

## Mediating Role of Self-Regulation between Emotional Intelligence and Entrepreneurial Intention: Evidence from Management Students

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### ABSTRACT

#### Keywords:

Emotional Intelligence  
Self-regulation  
Entrepreneurial Intention  
Mediation  
University Students

The current study is an attempt to investigate the factors shaping entrepreneurial intention among university students' namely emotional intelligence and self-regulation. Final year students of business administration program enrolled in various public sector universities of KP, Pakistan comprise a sample size of 352 are surveyed for this purpose. A positivist paradigm concerning quantitative design using adopted questionnaires for assessing the respondent's emotional intelligence, self-regulation, and entrepreneurial intention is used. Correlation is computed to test relationship-related hypotheses whereas, through PROCESS macros (Hayes, 2013), the mediating role of self-regulation in the relationship of emotional intelligence and entrepreneurial intention is tested. Results revealed that emotional intelligence is significantly positively correlated with entrepreneurial intention. Similarly, emotional intelligence is also found significantly positively correlated with self-regulation; hence, in turn, self-regulation mediates the relationship of emotional intelligence and entrepreneurial intention however the mediation is of partial nature. At the end, study implications, limitations and some directions for future research are also provided.

### INTRODUCTION

The entrepreneurship field is quickly evolving and matures as a discipline that gets considerable attention from researchers. One prevalent area of research in the field of entrepreneurship is investigating one's intention of establishing a new venture which is known as entrepreneurial intention. Entrepreneurial intention is a significant construct not only for predicting entrepreneurial behavior but also works as a base for becoming an entrepreneur. Limited research has been conducted in developing countries particularly Pakistan in the field of entrepreneurship because of regular ignorance of this field by the government in past. However, by the emergence of the Small and Medium Enterprises Development Authority (SMEDA) and SME bank in the last decade, researchers have been attracted to

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this field. SMEDA provides a platform and hence important for enhancing entrepreneurial activities specifically for small and medium enterprises as in developed countries more than 90% of these firms are working under the shadow of SMEs (Ullah, Ahmad & Manzoor, 2013). In Pakistan, 2.3 million small and medium enterprises are contributing almost 30% of GDP whereas 25% in earnings through exports. Also, these firms provide almost 70% of employment opportunities for industrial labor to the community (Ullah *et al.*, 2013). Pakistan is an agriculture base developing country and dependably tries to move its economic focus from farming to business for the making of more job opportunities as it is the demand of the present time. At the point when the economy is created through entrepreneurship couple of things grew naturally, which are business, social up-gradation, improvement of living standards, lessening poverty, and so on. Among Pakistan states, there are huge regional disparities. An entrepreneur assumes a critical part to reduce these territorial disparities.

Khyber Pakhtunkhwa province is geographically significant for Pakistan as it shares a boundary with an important neighbor country i.e. Afghanistan, which is also a major business partner of Pakistan. This province of Pakistan has also rich business opportunities in various sectors, however; enterprises here are not performing successfully due to the lack of effective and efficient technological and skills utilization. This is why they are not playing a proper role in the economic development of the country and hence not providing job opportunities and nor decreasing the poverty level which are the two remarkable difficulties of KP province (Pakistan).

As discussed above that researchers are recently attracted to entrepreneurship in Pakistan and various entrepreneurial theories have emerged from developed countries research so this is important to check that to what extent these theories apply to the present study context i.e. Pakistan and specifically KP province.

The present study has focused to examine empirically the factors shaping entrepreneurial intention among university students in Pakistan, particularly concerning KP province. In the present study, the entrepreneurial intention is taken as a dependent variable, emotional intelligence as an independent variable whereas self-regulation as mediator.

Entrepreneurship is considered an intentional process (Sasu & Sasu, 2015) which means that it depends upon the intention or willingness of the individual who is entering an entrepreneurial process. Thus, the intention is considered as the base for entrepreneurship. The intention is the reflection of an individual's attitude towards performing certain specific behavior (Kuehn, 2008).

It has been experienced that only a few individuals having distinctive characteristics are attracted to entrepreneurship (Chamola & Jain, 2017). Entrepreneurial intention is considered a significant indicator of entrepreneurial behavior (Wong & Choo, 2009). They are of the view that if an individual is having entrepreneurial intention then he or she will proactively act for establishing a new venture.

