International Journal of Psychology and Counseling.
ISSN 2278-5833 Volume 9, Number 1 (2019), pp. 1-17

http://www.ripublication.com

A Study on Creativity and Decision Making Amongst the Young Adults and Middle Age Women Population

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Abstract

A woman's busy schedule can be made better when Creativity and Decision making are understood. Creativity is defined as the ability to produce work that is both novel and appropriate. Decision making is defined as the process of choosing among various courses of actions or alternatives.

A child's growth at each stage is appealing to the mother, but the mother encounters novel problem every day from the child, this requires creative solutions and decisions to the solutions. A working woman on the other hand encounters novel problems when told to design a product or to find creative strategies to motivate her teammates, etc. which require creative and decisive solutions. Creativity and decision making go hand in hand thus leading to an important question. Does creativity and decision making have a relationship between them? Studying about these variables can help us understanding the variables, thereby improving and implementing, creativity and decision making in a better way.

The present study was to find out the relationship between creativity and decision making amongst adult women. Creativity and decision making were the two variables that were selected and data was collected from a sample size of 30. The tools used for the present study are Wallach and Kogan Creativity Instruments, 1965 by Wallach and Kogan, Flinders decision making questionnaire, 1982 by Janis and Mann. The data collected was analysed by using spearman's correlation.

Keywords: Creativity, Decision making, correlation, Wallach and Kogan creativity instruments, flinders decision making questionnaire.

INTRODUCTION

Creativity is defined as involving the ability to produce work that is both novel and appropriate. Creativity is responsible for all of the advances made by our species since it emerged on the planet. It is somewhat surprising to learn, therefore that until recently, creativity was not the subject of extensive study by psychologists. Until recently different branches of psychology offered contrasting answers. Cognitive psychologists, for example, tended to focus on the basic processes that underlie creative thought. Research findings indicate that such processes as retrieval of information from memory, association, synthesis, transformation, and categorical reduction may all play a role in creativity. In contrast, social psychologists generally focused on the personality traits that make people creative and the environmental conditions that either encourage or discourage creativity. Creativity requires a confluence of six distinct resources:

- Intellectual abilities: the ability to see problems in new way, the ability to recognize which of one's idea are worth pursuing and persuasive skills.
- Knowledge: enough knowledge about a field to move it forward.
- Certain styles of thinking: Both a preference for thinking in novel ways and an ability to see the big picture.
- Personality attributes: such traits as willingness to take risks and tolerance for ambiguity.
- Intrinsic, task focused motivation: creative people usually love what they are doing and find intrinsic rewards in their work.

THE DISPOSITION TOWARD ORIGINALITY

There has been a marked tendency in psychological research on originally to focus attention upon the single original act in itself, rather than upon the total personality of the originator. This is understandable, for the birth and development of the original idea is usually more immediately interesting and dramatically vivid than the birth and history of the man who had idea. Newton's apple and Archimedes' tub and the well of Eratosthenes are thus naturally the circumstances with which we associate the remarkable insights of these original geniuses. We do not often ask ourselves whether these men were for the most part disposed to express or suppress impulses, or whether their emotions were fluent or turgid, or how subject to intense anxiety they were, or how much given to violent action. We tend to disembody the creative act and the creative process by limiting our inquiry to the creator's mental content at the moment of insight, forgetting that a highly organized system of responding lies behind the particular original that, because of its validity, becomes an historical event.

There is good reason for believing, however, that originally is almost habitual with persons who produce a really singular insight. The biography of the inventive genius commonly records a lifetime of original thinking, though only a few ideas survive and are remembered to fame. Voluminous productivity is the rule and not the exception among individuals who have made some noteworthy contributions. Original responses, it would see to recur regularly in some persons, while there are other individuals who

do not ever depart from the stereotyped and the convention in their thinking, either facilitate or impede the production of original acts. Rather than focusing on the immediate conditions that have triggered the original response, the study to be reported in this chapter was concerned with the underlying disposition toward originality which it may be presumed exists in persons who are regularly original. The research was directed first of all toward identifying individuals who performed consistently in a relatively more or relatively less original way. When this had been done, the more original were compared with the less original in terms of personality organizations. Independent evidence concerning the personalities of the subject was obtained both through the use of standardized paper and pencil tests and through employment of the living in assessment method, with its emphasis upon observation of the subjects through several days of informal social interactions, situational test, group discussions, psycho drama, and the like. The observers were of course kept in ignorance of the scores earned by the subjects on tests of originality.

