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Research Paper

Role of cognitive flexibility and mindfulness on flow

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ABSTRACT

The aim of the present study was to examine the cognitive skills and mindfulness in relation to flow disposition. For the same purpose college students from Delhi University (50 females and 50 males) in the age group of 18-28 was taken. The participants were asked to complete Cognitive and Affective Mindfulness Scale-Revised (CAMS-R; Feldman et al. 2007), the Cognitive Flexibility Scale (CFS; Martin & Ruben, 1995), the Dispositional Flow Scale-2 General (DFS2; Jackson & Eklund, 2002) and demographic questions. To do this study it was also enquired in advance if the students had ever practiced mindfulness meditation ever before. The results showed that when demographic variable and history of mindfulness meditation were held constant lead to cognitive flexibility and mindfulness as a good predictors of flow disposition, Female r2 =0 .181, male r2 =0 .202 and correlation (female r= 0.65 and male r=0.69), $p < .001$. It indicated male's students have high mindfulness on flow than female's students.

Keywords: *Education Sector, Cognitive Flexibility, Mindfulness, Experience Flow, And Psychological Well-Being (PWB)*

Psychology has given large body of work on happiness and well-being in past. Although these subjects have appeared in relations to religious, artistic and philosophical for number of decades. As the number of literatures have grown new concepts have aroused such as flow in the 1970's, Mihaly Csikszentmihalyi, conducted a research on creativity and creative processes. During the research process he conceptualized a type of positive experience which he labeled as an engagement in intrinsically rewarding activities. Moore (2013) found out that people sometimes experience heightened attention to activities and that they are driven to participate in activities even when demands such as hunger or fatigue set in. This state of enthrallment and ordered consciousness is called flow. These investigations have shown that what makes experience genuinely satisfying is a state of consciousness called flow—as a state of concentration which is so focused which makes the individual absorption in the activity. However, every individual experience flow from time to time and recognize its characteristics like people might start feeling strong, they become more alert, unselfconscious, feel peak in their abilities and effortless control in themselves (Sawyer, 2003). In this state of flow both the sense of time and emotional problem seems to vanish in individual and they may feel transcendence.

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The types of activities which induce flow may differ because one of the major requirements of flow is simply to challenge the level of the activity which is balanced with the skill level possessed by the individual. In addition to a balanced skill or challenge ratio, Moore & Malinowski (2009) gave eight other experiential components of flow; these include clear goals, clear and immediate feedback on performance, a sense of control, time transformation, a loss of self-consciousness, immersion of action and awareness, a sense of intrinsic value in the experience, and a high level of concentration.

One can define flow as a state of intrinsic motivation (Koehn, 2007) and happiness (Sawyer, 2003). However, in relation to happiness it can been said that flow states is the manifestation of personal expressiveness. But there may be signifiers of self-realization and a global sense of happiness, as opposed to more superficial, experiences of happiness **(**Stavrou, Jackson, Zervas & Karteroliotis, 2007). In a different vein, Moore & Malinowski (2009) had portrayed flow state as one of the optimal experiences. This might be the case, but others have posited that flow is simply a type of optimal experience and that intrinsic motivation also takes place for other types of experiences (Reiss, 2000). There is always some debate in regard to the magnitude of flow as optimal experience, there appears to be a consensus that flow state can be a significant source of well-being.

As experiences related to well-being and activity engagement, flow, and flow research, have applications in advancing clinical interventions and workplace productivity. This research is an attempt to increase our knowledge in these areas, the current study will look into how cognitive flexibility and mindfulness influence flow state.

Currently, there is little research on the cognitive skills relating to flow disposition in the general population. Chou & Ting (2003) had proposed that people who are more likely to experience flow might have certain personality type like the autotelic personality, which is primarily characterized by a need for cognition and engagement (Kang, Gruber & Gray, 2013). However little empirical research that examines the individual differences in why some people may be more inclined to experience flow.

Mindfulness

Over the decades, mindfulness has become a popular culture as well as a topic of enthusiasm among medical and psychological communities. At present mindfulness is understood as a practice of "paying attention in one particular way: on purpose, in the present moment and being non-judgmental". Mindfulness differs from habitual mental functioning by ways of cultivating an open, curious and non-judgment attitude towards one's mental and physical experience. Like other therapeutic techniques, mindfulness is not goal directed. They in fact promote mental training to reduce one's vulnerability to reactive states of mind that might increase emotional distress or psychopathology. However, researches have suggested that mindfulness meditation would encourage te development of metacognition insight (Chiesa, Calati & Serretti, 2011). Past studies have shown that it enhances the cognitive flexibility means improve one's ability to address problem immediately, decrease in levels of negative emotion or rumination and an increase in the use of adaptive behaviors.

