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Dr. S Patelia

Assistant Professor, PG, Department of Human Development, L.A.D. and Smt. R.P College for Women, Nagpur, Maharashtra, India

Dr. N Rath

Professor, Department of Human Development, L.A.D. and Smt. R.P College for Women, Nagpur, Maharashtra, India

Arwa Izzya

PG Student, Department of Human Development, L.A.D. and Smt. R.P College for Women, Nagpur, Maharashtra, India

Corresponding Author:

Assistant Professor, PG, Department of Human Development, L.A.D. and Smt. R.P College for Women, Nagpur, Maharashtra. India

Temperamental traits of adolescents studying in professional and non-professional courses

Dr. S Patelia, Dr. N Rathi and Arwa Izzy

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Abstract

Temperament refers to physiologically innate characteristics that result in patterns of behavior and emotional reactivity that remain stable over a variety of situations and throughout an individual's lifetime. The 15 dimensions of temperament are Sociability, Ascendance, Secretiveness, Reflective, Impulsive, Placid, Accepting, Responsible, Vigorous, Co-operative, Persistence, Warmth, Aggressiveness, Tolerance and Tough minded. In general, temperaments exist as they are prior to birth and are a component of an individual's personality. Although it is thought that temperaments are genetically determined, personalities as a whole are a combination of temperaments and experiences that shape and influence a person's development. The study was conducted on 200 college students (100 each from professional and non- professional) with an objective to assess and compare the temperamental traits of adolescents studying in professional and non-professional courses. The sample was selected through purposive random sampling from various professional colleges and non-professional colleges. The investigator used Dimensions of Temperament Scale (DTS) by Dr. N.K. Chadha and Sunanda Chandana. The data was subjected to Mean, SD and t test. Significant differences were seen in sociability, ascendance, reflective, placid, accepting, vigorous, co-operative, aggressiveness and toughness secretiveness, impulsivity, responsible, persistence, warmth, and tolerance failed to yield significant difference.

Keywords: Temperamental traits, professional and non- professional courses, college students

Introduction

Education plays a vital role in the development journey of an individual. Education is expanding at a very fast speed and is being democratized especially in India during last few decades. This has led to new educational problems and the old problems have become more acute and complicated. Hence, research in education has become the need of the hour. Educational research aims at development of the pupil's temperament and academic achievement. Researches have revealed that the students learn more when the teachers possess a great deal of information about them as individual. Education today aims at the wholesome development of personality, not for merely seeking employment. Hence, an awareness of the personality traits of the child goes a long way in educating the child.

The present era is an era of competition. Excellence is the catch word. Adolescents today go in for both professional and non-professional courses. Understanding the temperamental traits of professional and non-professional students gives us an edge and can be used to enhance the overall personality of the adolescents. So let us understand what is "Personality" and "Temperament".

The term personality is derived from the Latin word *persona* meaning a *mask*. Personality refers to individual differences in characteristic patterns of thinking, feeling and behaving.

"Personality is a dynamic organization within the individual of those psycho-physical systems that determine his unique adjustment to his environment." Allport (1948) [14].

"Personality is that which permits a prediction of what a person will do in a given situation."

Personality = Temperament + Character

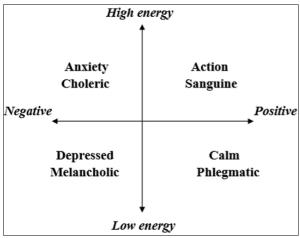
Character refers to a learned behavior of morals and beliefs that defines how we treat or behave with others and ourselves. A person of good character, for example, has high integrity; a person of bad character does not.

Temperament refers to consistent individual differences in behavior that are biologically based and are relatively independent of learning, system of values and attitudes. It refers to fundamental and early-appearing dispositional attentional, emotional and motor processes and reactivity (Rothbart, 2001) [15]. Despite showing relative consistency and stability across situations and over time, these dispositions are further "molded" by individual experience, ultimately constituting personality.

History of Temperament

Temperament is determined through specific behavioral profiles, usually focusing on those that are both easily measurable and testable early in childhood. Commonly tested factors include traits related to energetic capacities (named as "Activity", "Endurance", "Extraversion"), traits related to emotionality (such as irritability, frequency of smiling), and approach or avoidance of unfamiliar events. There is generally a low correlation between descriptions by teachers and behavioral observations by scientists of features used in determining temperament. Temperament is hypothesized to be associated with biological factors, but these have proven to be complex and diverse.

