a 90 item scale to be responded in two response categories. The 10 subscales within this scale are, as follows: Cohesion, Expressiveness, Conflict, Independence, Achievement Orientation, Intellectual Orientation, Active-recreational Orientation, Moral-religious Emphasis, Organization and Control.

Classroom Environment Scale

The classroom environment scale (Joshi & Vyas, 1997) reflects the teacher student, student-student relationship and the type of organizational structure of the classroom. There are a total of 78 statements to be responded on a five point scale ranging from '0 to 4'. The 9 subscales subsumed under this scale are Involvement, Affiliation, Teacher Support, Task Orientation, Competition, Order and Organization, Rule Clarity, Teacher Control, and Innovation.

Along with these two instruments Raven Progressive Matrices (1960) and Type A Behaviour Scale (Wolf, Sklon, Wenzl, Hunter, & Berenson, 1982) were also administered, on the present sample.

The reliability coefficient of the different measures were computed by using test-retest method. The reliability coefficients ranged between .60 to .93 for the Family Environment Scale, .69 for the Type A Behavior Scale, and .72 to .92 for the Classroom Environment Scale. All these reliability coefficients are quite satisfactory indicators of the reliabilities of these instruments.

RESULTS AND DISCUSSION

To study the relationship of Type A Behaviour Pattern Scale with the family environment, classroom environment, and the cognitive factor of intelligence, all variables were intercorrelated by applying appropriate correlational analysis techniques and were further subjected to step-wise Multiple Regression Analysis to check the contribution of each independent variable towards the dependent variable.

Correlational Analysis

The correlations between TABP and the different variables of family environment, classroom environment, and intelligence are given in Tables 1 and 2 for boys and girls, respectively.

Table 1

Correlations, regression coefficients, and F-ratios of Boys Sample (N=100)

Variables	Regression Coefficients	R ²	F Ratio	r
Intellectual Orientation	Cultural -3.65	.18	21.53*	-.40*
Innovation	-1.15	.20	2.43	-.37*
Organization	-.90	.23	3.75**	-.36*
Moral Emphasis	Religious -3.75	.26	3.89**	-.35*
Rule Clarity	-.49	.27	1.29	-.34*
Teachers Support	-.43	.28	1.29	-.34*
Involvement	.11	.28	0	-.30*
Competition	1.67	.33	6.89*	.30*
Teacher Control	-1.48	.45	19.67*	-.27*
Order & Organization in Class	-1.32	.53	15.38*	-.25*
Control at Home	1.01	.53	0	-.19**
Conflict	2.18	.59	12.76*	.15
Active Orientation	Recreational -.33	.59	0	-.15
Expressiveness	-1.88	.60	2.12**	-.13
Intelligence	-.08	.60	0	-.12
Independence	1.66	.62	4.44*	-.10

* $p < .01$; ** $p < .05$

Table 2

Correlations, regression coefficients, and F-ratios of Girls Sample (N=100)

Variables	Regression Coefficients	R ²	F Ratio	r
Affiliation	-.65	.16	18.66*	-.40*
Cohesion	-6.50	.23	8.53*	-.37*
Innovation	1.29	.26	3.89**	-.36*
Teachers Support	-1.15	.29	1.31	-.30*
Involvement	-.49	.27	2.66**	-.27*
Order & Organization	-.48	.31	2.70**	.23**
Competition	.34	.36	7.25*	.23**
Independence	2.1	.37	1.45	.19**
Rule Clarity	.72	.37	0	.16
Conflict	4.29	.41	6.06*	.14
Control at Home	-1.50	.45	6.45*	-.13
Achievement Orientation	.61	.45	0	-.12
Task Orientation	.13	.45	0	.11
Teacher's Control	-.78	.47	3.23*	.16
Expressiveness	-1.36	.49	3.33*	-.11
Intellectual-Cultural Orientation	-1.01	.49	0	-.09

* $p < .01$; ** $p < .05$

It is evident from the Table 1 that there is a negative correlation between TABP and following dimensions of family environment Intellectual-Cultural Orientation (-.40), Moral-Religious Emphasis (-.35), Organization at home (-.36), and Control at home (-.19). There is also a negative correlation between TABP, and various dimensions of classroom environment such as: Patterns and Involvement (-.30), Teacher Support (-.34), Order and Organization (-.25), Rule Clarity (-.34), Teachers Control (-.27). However, TABP correlates positively with only one variable i.e., Competition (.30), which is a dimension of the classroom environment. The results suggest that greater emphasis on competition in the class can make boys more vulnerable towards exhibiting TABP symptomatic characteristics. Moreover, within the family environment if there is a collective emphasis on the family's participation in political, intellectual, cultural, ethical, and religious issues and at the same time an appropriate system is maintained, there is a likelihood that lesser TABP will be exhibited. Similarly, if there is a balanced emphasis on the relationship dimension and the system-maintenance dimension the vulnerability towards TABP may be reduced.

