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COLLISION OF COGNITIVE AND BEHAVIORAL VARIATES ON THINKING STYLES IN DIFFERENT CAREER PERSONALITY PROFESSIONALS

Ms. Garima Saini[1], Dr. Shabnam[2]
[1]Research Scholar, NIT Kurukshetra.
[2]Assistant Professor, NIT Kurukshetra.

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Abstract

This study is an attempt to investigate the cognitive and behavioral impact on the different career personality in professionals. Participants participated in the study were 280 professionals who were selected from purposive and cluster sampling. Cognitive correlates are studied on dimensions; cognitive styles, metacognition and cognitive rigidity. Behavioral correlates are assessed on dimensions; leadership behavior, coping styles and organizational commitment. Data obtained from questionnaires were analyzed using Pearson correlation and stepwise regression analysis. The results indicated that thinking styles have a significant contribution with cognitive and behavioral correlates. There is a positive and meaningful correlation among thinking styles with cognitive styles, metacognition, leadership behavior, approach coping styles and organizational commitment. Thinking styles posse's negative correlation with cognitive rigidity and avoidance coping styles. A result with regression analysis shows that thinking styles are the potent predictors of the cognitive and behavioral correlates.

Introduction

What is happening in our life does not depend on how well we can think, but also on the way we can think. Different people have different ways of thinking, and often overestimate the extent to which others think about their thinking styles. Thinking styles can be defined as a favorable way of how we think; it cannot be called as ability but collective use of abilities that we possess. Individual has favorable way of styles which varies from one individual to

other. We can say this by quoting that an individual may like doing task in a unique/creative manner another may be fearful of trying new ways of doing a task. One individual may choose an orderly / systematic way for completing a task and another individual may complete the same task by defying systematization. As different individuals opt different careers and they succeed in it with their abilities and capacities, this study is an attempt to study the consanguinity of cognitive and behavioral dimensions on individual's thinking styles. This study is an attempt to investigate the individual's styles with different career personalities as individuals uses different abilities in different professions. Career personality types differ according to the activities that are related to abilities and competencies of an individual. In these study different cognitive and behavioral correlates are used to investigate their role on thinking styles. Cognitive correlates comprise of cognitive dimensions; metacognition, cognitive styles and cognitive rigidity. On the other hand, behavioral correlates comprise of leadership behavior, organizational commitment and coping strategies. Anempirical study which explains the relationship between the constructs thinking styles and metacognition indicates that: the judicial and legislative thinking styles contribute to the use of metacognitive strategies directly and in a positive way (Braojos, 2013). A significant positive relationship between monarchic, oligarchic, and conservative thinking styles and metacognitive awareness was found. (Heidari&Bahrami, 2012). Three creativity generating thinking styles (hierarchical, liberal and legislative) and the executive style shows consanguinity with metacognition (Zhang, 2010). Thinking styles and cognitive styles were studied and found out that the internal thinking style (a neutral style) being significantly correlated with the dualism scale and the remaining of the thirteen thinking styles were significantly related to the dualism scale (Zhang, 2002). Cognitive rigidity hampers the thinking style of the individual. In this study we included stress, anxiety and depression as correlates of cognitive rigidity. Perceived stress a predictor of belief states that stress lowers the rational thinking of an individual (Lasikiewicz, 2015). The hierarchical thinking style (one Type I style) in Sternberg's mental self government theory negatively related to depression, whereas the judicial, anarchic, and internal styles did so positively (Zhang, 2010). Creativity-generating thinking styles (also known as Type I styles) and the external thinking style (a preference for working with others as opposed to working alone) were negatively related to anxiety, whereas the conservative style was positively related to anxiety (Zhang,2009). The relationship between behavioral coping strategies and thinking styles were studied; active coping strategy was affected significantly by legislative, local and hierarchical thinking styles, while avoidance strategy was affected significantly by oligarchic thinking styles, behavioral conducts by judicial, global and anarchic thinking styles (Hassan, 2014). Monarchic, hierarchic and legislative thinking styles are potent predictors of approach coping strategies (Gezzel, 2012). Leadership behavior has an impact on thinking styles on an individual; dimensions of leadership behavior that are interpersonal relations and performance contribute positively with thinking styles (James, 2016). The

relationship between thinking style and leadership behavior is significant in information technology professionals (Herbst & Maree, 2015). In mid-level managers and found out that internal thinking style has a positive predictive value in the task oriented and people-oriented leadership style (Ince, 2013). Thinking styles of individual differ and it would have an impact on organizational commitment the individual is possessing in different professions. Managerial thinking styles and organizational commitment in professionals from different fields showed that thinking styles and affective organizational commitment are highly correlated (Groves &Vance, 2016). Managerial thinking style has increased significantly over the last decade of management and organizational commitment research (Dane and Pratt, 2007; Gartner, 2005 and Sternberg,1997).