The 4 Stages of Creativity

1. Preparation:

In this stage the thinker formulates the problem and collects the facts and materials considered necessary for finding new solutions. Many times the problem cannot be solved even after days, weeks or months of concentrated efforts. Failing to solve the problem, the thinker turns away from it initiating next stage.

2. Incubation:

During this period some of the ideas that were interfering with the solution will tend to fade. The overt activity and sometimes even thinking about the problem is absent in this stage. But the unconscious thought process involved in creative thinking is at work during this period.

Apparently the thinker will be busy in other activities like reading literature or playing games, etc. Inspite of these activities the contemplation about finding a solution to problem will be going on in the mind.

3. Illumination:

Following the period of incubation, the creative ideas occur suddenly. Consequently, the obscure thing becomes clear. This sudden flash of solution is known as illumination and is similar to ‘aha (eureka)’ experience. For example, Archimedes found solution to the crown problem.

4. Verification:

Though the solution is found in illumination stage, it is necessary to verify whether that solution is correct or not. Hence in this last stage evaluation of the solution is done. If the solution is not satisfactory the thinker will go back to creative process from the beginning.

If it is satisfactory, the same will be accepted and if necessary, minor modification may also be made in solution.

DECISION MAKING:

The process of choosing among various courses of actions or alternatives. From the moment you wake up until you turn out the light at night, life presents a continuous series of choices. If you were a perfectly rational decision maker, you would make each of these in a cool, almost mathematical way. You would consider i) the utility or value to you of the outcomes each alternative might yield and ii) the probability such results would actually occur. Then, taking these two factors in account, you would make your decisions on the basis of **expected utility –**the product of the value and the probability of each possible outcome. As you probably know from your own experiences and through observing the behavior of others, however, people don't usually pause to reason in such a systematic manner. Instead, they often make decisions informally, on the basis of hunches, intuition, or the opinions of others (Christenfeld,1995).

LOGICAL FALLACIES:

Argumentum ad hominem: is an informal logical fallacy that occurs when someone attempts to refute an argument by attacking the claim-maker, rather than engaging in an argument or factual refutation of the claim. There are many subsets of ad hominem, all of them attacking the source of the claim rather than attacking the claim or attempting to counter arguments. They are a type of fallacy of relevance.

The fallacy is a subset of the genetic fallacy, as it focuses on the source of the argument, at the expense of focusing on the truth or falsity of the actual argument itself.

An ad hominem should not be confused with an insult, which admittedly attacks a person, but does not seek to rebut that person's arguments by doing so — that type of rhetoric is better termed as poisoning the well.

Arguments that appeal to force and power – might or morality may be virtues, but they also may have nothing to do with treaties and a nation right to sovereignty.

Appeal to authority and/ or frame: a common logical error is made by authorities and/ or famous people in one domain who make statements about another.

The majority must be right argument: here the argument is that if most people do something, it must be right.

The straw man argument: this technique is to set up a weak argument and attribute it to someone else so that you can knock it down.

Estimating probabilities: most decisions are related to an estimate of the probability of success. It is likely that we think we are acting rationally in these conditions since our decisions are based roughly on mathematical probabilities, but how accurate are our estimate? Or, in other words, how can we act so stupidly when we think we are acting

so rationally? Tversky and Kahnemann have looked at the way people sometimes arrive at a poor conclusion when their decisions are based on past experience.

DECISION FRAMES:

A decision frame is, according to Tversky and Kahneman, a decision maker ‘’ conception of acts, outcomes, and contingencies associated with a particular choice’’. A frame adopted by someone about to make decision is controlled by the formulation of the problem as well as by the norms, habits, and personal characteristics of the individual. The authors of this concept have clearly demonstrated how powerful a frame can be in determining the conclusion reached by the individuals who are given essentially the same facts, but in different contexts.

