

# Periodic Research

## Assessment of Grit and Decision Making Styles among Males and Females of Different Age Groups



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### Abstract

Grit refers to persistence and passion for future long term objectives. It is one of the construct that has been recommended as critical factor which may explain the differences in accomplishment of generally capable people. Decision making is a procedure of assessing the information from current condition and prospering reasonable solutions from the most available options. These two constructs has been highlighted as important for understanding individuals toward their personal growth, to accomplish their success and achieve fulfilment in them.

The current study aims to understand the grit and decision making style and how it progresses with work experiences among males and females. It is hypothesised that there will be a significant relationship of grit with decision making styles among males and females of different age groups at differing work experience level, also grit will be predicted by different decision making styles.

The present research assessed the relationship between grit and decision making styles. It also aims at finding whether decision making styles can predict grit of the person. It was found that grit and rational style of decision making are positively related whereas grit is negatively correlated with dependent, avoidant and spontaneous decision making styles. Also rational, dependent and avoidant styles were found to be significant predictors of grit. One way ANOVA concluded that grit, rational, intuitive and avoidant styles have significant difference between young and older males and females. Also grit, rational and avoidant styles differ with work experience level. This study can help students to understand their efforts toward their goals. This will also help organisations in profiling new candidates and to assess their passion and their approach toward organisation's goals.

**Keywords:** Grit, Decision Making Styles, Work Experience.

### Introduction

Success is most desirable by everyone and it is achieved more by one than others. This is because of two things: talent and opportunities. Even though, individuals who have similar level of talent and opportunity often appreciate differing level of achievement. When one wants to be successful and to augment their ability, they should be reliable and determined. Talent without persistence never works out as intended. Opportunities without determination will be lost. There is an immediate relationship between determinations and potential (Sawaneh 2015).

Grit is defined as persistence and passion for future long term objectives (Duckworth et.al. 2007), and has been recommended as a critical factor which may explain the difference in accomplishment of generally capable people. Grit and similar constructs are related with lifelong educational attainment (Duckworth and Quinn 2009) and professional achievement. Anticipated longitudinal investigations have demonstrated that grit predicts the accomplishment of challenging objectives despite setbacks and difficulties.

Duckworth et.al. (2007) distinguished a two factor structure of grit. This structure was attributed to study the involvement of stamina in measurements of effort and interest. Grit requires consistency of interests and distinctions over time. Grit is unique in relation to leadership potential on the ground, in which gritty individuals demonstrate their stamina that does not require the contribution of dealing with and regulating different people. Additionally grit is different from conscientiousness which envelops

diligence that combines inclinations toward obligations, restraints, deliberateness, and traditionalism (Robert, Chernyshenko, Stark, and Goldberg 2005).

The relationship that grit has age features the idea proposed by Duckworth and Quinn (2009) that perhaps as individuals take part in their own particular life experience, they move toward becoming grittier. Also Robertson-Kraft and Duckworth (2014) were interested in studying connections amongst grit and performance results in the work environment and found teacher's effectiveness to be related positively with grit and leadership were found to be moderately related to grit. This inspires to study the effect the constructs with work experience.

Every day life presents individuals with a consistent need to take decisions. In spite of the fact that these choices are although unique, numerous experts have contended that people have constant propensities to approach different issues in a comparative ways (Dane and Pratt 2009; Scott and Bruce 1995). Besides, these decision making inclinations, referred to as decision making styles (Scott and Bruce 1995), which constitute an individual distinction that varies between individuals.

The utility of decision making styles lies in revealing to us something about the decision maker. Researchers look for comprehension about how individuals vary in landing at a decision (Scott and Bruce 1995), how fulfilled individuals are with their decision (Crossley and Highhouse 2005), and how individuals arrive at great decisions (Franken and Muris 2005; Parker and Fischhoff 2005).

Employees are leaders who are constantly occupied with decision making, and these decisions making is subsequently an essential aptitude paying little mind to which level in the association it happens at. Learning about decision making likewise clarifies social interactions and clashes in an organisation (Leonard, Scholl and Kowalski 1999).

Similarly Scott and Bruce (1995) defined decision making style which says that "the learned, habitual response pattern exhibited by an individual when confronted with a decision situation". Bodin and his colleague (2016) observed decision making styles to be better interpretation of decision process in various settings and considered it important to study the relationship of decision making styles with different constructs

In such manner, researches has demonstrated some association of different styles with various factors such as academic achievement positively correlated with rational style, absences from school was related positively with spontaneous and avoidant decision making styles, higher emotional intelligence and low avoidant style of decision making in police force than trainees, Intuitive and Rational style positively related with self-esteem, self-regulation and self-efficacy etc.

The present study was conducted to assess the connection between the grit and decision making styles in order to explain every individual through their career growth. For the selection of right candidate for

an organizational growth, these organizations require psychometric assessment of candidate toward their future visions. There are limited researches done so far which relate grit and decision making style relating it with work experience as a factor.

## Review of Literature

This theoretical overview has led to the main aim of present research which were reviewed and studied from concerned literatures present online. The literature review had led us to understand the concept in detail and the findings were recorded.

## Grit

Recent decades had witnessed the emergence and development of researches of a non cognitive trait "grit". Duckworth et.al. (2007) originally tested the concept defined in and accounted that grit carry four percent of the variance in success outcomes. They also found no positive relation of grit with emotional quotient but high relation with conscientiousness. Von Culin et.al (2014) found engagement as strongly associated with perseverance of effort, and pleasure with consistency of interest.