Cognitive Flexibility

Cognitive flexibility is an ability to abandon one strategy in favor of the other which is more optimal. In addition, researches have shown that flexible thinking predicts creative performance, it generates new ideas, and an ability to find multiple ways to use an idea. Researchers have shown that positive mood might result in more flexible thinking and helps

people to balance goals, stress levels and pressure. Literature has also shown that individual who involves in the active-unexpected-events conditions were more cognitively flexible and had significantly more creative than in active-normal-events (Koehn, 2007). However, rather than examining individual difference in cognitive flexibility, the goal of the present study is to examine whether cognitive flexibility encourage flow among people.

Flow

Mindfulness and flow share common defining characteristics. One can define flow as a best optimal psychological state of peak performance that will occur when there is a balance between perceived challenges and skill. It is a deeply rewarding state which tends to involve intense concentration it is so focused that it amounts to absolute absorption in the specific activity, loss of self-consciousness, a harmonious sense of everything clicking into place and so forth. Swann, Keegan, Piggott & Crust (2012) have given nine dimensions of flow. However, some of the conditions are as follow: challenge-skills balance, clear goals, unambiguous feedback; and flow characteristics: concentration on the task at hand, action awareness merging, loss of self-consciousness, sense of control, and transformation of time. The result is an autotelic experience; enjoyable and intrinsically rewarding (Swann, Keegan, Piggott & Crust, 2012).

METHODOLOGY

Purpose

The main purpose of this study is to analyze "role of cognitive flexibility and mindfulness on flow".

Research Objective

This research main objective that will be achieved in this investigation is:

- To study the role of cognitive flexibility and mindfulness on flow.

Hypothesis

The main research hypothesis of this research study:

- There would be significant role of cognitive flexibility and mindfulness on flow.

Participant

College students from University of Delhi (50 females and 50 males) in the age range of 18-28 were selected from undergraduate colleges. All of the participants belonged to middle socio-economic class. For this study, participant was selected between the 18-24 age groups those enrolled in the University of Dehli.

Tools Used

In this research, psychological measures to be used to investigate this research topic/problem. These are the psychological measures to be used:

Feldman et al. (2007) The Cognitive and Affective Mindfulness Scale-Revised (CAMS R) was used to measure dispositions toward mindfulness. this contains twelve items. Examples include "I am easily distracted," "I am able to focus on the present moment," and "I try to notice my thoughts without judging them." Participants were asked to rate their responses on a four-point Likert scale with the following options: 1 (Rarely/Not at all), 2 (Sometimes), 3 (Often), or 4 (Almost always). Numbers 2, 6, and 7 of the CAMS-R were reverse scored.

Martin & Ruben (1995) The Cognitive Flexibility Scale (CFS) was used to measure level of cognitive flexibility in participants. Responses were made on a six-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree). The CFS contains items such as "In any given situation, I am able to act appropriately," "I seldom have choices when deciding how to behave," and "I can find workable solutions to seemingly unsolvable problems." Numbers 2, 3, 5, and 10 of the CFS were reverse scored.

Brown & Ryan (2003) Mindful Attention Awareness Scale (MAAS) is a 15-item scale designed to assess a core characteristic of dispositional mindfulness, namely, open or receptive awareness of and attention to that is taking place in the present.

Procedure

Participants were selected from University of Delhi from different college that come under the University. The psychological test that were used are CAMS-R, CFS, MAAS and demographic questions. Random sampling method was used rather than stratified or non-random sampling for selection of participants. Analysis of data statistics was used rather than content analysis method to meet the goals and objectives of the present study. In this research, correlation and regression was used to calculate the collected data from participants through questionnaire survey as per the requirement of the study.

Statistical Analysis

The following statistical techniques were employed to the raw data to fulfill the objectives.

- Correlation Coefficient
- Regression

RESULTS

Statistics of the Variable under the Study

Table 1 & Table 2 show the correlation coefficient (r-test) and regression analysis (r^2).