In the recent past, emotional intelligence is added as an emerging topic in the fields of sociology and psychology (Law, Wong & Song, 2004). Emotional intelligence is the attribute of an individual to recognizing, understanding, and managing one's own emotions as well as the emotions of other people for overcoming a situation (Mortan *et al.*, 2014). Being an entrepreneur is full of risks just like taking financial risks, psychological risks and also taking into account the family relationship risks (Brockhaus, 1980), so emotionally strong people can do this.

Even though a lot of research about entrepreneurship is available, very few are known about the mediation mechanism through which emotional intelligence impacts entrepreneurial intention. The current study incorporated a major psychological component, self-regulation, as a mediator in predicting entrepreneurial intention through emotional intelligence.

Self-regulation is recently added as a theoretical framework for the field of entrepreneurship (Bryant, 2006, 2007; Tumasjan & Braun, 2012). Self-regulation is an individual personality attribute with which people have control over their behavior by overriding and altering their responses even though to change themselves for achieving a particular target (Baumeister, Gailliot, DeWall & Oaten, 2006). An individual can search and choose targets beyond the fact of the presence of a lot of individual and environmental difficulties (Higgins, 1998).

Plenty of literature in the field of entrepreneurship is available (e.g. Landström, 2020; Nawaz, Javed & Ullah, 2019; Kothari, 2013). However, the current study has some distinctive points in which the first distinction is the theoretical distinction i.e. self-regulation is the first time added as a mediator in predicting entrepreneurial intention through emotional intelligence. Studies showing the significant positive relationships of emotional intelligence with self-regulation (e.g. Sadri & Janai, 2015) and of self-regulation with entrepreneurial intention (e.g. Bryant, 2007) are conducted. Also study taking self-regulation as a mediator in predicting entrepreneurial intention through self-efficacy (Pihie & Bagheri, 2013) is also available. However, after an odd search, no study was found by the researcher containing all these three variables in a single study. Second, empirically, the current study is distinctive from previous ones as in previous studies mostly a well-known mediation model presented by Baron and Kenny (1986) is followed for mediation analysis whereas in the current study PROCESS macros by Hayes (2013) are followed. PROCESS macros are introduced in the recent past by Preacher and Hayes

(2008) for confirming the indirect impacts of predictors on criterion through mediators and moderators containing almost 76 different models. Model # 4 is adopted by the researcher to conduct a simple mediation analysis in the present study. Third, the context-wise current study is different from previous ones by taking Pakistan with special reference to KP province is scarce in entrepreneurship research. Recently a study was conducted by Ullah et al. (2013) investigating entrepreneurial orientation factors by taking entrepreneurs as target respondents. The present study is the first, taking public sector university students particularly business administration students of KP as target respondents for examining influences shaping entrepreneurial intention among them.

## **LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

### **Emotional Intelligence Relationship with Entrepreneurial Intention**

The emotional intelligence attribute is considered as the most significant indicator for becoming an entrepreneur. Emotionally keen people may have progressive and prosperous feelings whereas emotionally fragile people may have disappointed, irate, and discouraged feelings about happenings (Carmeli, 2003). Similarly, people with strong emotionally insightful ability can easily assess and regulate their emotions and hence they can promptly understand the reasons for negative outcomes and also accept these results rapidly as compared to individuals with a low level of emotional intelligence ability (Sy, Tram & O'Hara, 2006). Kong and Zhao (2013) concluded in their study that emotionally savvy people have positive characterizes impact with which they can easily translate events into a positive direction for identifying opportunities and also will remain hopeful for successful new business running. Individuals having the ability to direct and utilize emotional temper efficiently are most likely to have beliefs about having innovative targets and the may realize progressively sure and hence having higher probabilities of taking part in creating new ventures (Chamola & Jain, 2017). Archana and Kimari (2018) summarized in their study that people having emotional intelligence attributes have more intention and are attracted to the entrepreneurial profession for understanding the phenomena.