A perusal of the Table 2 shows that for girls TABP correlates negatively with Cohesion (-.37) and positively with Independence (.19), which are the dimensions of the family environment. TABP correlates positively with Innovation (.36), Competition (.23), Order and Organization (.23), and Teacher's Control (.16) dimensions of Classroom Environment. On the other hand, it correlates negatively with Affiliation (-.40), Teacher Support (-.30), and Involvement (-.27) of Classroom Environment. The results are indicative of the fact that lesser degree of commitment and support within the family environment can possibly make girls vulnerable to exhibit TABP. Even if excessive independence is provided to girls, without probably a proper support, it can make girls exhibit impatience, aggressiveness, and hostility which are traits characterizing TABP. The different dimensions of classroom environment significantly correlating with TABP are equally suggestive of the fact that the environment which the individual gets in the school can influence the development of TABP in girls.

Step-Wise Multiple Regression Analysis

A Step-wise multiple regression analysis was performed to determine the amount of variance in the dependent variable that could be accounted for by the different variables and the impact of each

independent variable in the prediction of the dependent variable. Results of regression analysis reveal that for boys sample, 62% of the variance is explained by the selected variables and for girls sample only 49% of the variance is explained by the selected variables.

In order to delineate the variables significantly contributing towards the dependent variable, F-ratios were calculated and their significance checked. The results of regression analysis and F-ratio's are also given in Tables 1 and 2 for boys and girls, respectively.

Results of Regression Analysis for Boys

A perusal of the Table 1 suggests that among family environment variables Organization (3.75, $p < .05$), Moral and Religious emphasis (3.89, $p < .05$), Conflict (12.76 $p < .01$), Expressiveness (2.12, $p < .05$), Independence (4.44, $p < .01$), and Intellectual-Cultural Orientation (21.53, $p < .01$) significantly contribute towards the development of TABP in boys. The regression coefficients suggest that there is a negative relationship between TABP and Organization, Moral and Religious emphasis, Expressiveness, and Intellectual-cultural orientation. The other two family environment dimensions, i.e., Independence and Conflict are positively contributing towards TABP. The results suggest that an open environment within the family, which permits or encourages adolescents for an open or direct expression of their feelings will help them to maintain a more balanced state of mind. The uninhibited expression of their feelings about any significant issue may make them less vulnerable towards TABP. If the family activities are planned, structured, and organized properly for maintaining a common interest in political, social, intellectual, and cultural activities, it will make an individual less vulnerable towards TABP.

An appropriate emphasis on clear structure in planning activities and responsibilities makes an adolescent to be in a more relaxed state. The emphasis on ethical and religious issues, if made a part of the family issues, contributes towards more relaxed state of mind and hence lesser TABP. Furthermore, it is even suggested from the results that a greater independence given to boy adolescents may make them more vulnerable towards TABP. Adolescence is a state when independence is much desired by individuals. Adolescents may like to be assertive or have a feeling of self-sufficiency or want to make their decisions, but if they are not given proper training for exercising or exhibiting this independence, they may get uncertain about their newly possessed emotional independence status. This uncertainty may

at times bring in impatience, anxiousness, and they may even display aggression in the garb of assertiveness. All these traits are a characteristics of TABP.

A further perusal of the Table 1 suggests that classroom environment variables which are significantly contributing towards the development of TABP are Competition (6.89, $p < .01$), Teacher's Control (19.67, $p < .01$), and Order and Organization (15.38, $p < .01$). The regression coefficients indicate that if in the classroom, the teacher places a greater emphasis on students for competing with each other for grades and recognition it can make adolescents more vulnerable towards exhibiting TABP. An overall assessment and thereafter the recognition of the adolescent, simply on the basis of their relative performances, can make him work very hard and over consciously. This may bring within him a sense of time urgency for completing tasks within a stimulated period and making him more vulnerable to exhibit behaviors characterizing TABP.

