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Research Article

A CORRELATIONAL STUDY OF TEMPERAMENT AND CHARACTER AMONG POST GRADUATES

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ABSTRACT

Temperament is defined as that part of the personality which is genetically based. Along with character, and those aspects acquired through learning, the two together are said to constitute personality. The paper aims to study the relationship between temperament and character. The sample comprised of 300 post graduate students selected randomly from Aligarh Muslim University. For collecting relevant information for the present study, the investigator used The Temperament and Character Inventory (TCI) by Cloninger *et. al* [1994]. The analysis was done by computing the product moment correlation between the two variables. The result showed that the temperament of the post graduate students was found to be negatively but significantly related to their character. The negative correlation between the temperament and character is mainly due to novelty seeking and harm avoidance dimensions of temperament. However, Reward dependence (a dimension of temperament) was found to be positively related to Cooperativeness and Self transcendence (dimensions of Character). Persistence (a dimension of temperament) was found to be positively related to Self directedness and Cooperativeness (dimensions of character). The educational relevance of the findings of the study is discussed.

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INTRODUCTION

In psychology, temperament is the innate aspect of an individual's personality, such as introversion or extroversion. Temperament is defined as that part of the personality which is genetically based. Along with character, and those aspects acquired through learning, the two together are said to constitute personality. Historically the concept was part of the theory of the humours, which had corresponding temperaments. It played an important part in premodern psychology, and was important to philosophers like Immanuel Kant and Hermann Lotze. More recently, with the emphasis on the biological basis of personality, the relationship between temperament and character has been examined with renewed interest that temperament is biologically based.

Temperament can be conceived of as those predispositions for behaviour that form the substrate on which experience and life events work to form the traits that later build a personality. Temperament is discernible in individual differences that emerge in very young human infants and is presumed to be partly heritable. Temperament, traits and personality are concepts that are hard to distinguish from each other in the literature, with different authors using different approaches. (Matthew, 1980)

Character - the inherent complex of attributes that determines a persons moral and ethical actions and reactions; "education has for its object the formation of character"- Herbert Spencer - a distinguishing feature of your personal nature personality - the complex of all the attributes--behavioral, temperamental, emotional and mental--that characterize a unique individual; "their different reactions reflected their very different personalities". Being a good person, however, is more than a matter of understanding what is morally right. In philosophy a distinction is made between deontic judgments of what is morally right and aretaic judgments of responsibility which involve a commitment to act on one's deontic judgment. In everyday language we use the term "character" to refer to the tendency to act in ways that are consistent with what one understands to be morally right. Traditional character education, which has been under focus since the early part of this century, had as its central aim fostering formation of elements of the individual's personality and value structure which would constitute socially desirable qualities or virtues. In the late 1920s a major research effort was undertaken by Hugh Hartshorne and Mark May to identify the factors that contributed to the formation of character. To the surprise and disappointment of the researchers they discovered that few students were virtuous, and that instead, most children cheated, behaved selfishly, and lacked "self control" a large amount of

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the time. Virtue, according to their data, seemed to be context dependent as students cheated, or lied in some situations and not in others. As Clark Power (1989, p. 127) noted: Hartshorne and May concluded that there were no character traits per se but "specific habits learned in relationship to specific situations which have made one or another response successful."

A man of character has not even the awareness that he is a man of character. It shines in everything that he does. Therefore such people attract, like they say, the moth to the candle. You cannot possibly accuse or praise the candle for attracting the insect; it is what it is, and being responsive to what it is, the rest of the insect life flocks to it. We flock to the light when we are in darkness. The truth behind the spiritual statement is: "Be yourself, and you will achieve much more than flaunting a false personality." Principles of Sahaj Marg (1978)

After collecting the related literature for all the two variables from different journals, books, encyclopedia and websites, the investigator has now come to a valid conclusion temperament and character has been used together in almost all the researches of clinical type and only a few have been observed in the educational field with other variables. The several studies show the relationship between temperament and motivation system (Beauvale and Tokarz, 1996). Similarly Barbara Keogh's research and thinking on temperament in childhood is paving way to the importance of temperament in education. Temperament related classroom strategies may prove to be helpful in learning. Puttonen *et al.* (2005) study provided support for the validity of Cloninger's temperament dimensions as predictors of emotions responses during different challenges. Especially, Novelty Seeking and Harm Avoidance appear to have a significant influence on emotional experiences.