In short, according to the fit theory view (French, Caplan & Harrison, 1982), emotionally intelligent individuals are best suitable for the entrepreneurial profession as they can easily overcome to their aversive emotions and strain and bounce back from this state quickly by composing their emotions amid towards the way of creating new business. In the light of all these narrations researcher derives

*H1: Emotional intelligence has a significant positive relationship with entrepreneurial intention.*

## **Emotional Intelligence Relationship with Self-Regulation**

Emotional intelligence is defined by Goleman (1995) as one's ability to have awareness about his emotions and hence utilizing this awareness for making correct decisions in routine life. Self-regulation may be summarized as the individual's attribute of having control over emotions and to modify emotions accordingly to the situation (Murtagh & Todd, 2004). Self-regulation is significant for wellbeing related tendencies, general alteration, and modifying emotional status (Barkhoff, Heiby & Pagano, 2007) whereas, lack of self-regulatory attributes are considered to drawback for wellbeing related tendencies like performance (Hagger, Wood, Stiff & Chatzisarantis, 2010). Sadri and Janai (2015) found self-regulation significant association with emotional intelligence by taking a sample of male swimmers athletes of Iran. Additionally, they suggested in their study some measures for training purposes as both of these individual's attributes are trainable. In light of previous research, both, emotional intelligence and self-regulation are considered very important in numerous fields of life like entrepreneurship (Tumsajan & Braun, 2012; Davis & Peak, 2014). As entrepreneurs will have to survive in a challenging environment full of dangers and uncertainties so must have to possess the ability to have control over their negative emotions for surviving successfully. Hence, for this emotional intelligence and self-regulation, both are very important. Researcher thus hypothesize

*H2: Emotional intelligence has a significant positive relationship with self-regulation.*

## **Self-regulation Relationship with Entrepreneurial Intention**

Self-regulation has emerged as a theoretical framework in the field of business and education recently (Tumsajan & Braun, 2012; Bryant, 2007). Self-regulation relates to the way by which people establish targets, check own abilities for endorsing intention and then direct their behavior for achieving the targets beyond the presence of uncertainties and complex situations which also happens while selecting entrepreneurship as a career (Bryant, 2007). Self-regulation has two main focuses, promotion focus, and prevention focus. Promotion focus empowers entrepreneurs to seek different imaginative and innovative opportunities for establishing new ventures (Tumsajan & Braun, 2012) and also to choose the best suitable opportunity to avail for establishing a new venture (Bryant, 2007). Prevention focus on the other side, however, keep far entrepreneurs from ambiguous activities just like the entrance to a different nature business industry or an unfamiliar market (Trevelyan, 2011). Previous researchers believe that self-regulation attribute can be enhanced through education and training and hence consequently the

intention of students to be an entrepreneur along with their competency for the profession (Tumsajan & Braun, 2012; Bryant, 2007). Hence, the researcher hypothesizes:

*H3: Self-regulation has a significant positive relationship with Entrepreneurial Intention*

### **Emotional intelligence, Self-Regulation, and Entrepreneurial Intention.**

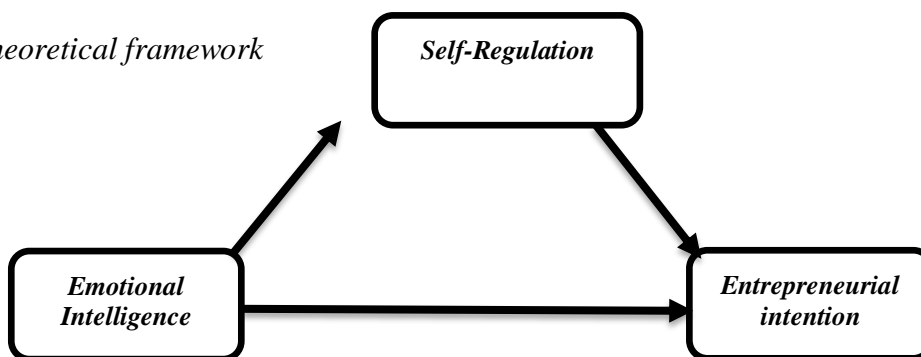
Although the organic impulses which provide the base for creating emotions are not under the control of the individual however the resulting emotions may be controlled. Whenever an individual feels high intensity in his or her emotions which cannot be ignored however can be managed and controlled properly if an individual has the ability. This proper management and control over emotions are called self-regulation and that is, in fact, the quality of emotional intelligence by which we can have control over our impulses and emotions (Goleman, 2012). There may be some time when we may be surrender by our emotions particularly when we are achieving some targets just like obtaining good grades in exams or getting achieved month target however not by negative emotions in all means like frustration, anger or fear, etc. Emotional intelligence concerns with the awareness about all emotions and hence to give the correct response to these emotions whereas self-regulation refers to the ability of an individual for using this awareness for controlling negative responses to the emotions (Connelly, 2017). This quality enables entrepreneurs to search for innovative and creative opportunities for entrepreneurial activities and also choosing a more suitable opportunity for becoming an entrepreneur (Tumsajan & Braun, 2012).