HEURISTICS- refers to experience based techniques for problem solving, learning, and discovery that finds a solution which is not guaranteed to be optimal, but good enough for a given set of goals. Where the exhaustive research is impractical, heuristic methods are used to speed up the process of finding a satisfactory solution via mental shortcuts to ease the cognitive load of making decision. Examples of this methods include using a rule of thumb, an educated guess, an intuitive judgement, stereotyping or common sense.

ALGORITHM- is an effective method expressed as a finite list of well-defined instructions for calculating a function. Starting from an initial state and initial input, the instructions describe a computation that, when executed, proceeds through a finite number of well-defined successive states, eventually producing ‘’output’’ and terminating at a final ending state. The transition from one state to the next is not necessarily deterministic; some algorithms, known as randomized algorithms, incorporate random input.

BAYES’S THEOREM AND DECISION MAKING-

People may revise their probability estimates when new or different information is presented. When confronted with an equally attractive choice of going to a concert or a movie, we may make a decision tipped in favor of the movie if we learn that the only concert tickets available cost 35. A mathematical model that provides a method evaluating hypothesis of changing probabilistic values is called Bayes’ theorem after its author, Thomas Bayes’s a mathematician.

METHODOLOGY

This chapter states the problem of the present study and lists the various hypothesis to be tested in investigation.

STATEMENT OF THE PROBLEM

The problem of the present study is to find out the relationship between creativity and decision making amongst young adult and middle age women.

OBJECTIVES OF THE STUDY

- To find out the relationship between creativity and decision making.
- To find out verbal and nonverbal level of creativity.
- To find out the creativity amongst young Adulthood and Middle age women.
- To find out the decision making amongst young Adulthood and Middle age women.

HYPOTHESIS

Null hypothesis (H0)

- There is no significant relationship between creativity and decision making
- There is no significant relationship between Vigilance and creativity
- There is no significant relationship between Hypervigilance and creativity
- There is no significant relationship between defensive avoidance and creativity.
- There is no significant relationship between rationalization and creativity.
- There is no significant relationship between buck passing and creativity.
- There is no significant relationship between procrastination and creativity.

RESEARCH DESIGN

The research design is based on survey research. A women population consisting of 30 young and middle age adults were identified. Data were collected from the group.

SAMPLE DESIGN

Sample characteristics: Consent was obtained from all the participants in the study. The demographic details such as age, gender, education, economic status, etc. were collected from the young adult and middle age women population.

METHOD OF SAMPLING

Simple randomized sampling technique was used to select the sample, which consisted of young adult and middle age women population.

SAMPLE SIZE

The size of the sample for the present study is 30 which includes young adulthood and

middle age women. The women were selected from women hostel and general Chennai population. The age of the subjects ranges from 21 to 51. The selected sample was more or less homogenous with regards to middle socio- economic status, cultural background and academic qualification.

VARIABLES

Independent Variable: Creativity

Dependent variable: Decision making

TOOLS USED

The tools used for the present study are the Wallach and Kogan creativity instruments, (1965) Flinders decision making questionnaire (1982).

DESCRIPTION OF THE TOOLS

Creativity

Creativity was assessed by using Wallach and Kogan (1965). The scale has 35 items and each item is divided into two parts that is verbal and non verbal tests according to his or her choice. There were three subtests in verbal instruments. Instances included four questions, alternate uses included seven items and similarities included six questions. One mark was given to the no of responses and two for uniqueness of responses.

Decision making

Flinders decision making questionnaire consists of 31 questions. The items are scored as ‘’true for me’’ is given two marks, ‘’sometimes true’’ is given one mark and ‘’not true’’ is given zero marks. The questionnaire assessed has six dimensions,

i. Vigilance – this involves a careful, unbiased, and thorough evaluation of alternatives and rational decision making.

ii. Hypervigilance – involves a hurried, anxious approach.

iii. Decision avoidance – involves escaping decisions through procrastination, avoiding responsibility or wishful bolstering of the least objectionable option.