Methodology

Sample

The present study would be based on primary data. The sample would be selected by purposive sampling and which would be comprised of 280 individuals having different professions or career personality types with varying age group.

Psychological Tests/ Measures

1) Thinking style. Thinking style inventory (Stemberg & Wagner& Zhang, 2007)
2) Cognitive style. Cognitive style inventory (Pradeep Jha,2001)
3) Metacognition. Metacognitive Skills Scale developed by (Gupta and Suman,2017)
4) Depression, anxiety and Stress. Depression, anxiety and Stress scale (Lovibond & Lovibond, 1995)
5) Organization commitment. Organizational commitment scale (Anukool. M. Hude& Roy, 2006).
6) Leadership behavior. Leadership behavior scale (Asha Hingar,1984)
7) Coping strategies**.** Coping strategies scale (A K Srivastava ,2001)

Results and Discussions

Correlation analysis

This study highlights the consanguinity of the dependent variable i.e. thinking styles with independent variables that are cognitive correlates including cognitive styles, metacognition and cognitive rigidity and behavioral correlates including leadership behavior, coping strategies and organizational commitment. To study the relationship and apply logic to understand impact among the variables is one of the objectives of this study. In order to study the impact, the relations of the independent variables i.e. metacognition and its dimensions planning skill, implementation, monitoring and evaluation; cognitive styles and its dimension systematic and intuitive; cognitive rigidity

i.e. stress, anxiety and depression with thinking styles. Behavioral correlates that are leadership behavior having dimensions emotional stabilizer, team builder, performance orientor, potential extractor, socially intelligent and value inculcator; coping styles with dimensions approach and avoidance styles; organizational commitment with dimensions belonginess, job satisfaction optimism and quality of work. Pearson's correlation coefficient was applied and relationship was seen in table 1 and 2.

Correlation between cognitive correlates and thinking styles

Correlation between thirteen dimensions of thinking styles and four dimensions of metacognition ranging between .04 to .46 in table 1. Legislative, Executive, Global, Local, Liberal, Hierarchical, Internal and External thinking styles shows positive correlation with four dimensions of metacognition that are planning skills, implementation, monitoring and evaluation. Judicial and Conservative thinking styles shows positive correlation with two dimensions of metacognition that are planning skills and implementation. Oligarchic and Anarchic thinking styles shows positive relation with planning skills, implementation and monitoring. Legislative and Anarchic thinking styles shows positive correlation with one dimension of cognitive style i.e. intuitive thinking styles. Executive, Judicial, Global, Local, Liberal, Conservative, External and Internal thinking styles shows positive relation with both the dimensions of cognitive style. Correlation between thirteen dimensions of thinking styles and three dimensions of cognitive rigidity ranging between .00 to .88 in table 1. Legislative thinking styles shows negative correlation with stress. Executive and external thinking styles shows negative correlation with three dimensions of cognitive rigidity. Liberal, conservative, global, hierarchical, monarchic and oligarchic thinking styles shows negative relation with depression.

