

Blood Type and their Relationship with Motivational Behaviours

Shyam B. R.^{1,2} & P. S. Aithal³

¹ Post-Doctoral Fellow, Institute of Management & Commerce, Srinivas University,
Karnataka, India.

² Associate Professor & Head, Maharaja Institute of Technology Mysore, Department of
Management Sciences, Mysore - 571443, Karnataka, India.

ORCID: 0000-0001-6338-3086; E-mail: shyamabhiram@mail.com

³ Institute of Management & Commerce, Srinivas University, Mangalore - 575 001, India.

OrcidID: 0000-0002-4691-8736; E-mail: psaithal@gmail.com

Area/Section: Health Management.

Type of the Paper: Case Analysis.

Type of Review: Peer Reviewed as per [|C|O|P|E|](#) guidance.

Indexed in: OpenAIRE.

DOI: <https://doi.org/10.5281/zenodo.6781619>

Google Scholar Citation: [IJHSP](#)

How to Cite this Paper:

Shyam, B. R., & Aithal, P. S., (2022). Blood Type and their Relationship with Motivational Behaviours. *International Journal of Health Sciences and Pharmacy (IJHSP)*, 6(1), 72-81. DOI: <https://doi.org/10.5281/zenodo.6781619>

International Journal of Health Sciences and Pharmacy (IJHSP)

A Refereed International Journal of Srinivas University, India.

Crossref DOI: <https://doi.org/10.47992/IJHSP.2581.6411.0082>

Received on: 02/03/2022

Published on: 30/06/2022

© With Author.



This work is licensed under a [Creative Commons Attribution-Non-Commercial 4.0 International License](#) subject to proper citation to the publication source of the work.

Disclaimer: The scholarly papers as reviewed and published by the Srinivas Publications (S.P.), India are the views and opinions of their respective authors and are not the views or opinions of the SP. The SP disclaims of any harm or loss caused due to the published content to any party.

Blood Type and their Relationship with Motivational Behaviours

Shyam B. R.^{1,2} & P. S. Aithal³

¹ Post-Doctoral Fellow, Institute of Management & Commerce, Srinivas University, Karnataka, India.

² Associate Professor & Head, Maharaja Institute of Technology Mysore, Department of Management Sciences, Mysore - 571443, Karnataka, India.

ORCID: 0000-0001-6338-3086; E-mail: shyamabhiram@mail.com

³ Institute of Management & Commerce, Srinivas University, Mangalore - 575 001, India.

OrcidID: 0000-0002-4691-8736; E-mail: psaithal@gmail.com

ABSTRACT

Purpose: *All people, including you and me, have motivational behaviors, and every individual comes up with different factors to influence their motivational behavior. It is what makes us the person we are. Our motivational behaviors take care of our behavior, thinking ability, emotions, thoughts, and even individual feelings, even at their unconscious levels. Such that, the mentioned things will always help in forecasting the future and also their behavioral changes in different situations. Many of the earlier studies have proved that there is no correlation between motivation levels of the individual through their blood group, but the concept remains more popular in all dimensions.*

Objective: *The researchers have set the following primary objective and the current study investigates a broad research question to identify whether blood type has a relationship with motivational behaviors.*

Methodology: *The study is based on secondary evidence. In this regard, various libraries were visited and some online journals were also reviewed in this direction.*

Findings/Result: *Researchers have found that blood type does have a relationship with personality and behaviors in countries where belief in the blood type personality theory is strong. This study concluded that people changed their personality to fit their blood type instead of in a self-fulfilling prophecy. Thus, blood type does have a relationship with motivational behaviors like motivation is an internal process, the anatomy of motivation, motivational traits, character motivation, and neuro motivation, intrinsic and extrinsic & major determinants of motivation.*

Research Implications: *Motivational behaviors need to be tackled with the weapon of trend motivational techniques i.e., beyond monetary compensation for which the blood type and their relationship with motivational behaviors help a lot.*

Originality/Value: *Other researchers have found that blood type does have a relationship with personality and behaviors. Similarly, blood type affects motivational behaviors. In countries like Japan, Korea, Asia, etc., where belief in the blood type personality theory is strong. This study concluded that people changed their motivation & personalities to fit their blood type instead of in a self-fulfilling prophecy. In this way, it is similar to the use of astrological signs, which is also popular in Japan.*

Paper Type: *The present study made an attempt to identify whether blood type has a relationship with motivation. The study is based on secondary evidence.*

Keywords: Blood type, Motivational behaviors, Motivational traits, Character motivation, Neuro motivation, Intrinsic & Extrinsic motivation.