Concisely, it may be concluded that emotional intelligence is related to self-regulation and self-regulation to entrepreneurial intention so it is proposed that the association between emotional intelligence and entrepreneurial intention may be arbitrated by self-regulation added as a mediator in this relationship hence it is hypothesized

*H4: Self-regulation mediates the association of emotional intelligence with entrepreneurial intention.*

In the light of the above developed hypotheses following framework may be obtained

Figure 1: *Theoretical framework*



## **METHODOLOGY**

### **Research Design**

Research design is a detailed plan about how the research procedure will be carried out. It is a structure that incorporates the contemplation for adopting suitable methodology, the manners by which the respondents are chosen, and also about how the data will be analyzed (Flick, 2011). The researchers in the current study adopted a quantitative research approach that generates results through statistical analysis (Ghauri & Gronhaug, 2005) and these results may be generalized to the total population (Malebana & Swanepoel, 2015).

### **Population and Sample**

Students enrolled in business administration programs at various public sector universities of KP running in their final year of studies are the focus of the researcher for the current study. University students are considered a general study population as they are near to complete their studies and now seriously thinking about their professional career path (Fatoki, 2014).

Due to the homogeneous population, a probability and simple random sampling technique are adopted. A simple random sampling technique is commonly used for a homogeneous population where one respondent is most like to another respondent. Respondents were chosen based on their convenient accessibility and easy availability. Although, the use of this sampling technique has significant advantages however this technique has also some limitations like uncertainty in generalization. Considering these limitations, homogeneous groups were focused inside the sample. Like as, questionnaires were distributed during lectures where students with large quantities in the same course and same phase, of course, were available.

### **Sample Size**

Selecting a sample, the size may be, as large as it provides adequate outcomes and also may be as small as it can be easily managed (Betram & Christiansen, 2014). Data about final year students enrolled in business administration programs at various KP public sector universities were obtained from all public sector universities of KP. According to which the approximate population was 2038. By applying Yamane (1967) formula of sample drawing, 335 sample size is derived for the present study.

## Data Collection instrument

The questionnaire is employed as a data collection instrument in this study. The questionnaire is an arranged list of questions to which respondents will have to give answers (Betram & Christiansen, 2014). Moreover, questionnaire quantifies and simplify responses, as well as people, are also more interested to just read a statement and tick boxes instead of writing or typing long answers (Cilliers, Davis & Bezuidenhout, 2014). The researcher tried to design and present the questionnaire is simple and fair wordings so that respondents might understand each question easily and give the answer because of their own opinion.

## Scales

All the scales for measuring constructs are adopted from previous literature. Emotional intelligence was measured through a scale developed by Wong and Law (2002), Self-regulation was measured through a scale presented by Grant and Higgins (2003) whereas for measuring entrepreneurial intention, the scale developed by Linan and Chen (2009) was adopted. A total of 400 sets of questionnaire were distributed for data collection. Keeping in mind the risk of low response rate, an increased number of the questionnaire was distributed in which 352 were collected back having complete responses in all aspects.

## Reliability and validity

Scale reliability and validity refers to the extent up to which the collecting instrument is enough to measure the particular construct. An acceptable Cronbach's alpha coefficient value range from 0.6 to 0.9 (Kotze & Gerhard, 2005). Table 1 illustrates the reliability analysis showing Cronbach's alpha for all the constructs exceeding 0.6.

**Table 1 Reliability Coefficients summary**

No.	Construct	$\alpha$	No. of Items
1.	Emotional Intelligence (EmI)	0.81	16
2.	Self-regulation (SR)	0.76	11
3.	Entrepreneurial Intention (EI)	0.88	06

## Statistical analysis

Both descriptive and inferential statistics were carried out through SPSS software. Pearson correlation was used to check the relationship between constructs. Table 2 is showing revealed results.