Furthermore, it is even seen that if teachers are able to organize the classroom activities in such a manner that the students can carryout all their activities in a meticulous and an orderly manner they may be less vulnerable towards exhibiting TABP. The negative relationship between teachers imposing control and TABP in boy adolescents is intriguing. A strict teacher, who is enforcing rules by way of punitive methods should also have been instrumental in developing anxiety, time urgency, etc., in the adolescent boys but the results on the contrary suggest that with more control exercised by the teacher, the adolescents will exhibit lesser TABP. Probably the adolescents at this stage are working on their identity issues which can not be dealt with by complete independence from the authority figures in their lives. They are still unsure of themselves and do not want to completely step out of the shadows of authority. They do not want freedom from others, rather they need freedom to carry out actions and at the same time maintain appropriate connections to significant others in their lives. Similar views have been given by Hill and Holmbeck (1986).

Results of Regression Analysis for Girls

A perusal of the Table 2 suggests that the family environment variables significantly contributing towards TABP are Cohesion (8.53, $p < .01$), Conflict (6.06, $p < .01$), Control (6.45, $p < .01$), and Expressiveness (3.33, $p < .01$).

The regression coefficients suggest that cohesion, control, and expressiveness dimensions of family environment have a negative relationship with TABP, whereas conflict shows a positive relationship with TABP. The results are indicative of the importance of cohesiveness and expressiveness within the family members. For girls it is the relationship dimension which has come out to be very important. If within the family, members show commitment, are helpful, provide support for one another, and all are even encouraged to act openly and express their feelings directly, that kind of environment may rear children with a lesser vulnerability towards TABP. The control which is used within the family to maintain the overall family system also is helpful for the girls. Girls in the Indian culture may generally like some kind of control by their parents. Probably this gives them a feeling of security or protection. Their vulnerability towards anxiety or depression increases if their tendency towards independence is not supported by the environment or significant people around them. Too much of permissiveness actually makes them land into a dilemma.

Further, the positive relationship between TABP and conflict suggests that if there is too much of openly expressed anger, aggression, and conflict among family members, it can have a detrimental effect on the adolescents mind. Conflicts within the family can make the adolescent girls anxious and even aggressive overtones can be experienced in their behaviour.

The classroom environment variables contributing towards the prediction of TABP are Involvement (2.66, $p < .05$), Affiliation (18.66, $p < .01$), Innovation (3.89, $p < .05$), Order and Organization (2.70, $p < .05$), Competition (7.25, $p < .01$), and Teachers Control (6.45, $p < .01$). The regression coefficients suggest that a greater emphasis on competition within the class, can contribute towards TABP. The innovative activities initiated or encouraged by the teacher also brings about an anxiety and apprehension which might contribute towards more TABP. On the other hand, if they are encouraged to participate collectively, arrange and carry out the classroom activities in an organized manner and there is greater involvement of the teacher in all the activities done, there is a likelihood that girls will be in a more relaxed state and will probably not show behaviors characteristic of TABP. Control by the teacher in the class over the students is also seen as beneficial for the girls because of their need for security.

Conclusively, it can be said that family environment is a significant contributor towards the development of TABP, both in boy and girl adolescents. The kind of environment in which they are

reared is significant. For girls, the relationship dimension (Cohesion, Expressiveness, Conflict) within the family are significantly more important. For boys, the personal growth dimension (Independence, Intellectual-cultural Orientation, Organization, and Moral and Religious Emphasis) as well as Conflict and Expressiveness of relationship dimensions play an important role. Competition promoted within the classroom environment is a significant predictor of TABP in both boys and girls. The involvement of the teacher in organizing the activities and even the encouragement given to work cooperatively helps in reducing the anxiety within the adolescents. An appropriate control exercised by the teachers is also helpful towards lowering their anxieties and apprehensions. Control by teacher has come out to be a significant contributor towards lesser TABP in both boys and girls. The variable of intelligence taken in the study has not shown any significant contribution towards TABP.

Furthermore, looking at the amount of variance (Boys – 69%; Girls – 49%) explained by these independent variables, it is pertinent to point out that there may be other significant contributors, especially in the girls, which may be mediating the relationship between TABP and the family environment and TABP and the classroom environment. Future studies should be directed towards assessing those factors. Lastly, it is even suggested that the results may be considered speculative in light of the socio-cultural milieu of the present day set up.

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