RELIABILITY AND VALIDITY

Creativity: The split half correlation on 10 variables on the creativity instruments was .51 to .93. The internal consistency was .41. These data are called into question by the limited size of the sample. And the validity of the test is low.

Decision making: there is a low reliability of their instruments (alpha:0.60), although other studies such as that carried out by Nicholas (1984) consider it to be somewhat higher (0.68). Points in its favour include the fact that it is considered to give scores that are uncontaminated by the bias of social desirability.

RATIONAL

Rationale for choosing the variable was the need to extend cognitive psychology research especially among women.

STATISTICAL ANALYSES

In this present study Spearman's rank order correlation was used to find the relationship between creativity and decision making.

RESULTS AND DISCUSSION

This chapter deals with tables, analysis, interpretations and discussions. Analysis, interpretations and discussions. Analysis and interpretation is a crucial step in research process. Analysis of the data means studying the organized materials in order to discover inherent facts. The data are studied from as many angles as possible to explore the new facts.

The data was analyzed using correlation to analyze relationship between variables.

Table – I

Shows the number of samples, correlation value and level of significance between Creativity and decision making.

VARIABLE	N	r VALUE	LEVEL OF SIGNIFICANCE
CREATIVITY	30	- 0.34	NO CORRELATION
DECISION-MAKING			

Creativity is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. Decision making is defined as a course of action or belief among several alternative possibilities.

From the above table it is inferred that the correlation score between creativity and decision making is –0.34 which is not significant at 0.05 level. This shows that there is no significant relationship between creativity and decision making. Hence null hypothesis is ‘’ there will be significant relationship between creativity and decision making’’ is accepted.

Table- 2

Shows the number of samples, correlation value and level of significance between creativity and vigilance of women.

VARIABLE	N	r VALUE	LEVEL OF SIGNIFICANCE
CREATIVITY	30	0.18	NO CORRELATION
VIGILANCE			

Creativity is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. Vigilance is when the decision maker clarifies objectives to be achieved by the decision, canvasses an array of alternatives, searches painstakingly for relevant information, assimilates information in an unbiased manner, and evaluates alternatives carefully before making a choice.

From the above table it is inferred that the correlation score between creativity and vigilance is 0.18 which is not significant at 0.05 level. This shows that there is no significant difference between creativity and vigilance. Hence the null hypothesis ‘’ there is no significant relationship between creativity and vigilance’’ is accepted.

Though there is no direct study about creativity and decision making or its dimensions, the below study has pondered about how information is being held as a valuable tool for creativity and decision making

Information is a tool of creativity and a result of creative thinking, decision-making and working, in terms of content and impact. All information and communication devices result from creative thinking and decision-making, too. The open issue is: with which methods does one achieve that no unavoidable cost is caused, and no unavoidable or even dangerous oversimplification or over complexity and over-complications are caused. Hence, the point is in reaching the requisite holism with only requisite effort by applied systems thinking and innovation.

Table – 3

Shows the number of samples, correlation value and level of significance between hyper vigilance and creativity of women

VARIABLE	N	r VALUE	LEVEL OF SIGNIFICANCE
CREATIVITY	30	- 0.14	NO CORRELATION
HYPER-VIGILANCE			

Creativity is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. Hypervigilance is when the decision maker impulsively seizes upon hastily contrived solutions that seem to promise immediate relief. The full range of consequences of choices are overlooked because of emotional excitement, perseveration and limited attention.

From the above table it is inferred that the correlation score between creativity and hypervigilance is –0.14 which is not significant at 0.05 level. This shows that there is no significant relationship between creativity and hypervigilance. Hence the null hypothesis ‘’ there will be no significant relationship between creativity and hypervigilance’’ is accepted.

Though there is no direct study about creativity and decision making or its dimensions, the below study has pondered about how creativity and decision making in present day Human Computer Interactions.