Historically, in the second century A.D., the physician Galen described four temperaments (melancholic, phlegmatic, sanguine and choleric) based upon the four humors or bodily fluids. These became known as the four classical temperaments as shown in figure no.1.1. In more recent history, Rudolf Steiner had emphasized the importance of the four classical temperaments in elementary education, the time when he believed the influence of temperament on the personality to be at its strongest. Neither Galen nor Steiner are generally applied to the contemporary study of temperament in the approaches of modern medicine or contemporary psychology.



Source:

http://teachyourselfmedicine.blogspot.com/2009/10/sanguine-phlegmatic-choleric.html?m=1

Fig 1: Four Classical Temperaments

Following are the 15 dimensions of temperament as given by Dr. N.K. Chadha and Sunanda Chandana.

- **Sociability:** Ability of the person of being sociable.
- Ascendance: Ability of a person having power over others.

- **Secretiveness:** The quality or fact of hiding your feeling, thought, intentions, and actions from other people.
- **Reflective:** Refers to deep thinking.
- **Impulsive:** The impetuous, spontaneous action done at the spur of the moment
- **Placid:** Refers to not easily getting upset or excited.
- Accepting: The person who accepts everything.
- **Responsible:** The quality which shows that the person seeks his responsibility.
- Vigorous: Ability characterized by or involving physical strength, effort and energy.
- Co-operative: Ability of going and working well with a team.
- Persistence: The ability to continue in an opinion or action in spite of difficulty.
- Warmth: Having affection and kindness.
- **Aggressiveness:** Ability to be hostile and violent.
- **Tolerance:** The willingness to tolerate the existence of opinion or behavior that one disagrees with.
- Tough-minded: Strong willed person who is able to face up to reality.

In the present study the above 15 dimensions of temperament are studied with respect to the professional and non-professional course opted by the adolescents.

Personality and choice of education

A large body of research suggests that personality plays a critical role in college student major choice. Astin (1993) argues that students with certain personality characteristics are more likely to choose particular majors. For example, he suggests that those who rated high on a social activism scale were more likely to major in the social sciences and education. Those who had artistic inclinations were most likely to major in fine arts, music, theater, journalism and English. Students scoring high on a hedonism scale were most likely to major in business, nursing, health technologies and secretarial studies. Leaders were most likely to major in prelaw, communications and military science. Status-striving students were most likely to major in architecture and agriculture.

Aim

The main aim of the present study was to investigate and compare the temperamental traits of adolescents studying in professional and non-professional courses.

Objectives

- 1. To measure the 15 temperamental traits of professional (technical) students.
- 2. To investigate the 15 temperamental traits of non-professional (non-technical) students.
- 3. To compare the 15 temperamental traits of students studying in professional (technical) and non-professional (non-technical) courses.

Significance of the study

In this modern era, we focus on E.Q (emotional quotient) and not on I.Q (intelligence quotient). A high level of E.Q is taking people high on the vocational ladder as compared to only I.Q. Emotions not only add color to our life but are also responsible for our success, failure, and behavior. Hence the importance of temperamental traits cannot be undermined.

Understanding the concept of temperament and applying that knowledge to ourselves and those around us helps us to better understand behavior- struggles, failures and successes. The temperamental traits do not exist in isolation. They interact with each other to influence our behavior in a complex way.

Temperament is individual differences in emotions, motor reactivity and self-regulation. It demonstrates consistency across situations and over time. So, it is logical to assume it influences career choices. Applying temperament feature to work, we can decide on directions to proceed, professional skills to develop and environment to feel comfortable while building a career.

A variety of contextual factors (eg: parenting) may influence temperament expression. Understanding temperaments is important since these do not change. Understanding temperament makes one better equipped to handle interpersonal relationships successfully. Taking on temperament perspective can help parents, clinicians, and educators become aware of individual differences, understand how temperament may be related to behaviors and develop strategies to increase the goodness of fit between the adolescent and their environment. Understanding the temperamental traits of technical and non-technical students gives us an edge and can be used to enhance the overall personality of the adolescent.

Review of Literature

The knowledge of related literature brings the researcher up to date on the work which others have done and helps to state the objectives clearly and concisely.

Singh S (2014) [13] investigated the qualitative assessment of temperament among adolescents. It was observed for sociability, responsibility, persistence, warmth and tolerancemales had higher scores as compared to females whereas for dimensions; reflective, impulsivity, acceptability, vigorousness and aggressiveness, females had higher scores as compared to males.

Raut D.B & Mundada D.N (2016) [12] investigated the anxiety and conscientiousness of professional and non- professional students of Jalgaon city. The study found that non-professional students are more anxious than professional students and there was a significant difference between anxiety of boy and girl students. Girl students had shown more anxiety than boy students.