Table 1.Correlation Matrix between cognitive correlates and thinking styles

Variables	Li	Ex	Ju	Gl	Lo	Lib	Co	Hi	Mo	Ol	An	In	Ext	Ps	Im	Mn	Ev	S	I	St	A	D
Li	1	.04	.08	.22	.13	.43	.00	.06	.33	.26	.14	.46	.30	.37	.39	.37	.34	.21	.32	-.25	-.13	-.23
Ex	.04	1	.33	.34	.40	.28	.70	.32	.22	.42	-.04	.08	.25	.46	.58	.26	.37	.52	.28	-.26	-.29	-.47
Ju			1	.34	.17	.21	.21	-.01	.18	.11	.22	.21	.06	.31	.40	.10	.14	.58	.46	.05	-.00	-.23
Gl				1	.55	.40	.48	.32	.65	.23	.32	.44	.43	.60	.65	.51	.60	.59	.55	-.02	-.07	-.43
Lo					1	.49	.50	.30	.57	.50	-.16	.29	.37	.66	.57	.46	.41	.67	.56	.02	.04	-.19
Lib						1	.17	.30	.45	.26	.26	.57	.22	.74	.73	.69	.71	.54	.52	-.18	-.19	-.45
Co							1	.42	.56	.64	.02	.06	.38	.46	.42	.25	.21	.52	.34	-.07	-.04	-.26
Hi								1	.40	.25	.35	.20	.49	.22	.33	.27	.25	.25	.05	-.16	-.10	-.26
Mo									1	.49	.16	.39	.40	.52	.57	.47	.40	.51	.54	-.14	-.05	-.36
Ol										1	-.05	.29	.31	.47	.46	.24	.18	.50	.47	-.12	-.11	-.22
An											1	.18	.30	.18	.24	.34	.31	.14	.22	-.11	-.06	-.19
In												1	.21	.56	.59	.49	.55	.52	.57	.04	.06	-.19
Ext													1	.30	.34	.52	.38	.30	.28	-.34	-.27	-.34
Ps														1	.75	.77	.74	.80	.66	-.08	-.10	-.33
Im															1	.64	.73	.74	.59	-.37	-.38	-.68
Mn																1	.85	.63	.57	-.35	-.37	-.48
Ev																	1	.60	.54	-.34	-.34	-.54
S																		1	.79	.01	-.01	-.28
I																			1	.09	.15	-.14
St																				1	.88	.79
A																					1	.84
D																						1

Significant level .22 at 0.05 level
Significant level .28 at 0.01 level

Table 2.Correlation between behavior correlates and thinking styles

Variables	Li	Ex	Ju	Gl	Lo	Lib	Co	Hi	Mo	Ol	An	In	Ext	Es	Tb	Po	Pe	Si	Vi	Ap	Av	B	Js	O	Qw
Li	1	.04	.08	.22	.13	.43	.0	.06	.33	.26	.14	.46	.30	.24	.28	.38	.25	.27	.22	.31	-.48	.29	.39	.06	.07
Ex		1	.33	.34	.40	.28	.70	.32	.22	.42	.04	.08	.25	.38	.50	.25	.18	.09	.25	.27	-.06	.24	.30	-.16	.31
Ju			1	.34	.17	.21	.21	.04	.18	.11	.22	.21	.06	.38	.22	.00	-.14	.12	.00	.07	.05	-.07	.17	-.39	.08
Gl				1	.53	.40	.48	.32	.65	.23	.32	.44	.43	.53	.59	.41	.48	.13	.31	.23	-.26	.46	.56	-.03	.45
Lo					1	.49	.50	.30	.57	.50	.16	.29	.37	.39	.46	.35	.43	.28	.22	.43	-.18.	.24	.31	-.01	.14
Lib						1	.17	.30	.45	.26	.26	.57	.22	.51	.36	.52	.47	.40	.46	.36	-.23	.24	.43	.01	.15
Co							1	.42	.56	.64	.02	.64	.02	.14	.45	.10	.00	-.05	-.04	.40	-.10	.13	.20	-.14	.31
Hi								1	.40	.25	.35	.20	.49	.23	.25	.20	.10	.04	.03	.52	-.00	.24	.28	.02	.26
Mo									1	.49	.16	.39	.40	.31	.49	.31	.40	.27	.19	.41	-.27	.30	.41	.03	.29
Ol										1	.05	.29	.31	.15	.40	.14	.16	.29	.22	.45	-.14	.11	.16	-.25	.12
An											1	.18	.30	.19	.00	.02	-.04	-.01	.17	.05	-.10	.15	.21	.20	.22
In												1	.21	.31	.17	.22	.34	.34	.30	.31	-.09	.10	.17	-.18	-.01
Ext													1	.60	.49	.49	.36	.24	.16	.12	-.26	.57	.62	.36	.55
Es														1	.69	.77	.67	.49	.62	.09	-.35	.54	.75	.19	.56
Tb															1	.72	.71	.40	.63	.26	-.32	.53	.69	.18	.51
Po																1	.76	.49	.66	.08	-.48	.43	.66	.34	.37
Pe																	1	.67	.79	.12	-.28	.64	.70	.39	.47
Si																		1	.71	.10	-.32	.26	.43	.35	.20
Vi																			1	.18	-.24	.53	.57	.28	.42
Ap																				1	-.26	-.07	.03	-.18	-.08
Av																					1	-.21	-.29	-.24	-.01
B																						1	.77	.41	.82
Js																							1	.26	.71