Today’s commercial visual analytics software packages, as the common applications to business intelligence, with the aid of recent advancements in artificial intelligence along with providing numerous data visualization tools, have been also equipped with a number of data mining, machine learning, optimization algorithms and big data technologies, which can even further enhance the intuitive decision-making. This in fact has been the novel idea that has led this research to benefit from the concept of predictive analytics. For achieving the highest level of creativity in enterprise decision-making, here the visual analytics software packages have been discussed to happen to be the most reliable human-computer interaction (HCI) tools which can highly manipulate and effectively enhance the intuitive mind via the human’s sense of vision.

Table – 4

Shows the number of samples, correlation value and level of significance between hyper vigilance and creativity of women.

VARIABLE	N	r VALUE	LEVEL OF SIGNIFICANCE
SIGNIFICANCE	30	- 0.16	NO CORRELATION
CREATIVITY			
DEFENSIVE – AVOIDANCE			

Creativity is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. Defensive avoidance is associated with incomplete and often biased evaluation of information, leading in turn to faulty decisions.

From the above table it is inferred that the correlation score between creativity and defensive avoidance is –0.16 which is not significant at 0.05 level. This shows that there is no significant difference between creativity and defensive avoidance. Hence the null hypothesis ‘’ there is no significant relationship between creativity and defensive avoidance’’ is accepted.

Though there is no direct study about creativity and decision making or its dimensions, the below study has pondered about how creativity is useful in Problem Solving Solutions.

The purpose of this study was to examine the role of creativity in problem solving situations. Previous research suggested that both background knowledge and the inability to transfer knowledge across contexts are important factors in how a problem is ultimately resolved. Given these findings, the researcher undertook a study on the role creativity might play when individuals lacking sufficient background knowledge are faced with a novel real world problem. A question raised by the researcher whether an absence of background knowledge might encourage novices to be more creative than their more experienced counterparts in novel problem solving situations. Findings of the study demonstrated that the role creativity plays is influenced more by support from the environment and understanding the regularities of the environment than background knowledge of a specific problem. More experienced others in the study were as creative, but used creativity differently than novices. It was found both novices and more

experienced others faced a system of eroding goals that placed pressure iv to lower goals concurrently with taking creative actions to resolve the problem.

TABLE- 5

shows the number of samples, correlation value and level of significance between rationalization and creativity of women.

VARIABLE	**N**	**r VALUE**	**LEVEL OF SIGNIFICANCE**
CREATIVITY	30	- 0.39	NO CORRELATION
RATIONAL-IZATION			

Creativity is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. Rationalization is defined as constructing wishful rationalizations to bolster the least objectionable alternative.

From the above table it is inferred that the correlation score between creativity and rationalization is –0.39 which is not significant difference between creativity and rationalization. Hence the null hypothesis ‘’ there is no significant relationship between creativity and rationalization’’ is accepted.

Though there is no direct study about creativity and decision making or its dimensions, the below study has pondered about decision making concepts.

Decision-making is a critical feature of every organization and in daily undertakings, decisions are taken at every step. It is also considered as one of the significant function of management. Understanding this vital concept is critical for every business success since it will help strategists and authoritarians to make more cautious, thoughtful and rational decisions by organizing relevant information and defining alternatives. In light of this, the current paper will review the relevant theories and models to offer insights on the decision making process, theories and models.

Table – 6

Shows the number of samples, correlation value and level of significance between buck passing and creativity of women.

VARIABLE	N	r VALUE	LEVEL OF SIGNIFICANCE
CREATIVITY	30	- 0.19	NO CORRELATION
BUCK PASSING			

Creativity is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. Buck passing is defined as shifting responsibility to someone else.

From the above table it is inferred that the correlation score between creativity and buck passing is –0.19 which is not significant at 0.05 level. This shows that there is no significant difference between creativity and buck passing. Hence the null hypothesis '' there is no significant relationship between creativity and buck passing'' is accepted.

Though there is no direct study about creativity and decision making or its dimensions, the below study has pondered about creativity concepts.