Character has been a topic of discussion from time immemorial (Sabini and Silver, 1998) found an aesthetic and moral basis of character. Calabrese and Roberts (2002) described character at the core of leadership. Leaders with virtuous character provide benefit to their schools and communities. Mayer and Casey (2000) examined the scientific evidence for whether emotional intelligence underpins social and emotional learning and how emotional intelligence is related to success and whether it is central to character.

For Herbert Spencer "education has for its object the formation of character". The complex of all the attributes--behavioral, temperamental, emotional and mental--that characterize a unique individual. Cloninger deals with the psychobiological aspect of character. The question for the educators is how to understand character and what aspects of educative process can contribute to character formation.

Just like motives are central to any theory of personality and therefore has a strong education implication so are our emotions. Motives are emotions in actions. Temperament and character are both biological and psychological. We cannot disregard temperament and character from any understanding of human behaviour and therefore these implications to the field of education cannot be overlooked.

Temperament and character are both biological and psychological. We cannot disregard temperament and character from any understanding of human behaviour and therefore these implications to the field of education cannot be

overlooked. It was felt that these variables as a major part of personality should be dealt in educational field. Therefore an attempt has been made to study the temperament and character among the sample under study.

The operation definition of the two variables taken into consideration for the research is:

Temperament

'The temperament is generally described as biologically based components of personality which are set to be independent heritable, manifest early in life and involve pre conceptual biases in perception, memory and habit formation.'
(Cloninger *et al.*, 1993)

On the basis of various definitions many sub dimensions have evolved of Temperament. Therefore Temperament can be defined in terms of sub dimensions like: Novelty Seeking, Harm Avoidance, Reward Dependence and Persistence.

Character

'Character dimensions are consciously learned components of personality which mature in adulthood and influence personal and social effectiveness by insight learning about self concepts.'
(Cloninger *et al.*, 1993)

Objectives of the Study

The objectives of the present study are given below:

1. To find out the relationship between temperament and character of the post graduate students.
2. To find out the relationship between the temperament and character of the male students.
3. To find out the relationship between the sub dimensions of the temperament and the sub dimensions of character of the male students.
4. To find out the relationship between the temperament and character of the female students.
5. To find out the relationship between the sub dimensions of the temperament and the sub dimensions of character of the female students.

Hypotheses

In order to study the objectives the following hypotheses were formulated:

1. There is a positive and significant relationship between the temperament and character among the post graduate students.
2. There is a positive and significant relationship between the temperament and character among the male students.
3. There is a positive and significant relationship between the sub dimensions of temperament and character among the male students.
4. There is a positive and significant relationship between the temperament and character among the female students.
5. There is a positive and significant relationship between the sub dimensions of temperament and character among the female students.

Design and Methodology

Sample

The data was collected from four faculties of Aligarh Muslim University, namely- Faculty of Social Sciences, Life sciences, Commerce and Arts. The sample of 300 post graduate students was selected randomly which consisted of 151 males and 149 females. The sample was found to be a true representative of the population.

Research Instrument/Tools Used

For collecting relevant information for the present study, this investigator used The Temperament and Character Inventory (TCI) by Cloninger *et. al.* [1994].

The TCI has been developed to account for individual differences in both normal and abnormal (deviant) behaviour patterns. The seven factor structure of personality has been replicated in both the general population and psychiatric patient populations. The TCI has proven useful in practical clinical work, notably in the diagnosis, differential diagnosis and treatment planning of psychiatric disorders.

The test measuring the temperament dimensions only was originally called the Tridimensional Personality Questionnaire (TPQ). In the TPQ, Novelty Seeking, Harm Avoidance, Reward Dependence and Persistence were measured, but Persistence was originally scored as a component of Reward Dependence. The name of the Test was changed when the character scales were added and Persistence was recognized as a fourth separately inherited Temperament dimensions.

The test retest reliability of the quantitative scores over six months is moderately high i.e, **0.85** for TCI. Cloninger *et. al.* has developed different versions of the TCI. There are Tri dimensional Personality Questionnaire (TPQ), Temperament and Character Inventory (TCI), Temperament and Character Structured Interview (TCSI) and Junior Temperament and Character Inventory (JTCI). The Temperament and Character Inventory (TCI) consists of 240 items out of which 14 items are not scored as a part of TCI therefore it leaves with **226 items** in total.