1. INTRODUCTION :

Many scientific studies have proved that red blood cells are called "erythrocytes". With reference to the Greek Erythros for red and Kytos for the hollow vessel with Cyte translated as cell modern usage, Red Blood Cells are also termed as red cells, haematids erythroid cells erythrocytes, and red blood

corpuscles. Dean Laura, (2005) [1]. A blood type is also termed as a blood group, where it includes the classification of blood, wherein, it depends on and without antibodies and inherited antigenic substances on the surface of red blood cells (RBCs) Dean L, (2005) [2]. The considerable antigens depend on the human blood group system including proteins, carbohydrates, glycoproteins or glycolipids. Many studies have proved that many of the considerable antigens are present on the surface of various tissues with respect to different types of cells selected in the study. Adding on further, many of the red blood cells on its surface include the antigens that are rooted in one allele, which is also termed an alternative version of a gene and describes the collective form of a blood group system and it is derived from both the parents of any individuals and it is said to be inherited Reid, Marion E (2012) [3]. The above theory was proven by the International Society of Blood Transfusion (ISBT) by considering 36 human blood group systems involving 346 antigens and according to Mitra, Ranadhir (2014) [4], it is proved that the most important blood group derived from the stated antigens are 'AB' and 'O' along with its Rh is considered and they have helped to derive other blood groups like A, B, AB, and O, wherein, the positive and negative antigens of the same are considered along with the RhD and it depends on the suitability and transaction of blood.

Considering the major factor of the study, the term motivation is termed as a psychological factor that helps in guiding the behavior of individuals. Adding on further, the term motivation is defined as the process that initiates, guides, & maintains goal-oriented behaviours of individuals and it is a factor that causes acts among the individuals. Many of the earlier studies have proved that important variables such as the wants and desires of individuals based on the influence of cultures, lifestyle and society influence the motivation of individuals and these are generally measured with the blood group. Many of the earlier have tried to identify which blood group has a significant relationship with motivation behavior among the individuals in various countries. Finally, it is observed that the term motivation is always a one's direction to the behavior of individuals and tries to identify the forcing acts with respect to the behavior of individuals and also the driving motives are measured among the blood group.

2. REVIEW OF LITERATURE :

For decades, many researchers have made an attempt to study the significant relationship between the blood group and the motivational level of individuals along with the behavioral aspect of the individuals. Hence, this section of the study includes the gist of various studies carried out by the earlier researchers which are termed as more illustrative than being definitive are as follows, according to Masahiko, (2012) [5], the considered blood group and the personality of each individual are dependent on the Rh factors of the individuals which play an important role in defining their personality. An empirical study by Parag Arun Narkhede (2015) [6] in Japan on the various blood type selected in the study has a significant impact on the personalities, which is also proven on the basis of horoscopes and the type of blood group. The above theories have made individuals strongly believe in the blood type and it significantly impacts the strength, weaknesses and personality traits of the individuals. The above claim was first identified in 1927 and the study was carried out by Takeji Furukawa [11] in their various articles and books in larger numbers. The above claim was disproven and it was un-popularized after the demise of Furukawa's in the year 1940, and it again got the strong support in the investigation made by the popular journalist Masahiko Nomi in his series of books which was sold in millions of copies in the year 1970 and the popularity is still more in the recent investigation. Adding on further, the primary objective of the study was the same as it is described and it was proven with the help of 100 samples selected randomly with the help of questionnaires that was distributed across various linkages in India. The basic idea of this paper is based on the same line. Primary data has been collected randomly from 100 people through the questionnaire to reveal similar linkages in India, wherein, the major findings of the study were there is a similarity in the distinct characteristics of blood group and the perception among the Japanese.