This report surveys the core concept of creativity. It sets out an original way to disentangle the range and variety of theories and understandings of the concept. Most of us use the word 'creativity' or 'creative' casually with a range of different meanings. However, the key insight of this report is that it is helpful to understand the term in its historical and social context. The report was produced for Creative Partnerships in 2006. This organisation aimed to develop schoolchildren's potential, ambition, creativity and imagination, by building sustainable partnerships between schools, creative and cultural organisations and individuals, which impact on learning.

Table 7

Shows the number of samples, correlation value and level of significance between buck passing and creativity of women.

VARIABLE	N	r VALUE	LEVEL OF SIGNIFICANCE
CREATIVITY	30	0.03	NO CORRELATION
PROCRASTI-NATION			

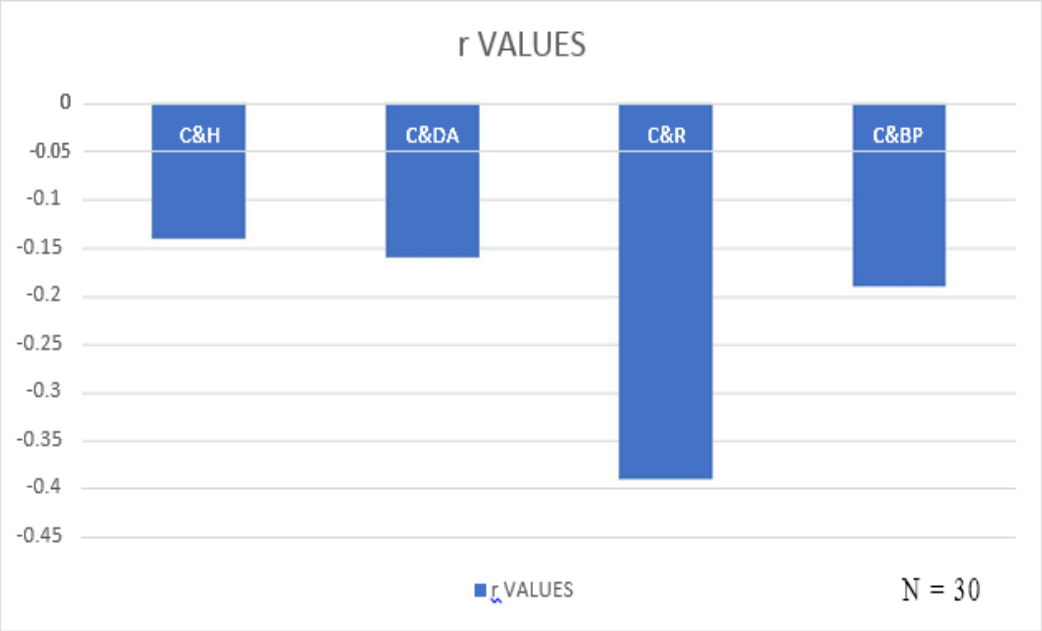
Creativity is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. Procrastination is defined as delaying or postponing the decisions that are required to be made.

From the above table it is inferred that the correlation score between creativity and procrastination is 0.03 which is not significant at 0.05 level. This shows that there is no significant difference between creativity and procrastination. Hence the null hypothesis '' There is no significant relationship between creativity and procrastination'' is accepted.

Though there is no direct study about creativity and decision making or its dimensions, the below study has pondered about creativity concepts.

Innovation and creativity have become increasingly important determinants of organizational performance and success. As organizations seek to harness the ideas and suggestions raised by their employees, it is axiomatic that the process of idea generation and implementation is a source of distinct competitive advantages. In this conceptual study, creativity is defined as generation of new ideas and innovation as implementation of the ideas in the innovation process. Based on the current literature review of the creativity and innovation, there were more studies and research within individual creativity and team creativity and less in organizational creativity. It is suggested that there is a need for further research in the level of organizational creativity. Further, this study illustrates, that the research on creativity and process innovation is less than research on creativity and product innovation in the literature.