Cloninger envisages temperament as being connected to the procedural learning systems of the brain, whereas character is connected to propositional learning. Thus character is more open to cognitive influence, whereas temperament reflects habit system. The sum total of temperament and character make up the personality of human, with the two being causally independent and functionally interactive.

The Temperament Variables is divided into four (4) sub dimensions. There are:

1. T1- Novelty Seeking (NS)
2. T2- Harm Avoidance (HA)
3. T3- Reward Dependence (RD)
4. T4- Persistence (P)

T1- Novelty Seeking (NS) – Behavioral activation involved the activation of behaviour in response to novelty and signals of reward or relief of punishment; accordingly, individual differences in such activatability were called ‘Novelty Seeking’. In other words it refers to engaging in new and unfamiliar, which leads to exploration of potential rewards.

This sub dimension can also be interpreted as ‘Choleric’ type of temperament corresponding to ‘anger’ emotion. Subjects Scoring high on NS are easily bored, impulsive, quick tempered, extravagant and disorderly. Subjects scoring low on NS like rules, are highly structured and are content without need for excitement.

T2- Harm Avoidance (HA)- Behavioral inhibition occurred in response to signals of punishment or non-reward, so individual differences in inhabitability were called ‘Harm Avoidance’. It is a temperament associated with inhibition or succession of behaviour and fear of uncertainty. People scoring high on HA are pessimistic, fearful, shy, anxious and easily fatigued. People scoring low on HA remain calm, even under circumstances where others might feel upset. This sub dimension can also be interpreted as ‘Melancholic’ type of temperament corresponding to ‘fear’ emotion.

T3- Reward Dependence (RD)- Behaviour that was previously rewarded was later maintained for a while without continued reinforcement, and individual differences in such maintenance was called ‘Reward Dependence’. It is also defined as a heritable base in maintenance and continuation of an ongoing behaviour and manifest as social attachment and dependence on approval of others. Subjects scoring high on RD are sociable, dependent on emotional support from others, yield quickly to social pressure, are warm and sympathetic, sensitive to rejection or criticism and responsive to sentimental appeals. Subjects scoring low on RD are aloof, cold, insensitive to criticism and resistant to social pressure. This sub dimension can also be interpreted as ‘Sanguine’ type of temperament corresponding to ‘love’ emotion.

T4- Persistence (P) - means perseverance in behaviour as being industrious, hardworking and stable despite frustration and fatigue. People scoring high on persist despite frustrations, sometimes to the extent that they are unable to change strategy when necessary. Thus, a high score on persistence points also to rigidity. People scoring low on persistence easily give up in case of frustration. This sub dimension can also be interpreted as ‘Phlegmatic’ type of temperament corresponding to ‘tenacity’ emotion.

The Character Variable has three (3) sub dimensions. There are:

1. C1- Self Directedness (SD)
2. C2- Cooperativeness (C)
3. C3- Self Transcendence (ST)

C1- Self Directedness (SD)- Individual who are able to adapt their behaviour in accord with individually chosen, voluntary goals. It measures individual self-acceptance. Subjects scoring high on SD are autonomous, responsible, have high self-esteem, good impulse control and set clear goals for themselves. Subjects scoring low on SD are irresponsible, purposeless, helpless, have poor self- acceptance and poor impulse control. From this self concept are derived feelings of personal integrity, honor, self-esteem, effectiveness, leadership and hope.

C2- Cooperativeness (C)- is understanding and respecting the preferences and needs of others as well as their own. Cooperativeness is related to which a person identifies himself or herself as an integral part of the society as a whole. People

scoring high on cooperativeness are tolerant, empathic, agreeable, helpful and compassionate. People scoring low on cooperativeness are intolerant, narcissistic, disagreeable, hostile, revengeful and opportunistic. From this self concept are derived feelings of community, compassion, conscience and charity.

C3- Self Transcendence (SD)- reflects the tendency of identification with unity of all things and is associated with deficits in transpersonal identification or conscience. It captures the degree to which an individual feels a part of nature and the universe at large. Subjects scoring high on ST have aesthetic sensitivity, pursue spiritual values, are self neglecting and have a strong imagination. Subjects scoring low on ST accept only their own perspective, are materialistic and are not interested in spiritual issues. In addition, they are unstable in affect and self image. From this self concept are derived feelings of mystical participation, religious faith and unconditional equanimity and patience.