The study was carried out by Mary Rogers A. & Ian Glendon (2003) [7] had invested in the personality and differences among the individuals and the expected relationship between the various blood group individuals available and the personality of the population selected normally. The above claim was evident in various studies published including various scanty, conflicting, and characterized factors at unequal cell sizes. The major findings of the study are that blood group 'B' has higher neuroticism, group 'O' has a behavior of extroversion and the individuals are more optimistic, wherein group 'A'

individuals are having higher agreeableness and group 'AB' is higher conscientiousness compared to the other blood group considered in the study, but the claim was more predictive than being in reality. Adding on further, this study predicted the influence of gender and also the type of blood group. To test this claim, the researchers have considered the sample of 180 males and the same numbers of females with respect to the various blood groups were tested and finally it was reduced to 30 samples for each of the blood groups identified. The above parameters were tested with the help of big-five traits developed by Goldberg and a further Life Orientation Test was administered and it was revised to understand the various versions of personality traits. The major findings of the study with the help of MANOVA indicate that there is no significant relationship between the various variables considered in combination and the blood group selected in the study and it was also helpful to understand there is no significance among the type of gender and the personalities with respect to the various blood group selected in the study as it is described in the methodology.

Does Blood Type Affect Human Behavior?

In the study by (Sabo & Watanabe, 1992 [8]; Sullivan, (1995/2000) [9]), the individuals from Japan believe that there is a significant relationship between the personality of individuals along with the vocational success of the individuals including the compatibility and their blood type. According to Sullivan, there is clear evidence on the significance of blood group and the astrological belief of individuals along with the Zodiac signs plays an important role among the individuals of Japanese. The study explained by (D'Adamo & Whitney, (2004) [10]) in the United States, expressed the importance of naturopathic medicine often considered as a great store in blood group that helps in understanding the vocational differences among the blood group selected. At the initial stages of the study, it was understood that the blood group individually selected in America have a significant relationship with the vocational behavior of the individuals and even the Japanese believe the same with the proof of some empirical evidence, such that, the confusions of the same have given emergence to septic pause for understanding the concept in depth.

Japanese Views on Vocational Implications:

The study carried out by (Sabo & Watanabe, (1992) [8]), on understanding the personality and relationship between the blood group of the individual samples in Japan. The major findings and belief of the study were that identified blood group of individuals has a significant relationship with the personality traits of individuals are most commonly understood among the group and they are widely spread across. The study carried out after the II World War (Sullivan, 1995/2000) [9] have framed various assumptions according to the various blood group. Finally, the major drawings from more than 30 works carried out by Tashitaka Nomi on the implications of blood type provide the supporting evidence the outlining positive traits, negative traits, and appropriate careers for individuals of the four blood types. The career recommendations are provided below:

Type O: Banker, politician, gambler, minister, investment broker, baseball player

Type A: Accountant, librarian, economist, novelist, computer programmer, gossip columnist

Type B: Cook, hairdresser, military leader, talk show host, journalist, golfer

Type AB: Bartender, lawyer, teacher, sales representative, social worker

Western Views: Evolutionary Naturopathy:

From the study of various researchers in the western part, many of the theories have proved that the influence of family and the blood type has affected the personality patterns and their thought process and behavior of adjustment relies on the evolutionary psychology of blood type. One of the major blood groups 'Os basically assumed as the "original" type, since it is distributed commonly across all areas and humans across the world; this is the primary reason for considering the human beings with type 'O' blood as universal donors and also many other types of blood groups are derived from the same. Nowadays, it is assumed that the group's blood contains the characteristics that are very well suited to the day-to-day diet of primitive hunter-gathering society, wherein, they thrive on a diet that is heavy in fruit, meat, and nuts but they are very much low in grains and milk. The researcher D'Adamo and Whitney (2004) [10] in their study have assumed that the mentioned blood group is more connected to the personality traits of an individual (basically being aggressive) as they are considered a predator at the top of the food chain.

Adding on further, the other major group 'A' is considered as a successor blood group after group 'O', in which it is shown its existence after the human settlements in the part of agriculture and this was proved in the study of D'Adamo and Whitney, carried out between 25,000-15,000 B.C., and it was observed in the Asian Pacific and also in the Middle East. The researchers in their study also observed that group 'A' individuals are blessed with additional abilities to fight against the foreign bodies and also help to be normal against the infectious diseases that are very common and spreading rapidly in the group of agriculturists. The study has also given enough conclusive evidence that group 'A' blood is very much common in the Mediterranean region, and it was then rooted in the west reaching Western Europe with help of Indo-European peoples. (One of the superior countries like Japan too has the highest rates of individuals with group 'A' in East Asia). The study is carried out under certain assumptions, wherein, individuals with the blood group being 'A' are considered to be very much concerned about their diets and tend to prefer the diet which is rich in grains but low in meat and dairy products. The study with other main assumptions is that group 'A' individuals are more commonly associated with their personality traits and they are well connected among the farmers and also being more cooperative in crowded communities.