**Table 2 Descriptive statistics and Correlation coefficients**

Constructs	Mean	SD	EmI	SR	EI
Emotional Intelligence	3.99	.68	1		
Self-regulation	3.48	.53	.261*	1	
Entrepreneurial Intention	3.93	.76	.585*	.313*	1

\*Correlation is significant at the 0.05 level (1-tailed), N=352,  $p > 0.05$ , SD= Std. Deviation, EmI=Emotional Intelligence,

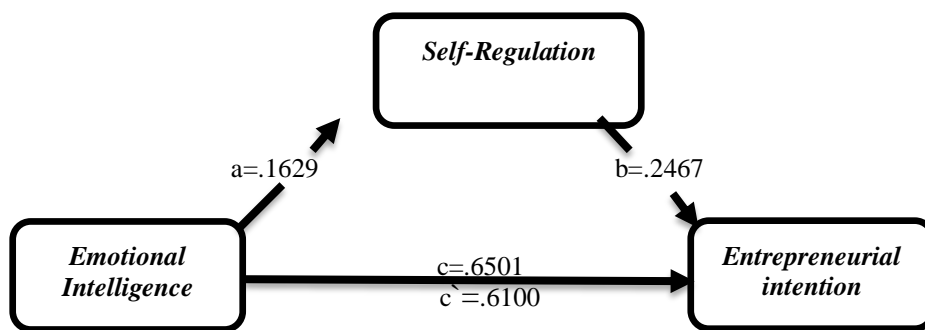


The above table shows descriptive statistics and correlation among the constructs. Results revealed that emotional intelligence is significantly positively correlated with entrepreneurial intention ( $\beta=0.585$ ,  $p<0.05$ ) and also with self-regulation ( $\beta=0.261$ ,  $p<0.05$ ). Whereas results also revealed a significant positive correlation between self-regulation and entrepreneurial intention ( $\beta=0.313$ ,  $p<0.05$ ).

**Mediation Analysis**

As in the current study, self-regulation is used as a mediator in the relationship of emotional intelligence and entrepreneurial intention so for this purpose PROCESS macros model 4 by Hayes (2013) is employed.

Figure 1: *Theoretical framework*



**Table 3 Summary of mediation analysis**

Emotional Intelligence (EmI)			n= 352				
R	R-sq	SE	Model Summary		Df1	Df2	p
.6258	.3916	.3585	F	112.30	2.000	349.00	0.000
Path			Coefficient		p-value		
EmI→SR (a)			.1629		.0024		
SR→EI (b)			.2467		.0000		
EmI →EI (c)			.6501		.0000		
EmI→SR→EI (c')			.6100		.0000		
			Effect		95CI		
					LLCI		ULCI
Total			.6501		.5555		.7448
Direct			.6100		.5175		.7024
Indirect			.0402		.0163		.0760
Sobel test or normal theory test for the indirect effect							
Effect		se		Z		p	
.0402		.0154		2.6132		.0090	

Table 3 shows that the model investigating the relationship of emotional intelligence with entrepreneurial intention with the mediating effect of self-regulation is significant ( $F=112.30$ ,  $p<0.000$ ) and explained a significant amount of variance in entrepreneurial intention ( $R^2=0.39$ ). In simple mediation model results revealed that emotional intelligence is significantly positively related to self-regulation ( $a=0.162$ ,  $p<0.002$ ) as well as to entrepreneurial intention ( $c=0.650$ ,  $p<0.000$ ). Also, self-regulation is significantly positively associated with Entrepreneurial Intention ( $b=0.246$ ,  $p<0.000$ ).

The effect of emotional intelligence related to entrepreneurial intention after adding the mediating effect of self-regulation is also positively significant ( $c'=0.610$ ,  $p<0.000$ ). Furthermore, results show the total effect ( $0.650$ , 95% CI [ $0.555$ ,  $0.744$ ]), the direct effect ( $0.610$ , 95% CI [ $0.517$ ,  $0.702$ ]) and indirect effect ( $0.040$ , 95% CI [ $0.016$ ,  $0.076$ ]) of emotional intelligence on entrepreneurial intention. For the determination of the presence of a significance indirect effect, the upper and lower confidence intervals (CIs) must not contain zero. Present model results also not contain zero and hence indicate that mediation is occurring. Sobel test ( $Se=.015$ ,  $Z= 2.613$ ,  $p= 0.009$ ) significant results also confirming about the mediating role of self-regulation in the relationship between emotional intelligence and entrepreneurial intention. However, as both the path  $c'$  ( $c' =0.650$ ,  $p<0.000$ ), and  $c$  ( $c=0.610$ ,  $p<0.000$ ) are significant which indicates that self-regulation partially mediates the relationship between emotional intelligence and entrepreneurial intention.