Fomunyam G.K & Mnisi T (2017) examined how the temperamental make up of students either empowers them to perform excellently in formative assessment or incapacitates their performance. The study found that cholerics who are natural leaders and hence do not struggle to express themselves; often perform excellently in formative assessment while sanguine, who, like cholerics, are extroverts, perform relatively well. Phlegmatics and melancholics performed averagely and poorly, respectively in formative assessment because they are naturally prone to fear and dislike such activities because they prefer to keep to themselves.

Lahdelma, P., Tolonen, M., Kiuru, N. (2021) [10] investigated the unique and interactive effects of early adolescents' and their parents' temperament types on adolescents' academic emotions in literacy and mathematics. The results showed that adolescents' temperament type was significantly related to their negative emotions in both school subjects. Adolescents with an under-controlled temperament reported more anger compared to adolescents with a resilient or over-controlled temperament, and more anxiety, shame, and hopelessness compared to resilient adolescents. In addition, undercontrolled adolescents reported more boredom in mathematics than resilient or over-controlled adolescents. The parents'

temperament type was related to positive emotions. Adolescents of resilient parents reported greater pride in mathematics than adolescents of under-controlled or over-controlled parents and higher hope in mathematics than adolescents of over-controlled parents. Finally, over-controlled adolescents with a resilient or over-controlled parent reported higher enjoyment of mathematics and literacy in comparison to over-controlled adolescents with an under-controlled parent.

To bridge the gap an attempt has been made to study 15 dimensions of temperamental traits of professional and non-professional students.

Methodology

Sample

The sample of the study comprised of 200 girls of age group 18-20 years of which 100 were studying in professional courses such as - Law, Engineering, Medical, etc and 100 were belonging to non-professional groups such as - Arts, Home science, etc. The sample was convenient purposive random sample.

Tool used

Dimensions of Temperament Scale (DTS) by Dr. N.K. Chadha and Sunanda Chandana is employed for the present research study. It is a scale which determines the temperaments of adolescents. There are 152 items in DTS to measure 15 dimensions of temperament. Each item has two options YES/NO. The testee is to choose one of them. The test-retest reliability of the test is 0.94 and validity of the scale is 0.81.

Variables

- Independent variable: Professional and Non-Professional courses of study
- **Dependent variable:** Temperamental traits

Hypotheses

- 1. There exists significant difference in trait of sociability among the professional and non-professional students.
- 2. There exits significant difference in trait of ascendant among the professional and non-professional students.
- 3. The trait of secretiveness differs significantly among the professional and non-professional students.
- 4. The trait of reflective differs significantly among the professional and non-professional students.
- 5. Significantly the trait of impulsivity differs among the professional and non-professional students.
- 6. Significantly the trait of placid differs among the professional and non- professional students.
- 7. There exits significant difference in the trait of accepting among the professional and non-professional students.
- There exits significant difference in the trait of responsibility among the professional and nonprofessional students.
- 9. The trait of vigorous differs significantly among the professional and non-professional students.
- 10. The trait of co-cooperativeness differs significantly among the professional and non-professional students.
- 11. Persistence trait of temperament significantly differs among the professional and non-professional students.
- 12. Warmth trait of temperament significantly differs among the professional and non-professional students.
- 13. Aggressiveness trait of temperament significantly differs among the professional and non-professional students.

- 14. There exits significant difference in the trait of tolerance among the professional and non-professional students.
- 15. The trait of tough minded differ significantly among the professional and non-professional students.

Operational definitions

Adolescent

According to Bigner (1983), Adolescent can be defined as "a stage in the life cycle between 13 and 18 years of age characterized by increasing independence from adult controls, rapidly occurring physical and psychological changes, exploration of social issues and concerns increased focus on activities with a peer group and establishment of a basic self-identity.

According to A.T Jersild (1963) [16], "Adolescence is a span of years during which boys and girls move from childhood to adulthood mentally, emotionally, socially and physically."

Temperament

According to Kristal, "The constellation of inborn traits that determine a child's unique behavioral style and the way he or she experiences and reacts to the world." [Kristal, J. (2005) [3] According to Lindgren (1956) [17] – "Temperament is the general emotional responsiveness of the individual".

Temperamental traits

Temperamental traits are a particular characteristic, quality, or tendency that a person possesses that distinguishes him from others

Professional course

Professional courses refer to a variety of education and training which match the specific needs of an industry. The focus of these courses is on skill building, career development, self-improvement etc.

Non-Professional course

Non-Professional courses are those courses which are related to or engaged in a paid occupation that does not require advanced education or training.