With reference to the work of D'Adamo and Whitney (2004) [10], carried out between 15,000 and 10,000 B.C, they found the emergence of one more blood group, i.e., group 'B', wherein, the emergence was initially identified in the Himalayan highlands of Asia, where it was considered as the base for nomadic tribes who are dependent on the diets like meat and dairy products, as it was extracted through herds and maintained by the tribes. The study is carried out under certain assumptions that group 'B' blood individuals avail various benefits by following certain diets, i.e., consuming agricultural foods drawn from meat, and dairy products. Adding further, with reference to the study, it was observed that, there were 2 major populations with group 'B' started to develop in the northern (Mongolian) where they are more nomadic, and the being southern (Chinese) concentrating more on agricultural production. The study with other main assumptions is that group 'B' individuals carry certain personality traits, wherein, they are considered as individuals who look out for more knowledge and as an ability to adapt to the demands. With the above reference, group 'AB' is considered as the hybrid of group 'A' and group 'B' and they follow a diet which is in between those group 'A' and 'B' or considered to be following the things separately. This was initially identified in Eastern Europe very long back i.e., during A.D 900. The study also helped to understand that, the group 'AB' is still considered to be one of the rarest blood groups among the individuals, wherein, these are blessed with certainly presumed abilities as they follow optimal diets and like to process a wide variety of foods, such that, they are considered to be individuals with more general flexibility and ready for a wide variety of situations and challenges.

Many of the earlier theories, which are more popular in this field, have proposed that each of these blood groups has its own personality traits and these are considered to be proven. For example, individuals having group 'O' are said to be extroverts, where they tend to prefer themselves to be in the higher positions and also ready to take leadership, being aggressive, and encouraged to be more relatively independent, wherein, group 'A' are more team players and they tend to prefer the positions involving group harmony. With these references, many of the studies and theories are more associated with various blood groups and they are not much different in the way of understanding and also the content involved in the same.

Empirical Research and Vocational Implications:

In the past, many researchers have tried to observe the significance of the blood type and personality of an individual, such that the below are certain reviews considered to be illustrative rather than they being definitive. This study involves the review of authors concentrating on identifying the relationship between blood type and personality and it is a primary objective of the study. The study by the authors (Koga & Kato, 1934 [12]; Thompson, 1936 [13]) has found that there is no significance between blood type and personality traits or abilities of an individual and it proved that they are mutually exclusive in nature. But, some of the recent studies on the concept have found certain significance in the blood group and the personality of individual human beings. To prove the statement, the recent study by the authors, Rinieris, Stefanis, and Rabavilis (1980) [14], considered a sample size of 600 individuals from different

places and tested to find out the greater linkage between the blood group (A, B, AB) and the personality traits among them but it was proven wrong again in type 'O'. Another study by Marutham and Prakash (1990) [15] including 137 graduate students from various places helped to identify that, individuals with group 'B' blood are found to have higher neuroticism scores, when compared to individuals with group 'O' and 'A' and also on the Eysenck Personality Inventory of the individuals. It was also found that there were no significant differences in the behavior pattern of the individual in group 'A'. In a small study carried out by the author Edward (1992) [16] ulcers, Neumann, Shoaf, Harvill, and Jones, stated that group 'A' individuals were found to have higher trait anger, trait anxiety, and found to have more depression when compared to individuals having group 'O' on measuring their personalities. The earlier studies have commented that, if there is an association between the blood groups and the personality of individuals, then it is assumed that, the typical blood groups should also include the type of occupation preferred by the individuals and their ability to perform the certain job along with their resistance to any kind of stress in their occupations, which is not very much possible in terms of practicality.

Does Your Blood Type Affect Your Personality?

The term personality of an individual is assumed to be influenced by many the internal and external factors that include, environmental, genetic, cultural and situational aspects. To understand the concept of personality many can refer to a specific branch of psychology, which addresses the characteristics and behavior of individuals, wherein, these personality concepts are rooted as the concept in sciences and are said to be useful theories to describe the people distinctive. In the past, there are many theories are proposed on personalities that even include the association between astrology and zodiac signs as a part of pseudoscience. Adding on further, many of the concepts in pseudo-science contains theories and statements that are considered to be extracted from the scientific method are said to be a wrong claim, wherein, they are considered to be identified by mistake and the other theory under pseudo-science as stated that the personality of an individual can be defined from their blood groups.