Scoring of the Test

Cloninger *et al.* (1993) constructed the Temperament and Character Inventory (TCI) with total of 226 items. The self report questionnaire are paper and pencil tests in which the subject answers true or false to a series of questions about their

0 and for negative statements (110 statements) score for True is 0 and False 1.

Analysis of Data

All the calculations were done on the computer with the help of a software package named as Statistical Package for Social Sciences (SPSS) (version 12.0). The analysis was done by computing the product moment correlation between the two variables.

RESULT

Product Moment correlation was worked out between the temperament and character among the post graduate student. The value of correlation between the temperament and character was $-.217^{**}$, which was significant at 0.01 level. This leads to the partial confirmation of hypothesis I. Hence, the temperament of the post graduate students is significantly but negatively related to their character. According to table II, the value of correlation between the temperament and character of male students was $-.305^{**}$, which was significant at 0.01 level. Thus the hypothesis II was partially accepted. Hence, the temperament of male students is significantly but negatively related to their character. In male sample novelty seeking was found to be negatively and significantly related to Cooperativeness ($-.235^{**}$).

Table I The Intercorrelation Between The Variables And Their Sub Dimensions of The Total Sample

VARIABLES	Total Temperam. (T)	Total Character (C)	Novelty Seeking (T1)	Harm Avoidance (T2)	Reward Depend (T3)	Persistence (T4)	Self Direct (C1)	Cooperative(C2)	Self Transd (C3)
Total Temperament –T	1	-.217**	.410**	.650**	.475**	-.073	-.330**	-.054	-.041
Total Character- C		1	-.281**	-.247**	.265**	.275**	.717**	.815**	.521**
Novelty Seeking- T1			1	-.250**	.000	-.046	-.286**	-.237**	-.044
Harm Avoidance-T2				1	.064	-.326**	-.286**	-.086	-.126*
Reward Dependence- T3					1	.017	.075	.309**	.173**
Persistence- T4						1	.279**	.184**	.095
Self Directedness- C1							1	.467**	-.060
Cooperativeness- C2								1	.208**
Self Transcendence- C3									1

[Where **. Significant at the 0.01 level,
* - Significant at the 0.05 level]

Table II The intercorrelation between the variables and their sub dimensions of The male sample

VARIABLES	Total Temperam. (T)	Total Character (C)	Novelty Seeking (T1)	Harm Avoidance (T2)	Reward Depend (T3)	Persistence (T4)	Self Direct (C1)	Cooperative (C2)	Self Transd (C3)
Total Temperament –T	1	-.305**	.441**	.669**	.295**	.065	-.253**	-.140	-.209**
Total Character- C		1	-.223**	-.382**	.236**	.310**	.671**	.725**	.580**
Novelty Seeking- T1			1	-.158	.013	-.002	-.107	-.235**	-.099
Harm Avoidance-T2				1	-.189*	-.286**	-.318**	-.085	-.355**
Reward Dependence- T3					1	.212**	.028	.110	.332**
Persistence- T4						1	.355**	.116	.143
Self Directedness- C1							1	.303**	.023
Cooperativeness- C2								1	.129
Self Transcendence- C3									1

[Where **. Significant at the 0.01 level,
* - Significant at the 0.05 level]

and values. No time limit is given. As this test is lengthy it takes up to 25-30 minutes to complete it. For positive statements (116 statements) the Score for True is 1 and False is

Harm Avoidance was found to be negatively and significantly related to reward dependence ($-.189^*$), persistence ($-.286^{**}$), self directedness ($-.318^{**}$) and self transcendence ($-.355^{**}$). Reward Dependence was found to be positively and

significantly related to persistence (-.212**) and self transcendence (.332**). Persistence was found to be positively and significantly related to self directedness (.355**). Self directedness is positively and significantly related to cooperativeness (.303**). Thus the hypothesis III is partially accepted as there was found to be negative as well as positive significant relationship among the sub dimensions of temperament and character in male sample.

novelty seeking and harm avoidance dimensions of temperament.