Table 1: Descriptive Statics of the total sample (50 Males & 50 Females) on Cognitive and Affective Mindfulness Scale-Revised (CAMS-R), Cognitive Flexibility Scale (CFS) and Mindful Attention Awareness Scale (MAAS) that presents correlation (r) between these variables:

Male				**Female**			
	CAMS-R	CFS	MAAS		CAMS-R	CFS	MAAS
CAMS-R				CAMS-R			
CFS	0.308			CFS	0.310		
MAAS	0.289	0.265		MAAS	0.246	0.275	

**Correlation is significant at $p < 0.01$*

Table 2: Showing regression analysis (r^2) between CAMS-R, CFS and MAAS

Male				**Female**			
	CAMS-R	CFS	MAAS		CAMS-R	CFS	MAAS
CAMS-R				CAMS-R			
CFS	0.095			CFS	0.096		
MAAS	0.083	0.070		MAAS	0.060	0.075	

DISCUSSION

The present study is supported by the past researches done on cognitive flexibility with mindfulness. But still the question remains unclear if one of these skills is an antecedent of

other or they arise simultaneously. Generally, cognitive flexibility is characterized by creativity, while the mindfulness is more skill of detached, non-judgment and attention control. Correlation and regression analysis results showed a low correlation between gender difference and cognitive flexibility, which may suggest that females are more cognitively flexible than males (Hayes, Follette & Linehan, 2004). This increase in cognitive flexibility with age might be associated with development into post formal ways of thinking.

Part of the research was exploratory in nature as past researches have not suggested a link between cognitive flexibility, as a distinct construct and flow disposition. Results of the study have shown that cognitive flexibility, as a distinct construct and flow disposition. Analysis of the data have also shown that cognitive flexibility as a good predictor of the disposition towards flow. This appeared as a case because, although people have clear goals predictor of the disposition towards flow. The correlation and regression analysis results indicated the males are more mindfulness, open, awareness of and attention that females (Kang, Gruber & Gray, 2013). It suggests that college strict rules and guidelines might be a need for flexibility or creativity in order to remain in flow during the activity.

Present study may also have implication for college settings. Students who experienced flow in study may show higher levels of creativity and mindfulness because of intense focus and attention involved during this state. However future researches can examine the relationship between flow disposition and workplace productivity, performance quality and job satisfaction. As flow state is defined as a state of being free from unpleasant emotions or cognitions, methods of eliciting this state would be extremely useful in clinical settings (Moore & Malinowski, 2009). Increase of mindfulness and cognitive flexibility may influence flow elicitation, but more research would need to be conducted to determine if this is true. As the present study was based on correlation, it can be the case that flow disposition causes increases in mindfulness and cognitive flexibility.

CONCLUSION

Research has shown that experience of flow, mindfulness and flexibility brings in the $p < 0.01$ that can be a significant source of wellbeing. This study is found role of cognitive flexibility and mindfulness on flow as the positive value of r and r^2 indicated the student those are high flexible are also high on mindfulness. This study found there was a positive relationship between flexibility and mindfulness on flow that means increase in cognitive flexibility also enhance mindfulness on flow among students. Understanding some of these cognitive skills related to flow state can help us gain better understanding of good life. As the social system has become complex and information transfer have higher sleep it is important that people learn to acquire skills that will help them to adapt and cope with the new environments around them. I hope this study will encourage future researchers to techniques and methods for cognitive skills.

REFERENCES

Csikszentmihalyi, M., & Getsels, J. W. (1970). Concern for discovery: An attitudinal component of creative production. Journal of Personality, 38(1), 91-105.

Chiesa, A., Calati, R., & Serretti, A. (2011). Does mindfulness training improve cognitive abilities? A systematic review of neuropsychological findings. *Clinical psychology review, 31*(3), 449-464.

Chou, T. J., & Ting, C. C. (2003). The role of flow experience in cyber-game addiction. *Cyber Psychology & Behavior, 6*(6), 663-675.

Hayes, S. C., Follette, V. M., & Linehan, M. (2004). *Mindfulness and acceptance: Expanding the cognitive-behavioral tradition*. USA: Guilford Press.

Kang, Y., Gruber, J., & Gray, J. R. (2013). Mindfulness and de-automatization. *Emotion Review, 5*(2), 192-201.

Koehn, S. (2007). *Propensity and attainment of flow state* (Doctoral dissertation, Victoria University).

Moore, A., & Malinowski, P. (2009). Meditation, mindfulness and cognitive flexibility. *Consciousness and cognition, 18*(1), 176-186.

Moore, B. A. (2013). Propensity for experiencing flow: The roles of cognitive flexibility and mindfulness. *The Humanistic Psychologist, 41*(4), 319-332.

Sawyer, R. K. (2003). *Creativity and development*. Oxford University Press, USA.

Stavrou, N. A., Jackson, S. A., Zervas, Y., & Karteroliotis, K. (2007). Flow experience and athletes' performance with reference to the orthogonal model of flow. *The Sport Psychologist, 21*(4), 438-457.

Swann, C., Keegan, R. J., Piggott, D., & Crust, L. (2012). A systematic review of the experience, occurrence, and controllability of flow states in elite sport. *Psychology of Sport and Exercise, 13*(6), 807-819.

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Conflict of Interest

The author declared no conflict of interest.

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