The personality theory on blood groups was initially identified and developed in Japan, wherein, the majority of their population is a group 'A' and rarely individuals with the 'AB'. The theory proposed states that it is significant among the blood group and the personality of individuals, wherein, each of the blood groups i.e. A, B, AB, and O, do influence certain behavior among individuals and states certain personality characteristics and these were the key factors to assess the relationships, behavior and compatibility among the individuals. It is said that individuals in Japan can be asked about their blood group to check on their personality, which is similar to checking on zodiac signs in the USA. The theory also expressed certain views, wherein, the Japanese use blood group as a key indicator to determine their compatibility and matching their only date as it is very popular among the women's publications in Japan and it is proven that, it is used to match the perfect partner among themselves, along with these Japanese newspaper and television shows offer information about the blood group horoscopes on a daily basis.

3. GAPS & AGENDA FOR FUTURE RESEARCH :

The review of the studies explains that the earlier studies on the blood groups are basically on the strategies for motivation and other motivation concepts. But, some of the few studies are very much particular and they are very much general and they are in the form of reports and articles, wherein, it is lagging with required research aspects and orientation. Therefore, there is an immense need to conduct comprehensive/descriptive research on blood type and their relationship with motivational behaviours.

4. OBJECTIVE OF THE STUDY :

Previously nobody studied blood type and their relationship with motivational behaviours hence the researchers have set the following primary objective and the current study investigates 1 broad research question:

(1) To identify blood type has a relationship with motivational behaviors.

5. RESEARCH METHODOLOGY :

The present study is made an attempt to identify whether blood type has a relationship with motivation. This study involves more secondary data evidence than primary evidence. The secondary evidence is

gathered by visiting many libraries and also references of journals, articles, and reviews that were available and evident.

6. RESEARCH MODEL :

The variables selected for the study include independent variable as blood type & dependent variable as professional socioeconomic factors & motivational behavior. The researchers have built a conceptual model stating blood type does have a relationship with motivational behaviors like motivation is an internal process, the anatomy of motivation, motivational traits, character motivation, and neuro motivation, intrinsic and extrinsic & major determinants of motivation.

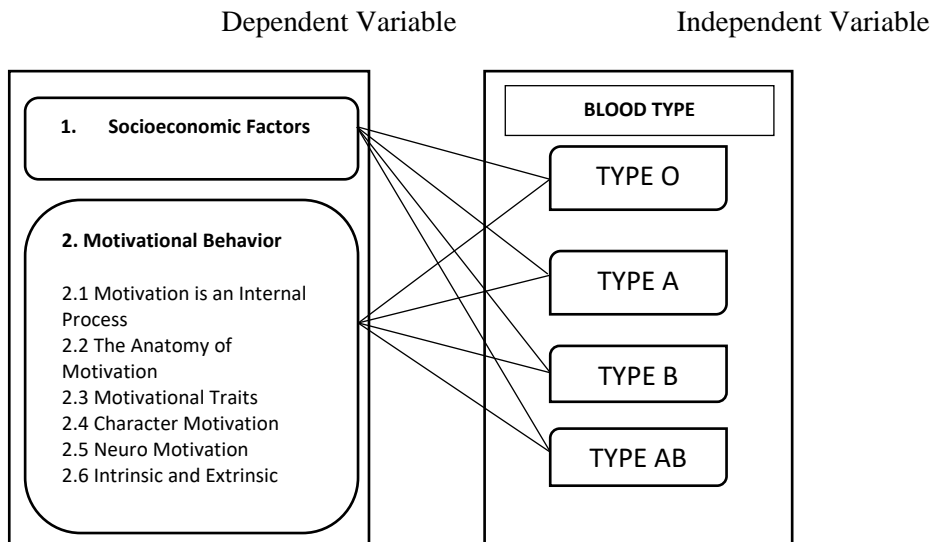


Fig. 1: Conceptual research model

Table 1: Variables Selected	
Independent Variable	Blood type
Dependent Variable	Professional socio-economic factors & motivational behaviour

Independent Variable	Dependent Variable
Blood type: O A B AB	Socio-economic factors
	Motivational behavior

Table 2: Blood Type says about Motivational Behaviors	
Blood Type	Motivational Behaviors
Type O	Motivational Behaviors Motivation is an Internal Process The Anatomy of Motivation Motivational Traits Character Motivation Neuro Motivation Intrinsic or Extrinsic
Type A	
Type B	
Type AB	
Type AB	

7. HYPOTHESIS OF THE STUDY :

Based on the objective framed hypothesis is framed to prove or disprove the statement.