GRAPHICAL REPRESENTATION



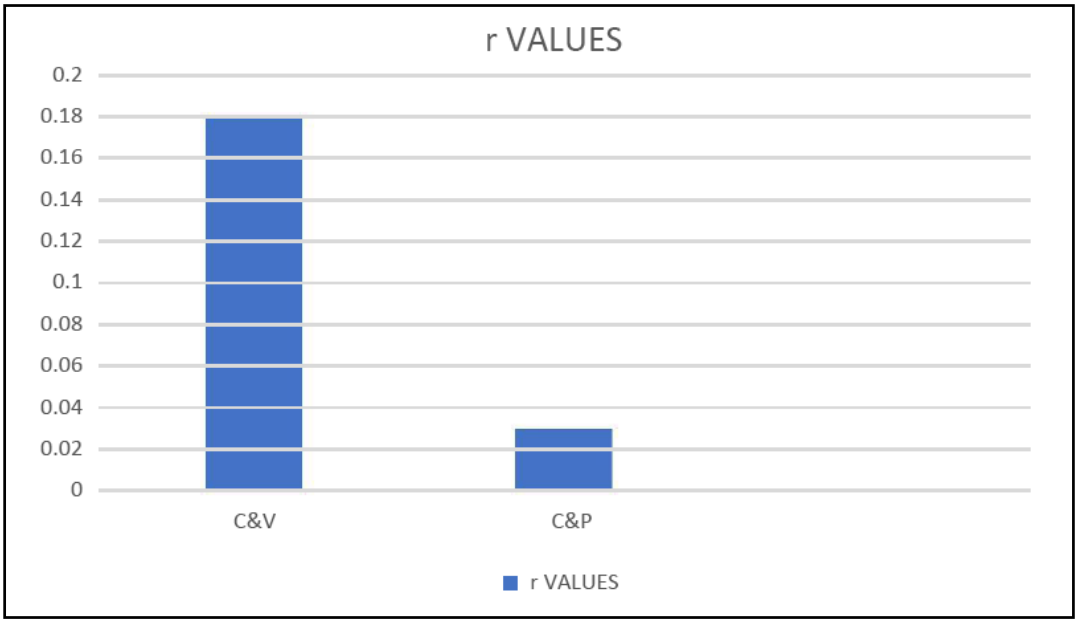


Table 8

VARIABLES	CD	CV	CH	CDA	CR	CBP	CP
rVALUE	-0.34	0.18	-0.14	-0.16	-0.39	-0.19	0.03

Keywords:

C – CREATIVITY	DA – DEFENSIVE AVOIDANCE
D – DECISION MAKING	R – RATIONALIZATION
V – VIGILANCE	BP – BUCK PASSING
H – HYPERVIGILANCE	P – PROCRASTINATION

DISCUSSION

The results presented in the preceding part are discussed here.

It is inferred from the tables that there is no significant relationship existing between creativity and decision making such as vigilance, hypervigilance, defensive avoidance, rationalization, buck passing and procrastination. There were no adequate studies that examined the relationship between creativity and decision making amongst adult women. Results inferred from the tables is that there is no significant relationship that exists between creativity and decision making and dimensions of decision making such as vigilance, hypervigilance, defensive avoidance, rationalization, buck passing and procrastination. There are many theories about what kinds of life events and personality traits can influence a person in creativity and decision making.

CONCLUSION

Lack of extended research to understand how cognitive variables worked over women population led to the choosing of this topic and also as the two variables creativity and decision making happen to be very important aspects in the lives of women. Hence the relationship between Creativity and decision making was found deploying a correlational design.

Although Creativity and decision making might seem to be interdependent, the present research findings conducted on the sample of adult women population tend to suggest that ‘’ there is no significant relationship between creativity and decision making and its dimensions. Thus null hypothesis is accepted.

Limitations of the study

- This study is only confined to young adult and middle age women.
- Finding a homogenous women samples were difficult to find.
- The size of the sample can be increased
- This study is mainly focused only on the relationship between the variable
- Situational variable and demand characteristics may have influenced the samples.

Suggestion for future study

- The study can be extended to other variables such as abstract or verbal thinking.
- This study can also focus on various demographic factors of the sample.

Implications of the study

By means of this study there could be extended research in creativity and decision making.

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