On the maturity continuum we move from dependence (paradigm of you) to independence (paradigm of I) to interdependence (paradigm of we). With reward dependence and especially persistence, the independent character moves to interdependence. Interdependence is a far more mature, and more advanced concept.

Table III The intercorrelation between the variables and their sub dimensions of the female sample

VARIABLES	Total Temperam. (T)	Total Character (C)	Novelty Seeking (T1)	Harm Avoidance (T2)	Reward Depend (T3)	Persistence (T4)	Self Direct (C1)	Cooperativeness (C2)	Self Transd (C3)
Total Temperament -T	1	-.195*	.375**	.652**	.575**	-.203*	-.420**	-.021	.084
Total Character- C		1	-.346**	-.0157*	.271**	.233**	.738**	.874**	.491**
Novelty Seeking- T1			1	-.308**	-.026	-.105	-.417**	-.269**	-.077
Harm Avoidance-T2				1	.230**	-.357**	-.268**	-.085	.055
Reward Dependence- T3					1	-.128	.086	.428**	.067
Persistence- T4						1	.209*	.210*	.063
Self Directedness- C1							1	.562**	-.113
Cooperativeness- C2								1	.276**
Self Transcendence- C3									1

[Where **- Significant at the 0.01 level, *- Significant at the 0.05 level]

According to table III, the value of correlation between the temperament and character of female students was -.195** which was negative and significant, which leads to partial confirmation of hypothesis IV. Thus the temperament of the female students is significantly but negatively related to their character.

In female sample it was found that Novelty seeking was negatively but significantly related to harm avoidance (-.308*), self directedness (-.417**) and cooperativeness (-.269**). Harm Avoidance was found to be positively and significantly related to reward dependence (.230**) and negatively related to persistence (-.357**) and self directedness (-.268**). Reward Dependence was found to be positively and significantly related to cooperativeness (.428**). Persistence was positively and significantly related to self directedness (.209*) and cooperativeness (.210*). Self Directedness was positively and significantly related to cooperativeness (.562**) and Cooperativeness was positively and significantly related to Self Transcendence (.276**). Thus the hypothesis V is partially accepted as it was found to have negative as well as positive significant relationship among the sub dimensions of temperament and character in female sample.

DISCUSSION

One can understand as to why a temperament is negatively correlated to character. Temperament is biologically inherited whereas character is a learned component of personality. However, reward dependence and persistence dimensions of temperament do not seem to be completely biological, rather a matter of habit formation and learning. This is the reason why these dimensions are positively correlated to cooperativeness and self transcendence dimensions of character in case of reward dependence; and to self directedness and cooperativeness in case of persistence. The negative correlation between the temperament and character is mainly due to

As an interdependent person we have the opportunity to share ourselves deeply, meaningfully with others and we have access to the vast resources and potential of other human beings. This was observed in the sample under study where the dimensions of temperament (reward dependence and persistence) were contribution in the character domain. The essence of character growth can only be achieved by first mastering the inner accomplishments (self awareness, imagination, conscience and independent will).

Relevance of the Findings

The development of character dimensions i.e, self directedness, cooperativeness and self transcendence are prime importance from educational point of view. The inculcation of the dimensions of character will help us in achieving the aims of education. Besides, the novelty seeking (making one angry and impulsive) and harm avoidance (leading to fear and anxiety) aspect of temperament should be discouraged and treated properly for a sound development of personality.

The ‘inside-out’ approach should be adopted as it supports the idea that private victories precede public victories, that making and keeping promises to ourselves precedes making and keeping to others. According to this approach it is futile to put personality ahead of character. (Covey, 2008)

CONCLUSION

The temperament of the post graduate students was found to be negatively but significantly related to their character. The temperament of the male and female students was also found to be negatively and significantly related to their character. Moreover a common feature found in total, male and female sample was that Reward dependence (a dimension of temperament) was found to be positively related to Cooperativeness and Self transcendence (dimensions of Character). Persistence (a dimension of temperament) was

found to be positively related to Self directedness and Cooperativeness (dimensions of character). The negative correlation between the temperament and character is mainly due to novelty seeking and harm avoidance dimensions of temperament. To conclude a well said quote by Henry David Thoreau 'I know of no more encouraging fact than the unquestionable ability of man to elevate his life by conscious endeavor.'

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