Hypothesis 1 (H0): Blood type has no significance on motivational behaviors.

8. RESULTS & DISCUSSIONS :

8.1 Epilogues to Prove Blood Type and their Relationship with Motivational Behaviors:

The term motivation of an individual is assumed to be influenced by many the internal and external factors that include, environmental, genetic, cultural and situational aspects. To understand the concept

of motivation many can refer to a specific branch of psychology, which addresses the characteristics and behavior of individuals. Adding on further, many of the concepts in pseudoscience contain theories and statements that are considered to be extracted from the scientific method are said to be a wrong claim, wherein, they are considered to be identified by mistake and the other theory under pseudoscience as stated that motivation of individual can be defined from their blood groups.

(1) Motivation is an Internal Process: The term motivation is an internal process that makes an individual look for the goal, wherein, motivation is considered to be a person’s behavior. Many of the studies by the researchers have proposed many theories to explain human motivation and these theories include drive reduction theories & Maslow’s Hierarchy of needs theory.

(2) The Anatomy of Motivation: It is considered an ecological approach and there are few attempts have made to bring the theories concerned about human motivation. Considering the major perspective motives the psychological mechanisms are used to produce behaviors that are evolutionary and important in human beings.

(3) Motivational Traits: Motivational traits are stable, non-ability characteristics that influence the direction, intensity and persistence of an individual’s goal-directed behaviours across situations. Motivational traits are thought to affect behavior through task-specific motivation and self-regulation.

(4) Character Motivation: Character motivation is considered the main reason behind any characters and behaviors of an individual against the actions in a given scene or throughout the story. Adding further, many of the motivations are very much internal and they might be external in nature and they can relate to the survival of individuals. But they might also be psychological or existential needs, such as love or professional achievement.

(5) Neuro Motivation: Neuro motivation stands connection between the neurological processes. (Neuro) which means Brain. The study of neuro is all about we think, how we code out experiences in our mind and the way we use our senses to understand, sending, receiving, storing and processing signals that add up to information. (Motivation) which means: A motive is an inner state that energizes, activates or moves and directs or channels behavior goals.

(6) Intrinsic and Extrinsic are the Two Broad Types of Motivation: It is clearly defined that, the factors that influence any individual by their own self said to be internal factors is said to be intrinsic motivation and any factors influence the individual from the external environment such as reward or punishment is said to be extrinsic motivation.

(7) Major Determinants of Motivation:

Blood Type says about personality and behavior than says about motivational behaviours:

Table 3: Blood Type says about Personality and Behaviors		
Blood Type	Personality Type/Trait	
	General Research	Japanese Research
Type O	Social, open minded, intuitive	Rakkanshugi = Optimistic
Type A	Creative, responsible, intelligent, persistent	Kitchomen = Well organized
Type B	Unbelievably creative, fun, passionate, energetic	Jikochu = Selfish
Type AB	Rational and a bit controlling, strong willed	Kawarimono = Eccentric

Same way blood type says about motivational behaviors whether intrinsic or extrinsic and the table shows for better understanding:

Table 4: Blood Type says about Motivational Behaviors	
Blood Type	Motivation Type/Trait
Type O	Intrinsic or Extrinsic
Type A	
Type B	
Type AB	

Same way blood type answers motivational behaviors like:

- Which is the best blood type motivation?
- Which blood type is the strongest motivation?
- Which blood type has the highest motivation?
- Which blood type determines a human motivation?

And so on.

9. ANALYSIS, IMPLICATIONS & SUGGESTIONS :

The challenge of blood type and their relationship with motivational behaviours is not peculiar to any place or profession; hence the problem is more accentuated. A number of industry players have realized that in order to come out of the vicious circle of human resource challenges the crux of the problem i.e., motivational behaviours need to be tackled with the weapon of trend motivational techniques i.e., beyond monetary compensation for which the blood type and their relationship with motivational behaviors helps a lot. Alternately, another study shows that the attitude and behaviour of a person depend on feelings, emotions, and previous and present environment [17].