## **DISCUSSION & CONCLUSION**

The objective of the present study was to examine the factors shaping entrepreneurial intention namely emotional intelligence and self-regulation among university students. For achieving this objective, reliability, Pearson correlation, and PROCESS macros (Hayes, 2013) were employed. Results revealed that emotional intelligence and self-regulation both are important personality antecedents to entrepreneurial intention. The strong relationship between emotional intelligence and entrepreneurial intention suggests that the capability of an individual to understand emotions of oneself as well as of others enhances the probabilities of being involved in entrepreneurial activities as the process of entrepreneurship are full of hazards and to handle with emotions. This result is also in line with a previous study conducted by Davis and Peak (2014) who have concluded that emotionally strong people have a positive ability effect and hence can easily transfer circumstances in a favorable direction. Results also revealed a significant positive correlation between emotional intelligence and self-regulation which

is in line with the results obtained by Sadri and Janani (2015) in their study. A significant positive correlation is also observed between self-regulation and entrepreneurial intention which is in line with the results obtained by Pihie and Bagheri (2013). Hence, H1, H2, and H3 all are accepted.

H4 relates to check the mediating role of self-regulation if any, between emotional intelligence and entrepreneurial intention. Results revealed a significant mediating role played by self-regulation between emotional intelligence and entrepreneurial intention as all the paths (i.e. path a, path b, path c & path c') are significant with  $p < 0.05$  which is also confirmed by the Sobel test however the mediation is partial as both c and c' paths are significant.

On the bases of current study findings, it is concluded that, emotional intelligence and self-regulation, both are important personality attributes of students which infused the feelings of entrepreneurship in their minds and hence may diverts their intention towards establishing their own new ventures instead of becoming a job seeker.

### **Study Implications**

Entrepreneurship phenomena and their effect on economies both are generally analyzed. Job creation, economic growth, unemployment reduction, poverty alleviation, and changes inside an economy are certain results related to entrepreneurial behavior. However entrepreneurial actions are influenced by entrepreneurial intention. Therefore, it is more important nowadays, education system ought to build up the entrepreneurial intention amongst the students as they choose the fate of the country.

The present study is noteworthy for educational institutions administration, policymakers, parents, economic development, and guidance cell. Today Pakistan is a rising economy that is bound to accomplish developments on different fronts, in near future. However, for Pakistan to gain the status of developed country, besides other issues to be settled it also needs to make millions jobs and this is conceivable by advancing soul of entrepreneur among the students.

Teachers, educational modules, an association of co-curricular exercises, and university administration assume a vital part in the personality development of the students. They all build up the soul of leadership, collaboration, risk-taking, and innovativeness among the students. This study will enable them to recognize those students who have an intention for entrepreneurship and compose diverse sorts of seminars and workshops according to the personality traits of the students which will help them to begin a new venture in the future.

Self-employment or establishing its own business is the hot demand for the present time because, in the present aggressive condition, total job opportunities are restricted. Thus, numerous students failed to get a job after completing their studies. This study will be useful for parents when they know about his or her kid's personality attributes they can persuade their youngsters to choose a profession according to their inclinations.

### **Limitation and future directions**

Due to time and other resources availability constraints, present study has some limitations. This study was limited only to university students enrolled in the business administration discipline of KP public sector universities which are the constraint in generalizing the results. So in the future by extending the sample size to other disciplines or by adding other provinces as well as by focusing on non-university individuals from the general population who may be interested in entrepreneurship is also suggested. Similarly, some other factors may also be added in this stream of research which may be the cause of differences in the behavior of male and female respondents. PROCESS macros (Hayes, 2013) have suggested various mediating and moderating models for confirming different indirect effects of mediators and moderators. So, the mediating and moderating effect of other variables can also be examined in this relationship by future researchers by adding variables other than self-regulation.

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