Significant level .22 at 0.05 level
Significant level .28 at 0.01 level

Correlation between behavioral correlates and thinking styles

Thirteen dimension of thinking styles are analyzed with the behavioral correlates and it was found that the dimensions of leadership behavior that are emotional stabilizer, team builder, performance orientor, potential extractor, socially intelligent and value inculcator shows significant relation with legislative thinking styles, local thinking styles and liberal thinking styles. Executive thinking styles showed a positive relationship with emotional stabilizer, team builder, performance orientor and value inculcator. Judicial thinking styles are related with emotional stabilizer and team builder. Global thinking styles are related to leadership behavior correlates emotional stabilizer, team builder, performance orientor, potential extractor, socially intelligent and value inculcator. Conservative and hierarchical thinking styles are related to dimension team builder. Monarchic thinking styles shows consanguinity with five dimensions except value indicator. Oligarch thinking styles are related to team builder and socially intelligent dimensions. Internal and external thinking styles are related to all the dimensions of leadership behavior except team builder and value inculcator respectively. Coping styles are measured on the basis of approach and avoidance behavior. Approach coping strategies shows significant relation with legislative, exeutive, global, local, liberal, conservative, hierarchical, monarchic, oligarchic and internal thinking styles. Avoidance coping strategies shows negative relationship with legislative, global, monarchic and external thinking styles. Legislative, local and liberal thinking styles shows positive significance with organizational

commitment dimensions job satisfaction and belonginess. Executive global, hierarchic and monarchic thinking styles show positive relation with belonginess, job satisfaction and quality of work dimensions. Judicial and oligarchic thinking styles show negative correlation with dimension optimism of organizational commitment. External thinking styles are showing a positive relation with all the four dimensions of organizational commitment that are belonginess, job satisfaction optimism and quality of work.

Regression Analysis

Statistical technique regression analysis is used to aggregate the observation in which dependent variable is a mathematical function of independent variable. Adjusted R^2 value is obtained from the sample size variation, variation in degree of freedom between models compared or variation in the number of variables included in regression. Statistical information of the variables are as fellow

Dependent variable: Thinking styles (legislative, executive, judicial, monarchic, hierarchic, oligarchic, anarchic, global, local, external, internal, liberal and conservative thinking styles).

Independent variables: Planning, implementation, monitoring and evaluation, systematic, intuitive, depression, stress and anxiety, emotional stabilizer, team builder, performance orienter, potential extractor, socially intelligent, value indicator, behavioral approach and behavioral avoidance strategies, belonginess, job satisfaction, optimism and quality of work.

Statistical information extracted by applying regression analysis are presented in below table

Table 3.Summary of variables

Method of regression analysis	Variables Entered	Model	Dependent variables
Enter Method	Planning,implementation, monitoring,evaluation, systematic,intuitive,depression, stress and anxiety,emotional stabilizer, team builder, performance orientor, potential extractor, socially intelligent, value indicator, behavioral approach, behavioral avoidance strategies, belonginess, job satisfaction, optimism and quality of work.	1	Legislative thinking styles
		2	Executive thinking styles
		3	Judicial thinking styles
		4	Global thinking styles
		5	Local thinking styles
		6	Liberal thinking styles
		7	Conservativ thinking styles
		8	Hierarchical thinking styles
		9	Monarchic thinking styles
		10	Oligarchic thinking styles
		11	Anarchic thinking styles
		12	Internal thinking styles
		13	External thinking styles

Table 4.Model Summary

Model	Dependent variable	R	R Square	Adjusted R Square	Significance level
1	Legislative thinking styles	.875	.766	.681	1level
2	Executive thinking styles	.883	.780	.701	0.01 level
3	Judicial thinking styles	.949	.877	.833	0.01 level
4	Global thinking styles	.937	.877	.833	0.01 level
5	Local thinking styles	.925	.856	.803	0.01 level
6	Liberal thinking styles	.909	.827	.764	0.01 level
7	Conservative thinking styles	.970	.941	.920	0.01 level
8	Hierarchical thinking styles	.845	.714	.610	0.01 level
9	Monarchic thinking styles	.916	.838	.780	0.01 level
10	Oligarchic thinking styles	.934	.872	.825	0.01 level
11	Anarchic thinking styles	.747	.557	.397	0.01 level
12	Internal thinking styles	.91	.84	.78	0.01 level
13	External thinking styles	.97	.95	.93	0.01 level

Predictors: (Constant), QW, AV, S, SI, A, O, AP, EV, PO, VI, TB, I, JS, ES, IM, PE, PS, ST, MN, B, D