10. CONCLUSION :

With reference to the findings of the study, it was found that the blood group of any individual do have a significant relationship with the personality and behaviors of individuals in various countries, where they believe that, the blood type has a significant on personality as the theories are stronger in nature. Hence, this study can be concluded that people changed their motivation & personality to fit their blood type instead of in a self-fulfilling prophecy and thus blood type does have a significant relationship with motivational behavior considering both intrinsic and extrinsic factors in nature. Thus, blood type does have a relationship with motivational behaviours like motivation is an internal process, the anatomy of motivation, motivational traits, character motivation, and neuro motivation, intrinsic and extrinsic & major determinants of motivation.

REFERENCES :

- [1] Dean, L. (2005). Blood group antigens are surface markers on the red blood cell membrane. *Blood Groups and Red Cell Antigens. Bethesda [MD]: National Centre for Biotechnology Information [US]. Chapter 2.* [Google Scholar](#)
- [2] Dean, L. (2005). The ABO blood group. *Blood Groups and Red Cell Antigens. Bethesda [MD]: National Centre for Biotechnology Information [US]. Chapter 5.* [Google Scholar](#)
- [3] Reid., Marion, E. (2012). The Blood Group Antigen Facts book II Introduction (3/e). Elsevier Ltd. DOI: <http://dx.doi.org/10.1016/B978-0-12-415849-8.00001-6>, [Google Scholar](#)
- [4] Ranadhir, M., Nitasha, M., & Girija, P. R. (2014). Blood Group Systems. *Indian Journal of Anesthesia, 58(5)*, 524-528. DOI: 10.4103/0019-5049.144645. [Google Scholar](#)
- [5] Masahiko Nomi. (2012). Blood Type Humanics. Retrieved 01 2013 from [abo-word.co.jp](http://www.abo-world.co.jp): <http://www.abo-world.co.jp/English>.
- [6] Parag, A. N. (2015). An Empirical Study on Blood Types and Personality: *International Journal of Science, Spirituality, Business and Technology (IJSSBT)*, 3(2), 32-36. [Google Scholar](#)
- [7] Mary, R., A. Ian, G. (2002). Blood Type and Personality, 34(7), 1099-1112. [https://doi.org/10.1016/s0191-8869\(02\)00101-0](https://doi.org/10.1016/s0191-8869(02)00101-0). [Google Scholar](#)
- [8] Sabo, T., Watanabe, Y. (1992). Psychological studies on blood-typing in Japan. *Japanese Psychological Review, 35 (2)*, 234-268. [Google Scholar](#)
- [9] Sullivan. (1995/2000). Clonal Hematopoiesis & Blood Cancer Risk Inferred from Blood DNA Sequence. *American Journal of Psychiatry, 152 (7)*, 1073-1074. [Google Scholar](#)
- [10] Peter, J. D'A., Catherine, W. (2004). *Arthritis: Fight It With The Blood Type Diet. The Individualized Plan for Defeating the Pain of Osteoarthritis, Rheumatoid Arthritis, Fibromyalgia, and Other Inflammatory Conditions.* G. P. Putnam.

- [11] Mizoguchi, H. (1986). Takeji Furukawa and the theory of relationship between blood type and temperament. *Biological Science*, 38(1), 9-20. [Google Scholar](#)
- [12] Koga & Kato (1934). Blood Type & Personality, *Pers Individual Dif.* 34(1), 1099-1112. [Google Scholar](#)
- [13] Thompson, G. N. (1936). Blood Type as Related to Intelligence, Emotions & Personality. *Journal of Applied Psychology*, 20(1), 785-789. [Google Scholar](#)
- [14] Riniers, P. M., Christoloudous, G. N. & Stefanis, C. N. (1980). Neuroticism & ABO Blood Types. *Acta Psychiatrica Scandanavica*, 61(1), 473-476. [Google Scholar](#)
- [15] Marutham, P., & Indira, J. P. (1990). A Study of the Possible Relationship of Blood Types to Certain Personality Variables. *Indian Journal of Clinical Psychology*, 17(1), 79-81. [Google Scholar](#)
- [16] Edward, U., Neumann, Shonf. Harrilljones. (1992). Psychological Studies on Blood Typing in Japan. *Japanese Psychological Review*, 35(1), 234-268. [Google Scholar](#)
- [17] Aithal, P. S., & Aithal, S. (2019). A New Attitude-Behaviour (AB) Theory for Organizational Leadership. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 4(1), 83-97. [Google Scholar](#)