Statistical treatment

Initially Mean and SD were calculated and for inferential purpose t-test was employed.

Results and Discussion

The major objective of this research study was to investigate and compare the temperamental traits of adolescents studying in professional and non-professional courses. The results are displayed in the following tables:

Table 1: Mean & S.D of 15 dimensions of temperamental traits of professional and non-professional course students

S. No	Dimension of temperament	Professional Course students		Non-Professional Course students	t-value
1	Sociability	Mean	7.91	7.05	3.21**
		S.D	1.74	2.02	
2	Ascendant	Mean	6.94	6.46	2.20*
		S.D	1.40	1.66	
3	Secretiveness -	Mean	6.00	5.87	0.48
		S.D	1.84	1.93	
4	Reflective -	Mean	7.03	6.47	2.33*
		S.D	1.80	1.58	
5	Impulsivity	Mean	3.55	3.81	1.45
		S.D	1.25	1.26	
	Placid -	Mean	6.08	5.16	3.40**
6		S.D	1.73	2.06	
7	Accepting	Mean	4.04	4.31	1.96**
7		S.D	1.09	1.00	
0	Responsible	Mean	6.21	6.06	0.59
8		S.D	1.72	1.83	
9	Vigorous -	Mean	7.79	6.82	2.70*
		S.D	2.34	2.72	
10	Co-operative -	Mean	10.83	9.49	5.15**
10		S.D	2.01	1.64	
11	Persistence -	Mean	4.61	4.82	0.82
		S.D	1.18	1.36	
12	Warmth -	Mean	11.5	11.32	2.81*
12		S.D	1.42	1.42	
13	Aggressiveness -	Mean	6.26	5.56	0.89
		S.D	1.61	1.89	
14	Tolerance	Mean	6.03	5.84	0.69
		S.D	1.78	2.04	
15	Tough-minded -	Mean	3.88	3.18	4.57**
		S.D	1.07	1.08	

^{*}significant at 0.05 level

Examination of the mean scores and S.D from the above table reveals that the data is distributed normally. The scores of all the traits of temperament for the professional and non-

professional students are on the lower side. This means that the students are showing lower levels of temperamental traits as shown in the graph below.

^{**} significant at 0.01level

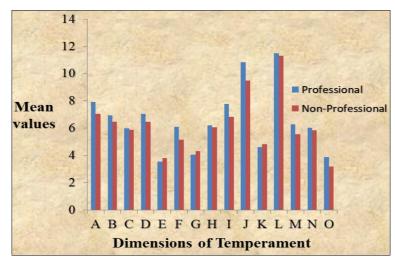


Fig 1: Mean values of adolescents belonging to professional and non-professional courses

From the above table no. 1, it can also be seen that on the various temperamental traits there are differences in the mean scores of the professional course students and non-professional course students. However, it is not possible to infer confidently only on the basis of descriptive statistics, hence the data was subjected to 't' test.

The computed value of sociability of t - 3.21 is significant at 0.01 level of significance. This indicates that professional students and non-professional students differ significantly. The professional students are more sociable than non-professional students. This could be because the professional courses students have to do many projects and they have to interact with industry people and others to gain an insight and therefore are sociable. Hence it can be said that the results support the first hypothesis - There exists significant difference in trait of sociability among the professional and non-professional students.

The second factor assessed was ascendant behavior. The 't' value=2.20 is significant at 0.05 level of significance. This indicates that professional students are more practical oriented and are not very shy and are also able to express themselves. Hence, they are more ascendant. This could be because professional students are trained to be developed in all the dimensions, including self-development and their course demands them to be more expressive. Thus the results support the second hypothesis of the study- Professional course students are significantly more on ascendant trait than non-professional students.

Reflective temperamental trait refers to the trait in which people can contemplate on a thought for days and even for years at a time. The calculated 't' value 2.33 for reflective dimension of temperament is significant at 0.05 level of significance. Thus, we can conclude that professional students are significantly more reflective than non-professional students as they are exposed to many different and varieties of subjects in curriculum. This makes them to try to co-relate different aspects of life, hence making them more reflective in general. The results are in congruence with the hypothesisthere exists significant difference in the reflective dimension of temperament amongst non-professional students and professional students.

The dimension of placid brought out significant difference amongst the two groups; t=3.40 (significant at 0.01 level.) The students belonging to professional course revealed higher placid tendencies when compared to non-professional students. Placid is a trait which means not getting upset or excited easily. It is the ability of an individual to look at

situations quietly and calmly and then show their reactions. Students studying in professional courses are given many different projects which makes them go beyond college campus and interact with different individuals. They have to work on many experiments and projects which may not yield immediate results and therefore they have to perform the experiment again. Hence, they slowly and steadily learn to be more placid in their reactions. The results supported the hypothesis - Significantly the trait of placid differs among the professional and non-professional students.