In the above analysis the correlation between the dependent variable that are different thinking styles and levels predicted for them (independent variables)are analyzed. Legislative thinking styles as a dependent variable predicted a valueof R (.875) which is high value andR^2 which contributes to the

successfulness of this model is 0.766. Adjusted R^2 value (.681) contributes that this model has accounted for 68% of the variance in the criterion variables.Executive thinking styles being a dependent variable on the levels predicted for them (independent variables) have a high value of R (.883) and R Square which contributes to the successfulness of this model is 0.780. Adjusted R square value (.701) contributes that this model has accounted for 70% of the variance in the criterion variables. Judicial thinking styles and levels predicted for them (independent variables) reflects high value for R (.949) and R Square is 0.877. Adjusted R square value (.833) contributes that this model has accounted for 83% for the predicted variables. Global thinking styles and levels predicted for them (independent variables) have a value of R (.937) which is high and R Square which contributes to the successfulness of this model is 0.877. Adjusted R square value (.833) contributes that this model has accounted for 83% to this model. Local thinking styles have a calculated value of R (.925) and R Square which contributes to the successfulness of this model is 0.856. Adjusted R square value (.803) contributes that this model has accounted for 80% for local thinking styles. The calculated value of R (.909) is high for liberal thinking styles and R Square which contributes to the successfulness of this model is 0.827. Adjusted R square value (.764) contributes that this model has accounted for 76% for this model. Conservative thinking styles as a dependent variable have a value of R (.970) which is high and R Square value is 0.941. Adjusted R square value (.920) contributes that this model has accounted for 92% in this model. Hierarchical thinking styles and levels predicted for them (independent variables) have a high calculated value for R (.845) and R Square which contributes to the successfulness of this model is 0.714. Adjusted R square value (.610) contributes that this model has accounted for 61%. Monarchic thinking styles have value of R (.916) and R Square value is 0.838. Adjusted R square value (.780) contributes that this model has accounted for 78%. Oligarchic thinking styles and levels predicted for them (independent variables) predicted a high valueof R (.934) and R Square which contributes to the successfulness of this model is 0.872. Adjusted R square value (.825) contributes that this model has accounted for 82%. Anarchic thinking styles and levels predicted for them (independent variables) have a R value (.747) and R Square value contributing to this model is 0.557. Adjusted R square value (.397) contributes that this model has accounted for 39% of the variance in the criterion variables indicates that the value is low and model is not fit. Internal thinking styles having a R value (.91) and R Square value contributing to this model is 0.84. Adjusted R square value (.78) contributes that this model has accounted for 78% in this model. External thinking styles being a dependent variable have a R value (.97) and R Square value contributing to this model is 0.95. Adjusted R square value (.93) contributes that this model has accounted for 93% of the variance in the criterion variables.

Conclusion

This study is an attempt to analyze the impact of cognitive and behavioral correlates on thinking styles. Thinking styles are the preferred way individual perform their task which are affected by the cognitive and behavioral components that they are possessing. Cognitive components are the belief, knowledge and thoughts which contribute to individual thinking styles. In this study cognitive components are studied on dimensions metacognition, cognitive styles and cognitive rigidity. It can be concluded that metacognition that is awareness and an understanding of one's own individual process adds a positive effect to different thinking styles. So, it can be added that individuals if aware of his cognitive thoughts possess certain specific thinking styles which would help him attaining his goal. Cognitive styles that are the specific styles which can be defined as dimension of personality which can be influenced with individual's values, attitudes and social interaction. Different styles of thinking varies with the different cognitive styles an individual is possessing. Cognitive rigidity is studied on the dimension of stress, anxiety and depression. Cognitive rigidity is the inability to mentally adapt to the new information and demands which helps an individual as a fundamental component of psychosocial functioning. These components hamper an individual style of thinking styles of thinking and have a negative impact on them. Behavioral correlates of the thinking styles are the actions and the manner an individual behave in system, organization and artificial entities in conjunction with the environment. It can be stated as the computed response of conscious, overt and voluntary actions can be studied through the thinking style of an individual. Leadership behavior studied on different dimensions showed that styles of leadership marks a flag pole with the styles of thinking. Coping strategies are the ways in which an individual cope up with the situations. It has a positive and a negative effect on the person coping styles which further effect his thinking styles. Organizational commitment is the computed behavior shown by the professionals in the organization which have significance with their thinking styles. Thinking styles are the way the individual prefer to complete its task and which shows significant relation with his cognitive and behavior correlates so we can sum up if we would work up on the individual styles of thinking his thoughts and behaviors can be altered up to an extent.

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