The next temperament studied was the trait of accepting. The table reveals that the mean value of non-professional course students is larger than that of professional course students. Hence it can be concluded that non-professional students are more accepting than professional students because their curriculum is simpler and they work in groups. Hence the findings support the hypothesis- There exits significant difference in the trait of accepting among the professional and non-professional students.

Vigorous dimension of temperament was the next temperamental trait which was assessed. The parameter vigorous brought out significant differences (t=2.70 p<0.05). The mean of professional course students is larger than that of non-professional course students (mean=6.82, S.D=2.72). Hence it can be confidently stated that the professional course students are more vigorous in their approach than the non-professional course students. The results are in congruence with the hypothesis - The trait of vigorous differs significantly among the professional and non- professional students. Professional course students work vigorously as they have many time-bound submissions and they have to keep themselves updated with the changes in the industry and corporate sector.

Co-operative factor was studied next and the table reveals the computed value of t=5.15 which is significant at 0.01 level. Thus, it can be confidently asserted that the two groups differ significantly. The professional course students revealed significantly more cooperative temperamental trait than non-professional course students. Students studying in professional course develop more of cooperative behavior as they have to move out more and interact with individuals working at different levels and also seek help from others. Therefore, their tendencies for cooperative behavior increases. Hence the results are in support of the hypothesis- The trait of co-cooperativeness differs significantly among the professional and non-professional students.

The next attribute investigated was aggressiveness. On this

attribute the two groups differed significantly (t=2.81). The professional course students with a mean score of 6.26 (S.D = 1.61) were higher than the non-professional course students (mean = 5.56, S.D = 1.89). The hypothesis Aggressiveness trait of temperament significantly differs among the professional and non-professional students is supported by the research findings. Professional courses curriculum is vast, tough and requires dedication and hard work.

Tough mindedness revealed that 't' value 4.57 is significant at 0.01 level of significance. This shows that professional students are more tough minded when compared with non-professional students. This can be because the students have to study in depth, get exposed to various stimuli of the subject; practical work is more and lot many project works to be completed etc. The research findings are in congruence with the hypothesis - The trait of tough minded differ significantly among the professional and non-professional students.

The results of the present study are in agreement with studies done earlier. Studies that adopted Holland's theory have found that there is a relationship between personality types and career choice (Momberg, 2004 and Onoyase & Onoyase, 2009) [18, 11]. Studies conducted in Kenya showed that people get employment in areas that are neither in line with their careers or professional training nor personality traits or interests. They go for what is available rather than what is in their personal interest, value, ability or skill to re-orient their interest to the available training (Godia, 2009) [9]. When such people are employed, they experience job frustration and dissatisfaction. This is characterized by low work morale and reduced productivity which has far reaching social and economic consequences. This is a manifestation of poor career choice.

Though temperament refers to inborn characteristics, our factory settings (how one is wired) environment also plays an important role in building temperamental traits. The family, school, peers, elders, education of the parents, number of siblings, SES child rearing technique etc. all play an important role in developing temperamental traits.

Conclusions

From the statistical interpretation of the data the following conclusions were drawn:-

- 1. The total temperamental traits of non-professional students revealed low scores which can be interpreted as negative temperament.
- 2. With respect to the professional students, temperament was more on the negative side.
- 3. The temperamental dimensions sociability, ascendance, reflective, placid, accepting, vigorous, co-operative, aggressiveness and toughness yielded significant differences between the professional and non-professional students. In all the above dimensions, professional students revealed higher values than the non-professional excepting on the dimension of accepting.
- 4. The temperament dimensions secretiveness, impulsivity, responsible, persistence, warmth, and tolerance failed to yield significant difference between the two groups.

Suggestions

- A large representative sample may be taken to get reliable results.
- The study can be conducted on different age groups.
- A comparative study between teachers of professional

courses and non-professional courses can be conducted.

Recommendations

- Workshops or seminars on parenting can be organized in which special emphasis should be placed on developing of temperamental traits.
- Every school and college should have counselors to help students cope with their temperaments.
- Parents should try to build a realistic temperament trait which would benefit the child.
- Parents should provide love and affection and support to adolescents and motivate children so that they can develop good temperamental traits.
- Test of temperamental traits can be a back bone of guidance cell of counseling.

Limitations

- The study was restricted to a sample of only girls.
- Only one variable temperamental trait was studied.
- Sample size was limited to only 200.

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