Grit is majorly studied in the context of academic performance and productivity where researchers have found positive correlation between them (Hodge et.al 2017; Garcia et.al. 2015; Cross 2014; Datu 2007). DiMenichi and Richmond (2015) found that grit increases more when individual analyse their failures than those who reflect on success.

Researchers correlated grit with different positive constructs where they found positive relation with happiness level and life satisfaction (Singh and Jha 2008; Aparicio et.al. 2017; Khan and Khan 2017); with self-control, self regulation, and engagement (Muenks et.al. 2017), honesty-humility (Ceschi et.al 2016), parental employment, authoritative parenting style, and high self-efficacy scores (Guerrero et.al. 2016). Besides being positively correlated, grit is negatively related with alcohol and marijuana consumption (Guerrero et.al. 2016), negative affect (Singh and Jha 2008).

It is also studied in the context of organisation where it is identified to be related to job satisfaction, physician engagement and burnout (Ion et.al. 2017; Underdahl et.al 2017). Walker et.al. (2016) examined the relationship of grit with training and found high level of grit among practicing surgeons than trainees. Grit was found to be negatively related with exhaustion and counter-productive work behaviour (Ceschi et.al. 2016). Whereas Suzuki et.al. (2015) correlated grit and found openness to experience and work engagement as work and academic performance indicator. Some interesting studies have observed grittier people to complete their training, keep their jobs and lead a married life. (Larkin et.al. 2016).

## Decision Making Style

Decision making is a cognitive concept which has attracted many domains of research be it management, career development, financial or psychological. Studies have found avoidant and

spontaneous styles to be predictors of decision making competency whereas intuitive style was found to be protective factor and avoidant style as a risk factor.

Researchers found the effect of different types of intervention on decision making such as effect of scenario planning on changing people's style to intuitive style (Bodin et.al. 2016), career courses on increase in career related decision making and self efficacy (Lam 2016). There is a correlation between career related decision making efficacy with attachment styles (Bolat and Odaci 2016).

Fitzgerald et.al (2017) observed positive relation between ability to handle disagreements and decision making styles where reliance was found to be high for spontaneous style and low for the rational style. Rational and intuitive styles were observed to be predictors of performance (Ward 2016).

Intuitive and rational style were positively related with self esteem, self-regulation and self-efficacy whereas negatively with spontaneous and avoidant style. Self regulation and self efficacy were negatively correlated with dependent style (Batool et.al. 2017). There is an association of rational and intuitive style with four traits of personality, except neuroticism, whereas dependent style with neuroticism and agreeableness. Avoidant style associates negatively with openness, extraversion and conscientiousness whereas spontaneous style of decision making had positive relation with neuroticism and negative with conscientiousness and agreeableness (Bayram and Aydemir 2017).

A research has concluded that there is an association between thinking styles and decision outcomes that are context dependent. In order to improve decision performance and wisdom, decision makers need to consider individual differences and the context of decision (Phillips et.al. 2016).

### Objective and Methodology of the Study

The aim of the present study was to understand grit and decision making style and how it progresses with work experience among males and females.

Toward understanding the individuals toward their career and personal growth, the purpose of this study is to understand the relationship between grit and decision making styles with respect to age and gender.

1. To study the relationship between grit and decision making styles.
2. To study grit between males and females.
3. To study decision making styles between males and females.
4. To study grit at different ages.
5. To study decision making style at different ages.
6. To study grit in males and females among different age groups.
7. To study decision making style in males and females among different age groups.

8. To assess dominant decision making style at higher and lower levels of grit.
9. To study the effect of decision making on level of grit
10. To study grit at different work experience level.

### Hypothesis

The hypotheses of the research are-

#### H1

There will be significant relationship between grit and decision making style.

#### H2

There will be no difference in the level of grit between males and females.

#### H3

Rational style of decision making will be more in males than females.

#### H4

Dependent style of decision making will be more in females than males.

#### H5

There will be difference between levels of grit at different ages.

#### H6

There will be difference between styles of decision making at different ages.

#### H7

There will be difference between level of grit in males and females at different ages.

#### H8

There will be difference between styles of decision making in males and females at different ages.

#### H9

Decision making styles will predict grit.

#### H10

There is significant difference of grit among different level of work experience.

#### H11

There is significant difference of decision making styles among different level of work experience.

### Sample and Its Selection

To study the above objectives, survey research design was used. 211 participants were recruited which included young adult students (62 females, 52 males,  $M_{age} = 22.53$  years, age range: 18-28years) from various universities and older adults (47 females and 50 males,  $M_{age} = 44.26$  years) from different professional background from Delhi NCR using purposive sampling method. Online and offline survey were administration and data collection system. Participants were eliminated if they strongly endorsed all the items. The data was analysed in SPSS version 23

### Description of the Tools Employed

#### General Decision-Making Style

Decision-making styles were assessed using Scott and Bruce's (1995) General Decision-Making Style scale. The scale was comprised of five subscales that are rational, intuitive, dependent, avoidant, and spontaneous styles of decision making and having five items each. Higher the score on one dimension indicate its higher presence in the

individual. Psychometric properties were calculated using cronbach's alpha for assessing reliability ranging from .76 to .86. whereas content validity was established.

**Grit**

The level of grit was assessed using Duckworth et.al's (2007) Grit scale. The scale was comprised of two dimensions, which are, persistence of effort and consistency of interest having six items each. Items of consistency of interest dimensions were reverse scored. Total grit score was calculated

by dividing the sum of individual item score with 12 to get the range from one to five. Psychometric properties were established using internal consistency for reliability with value .85.

**Result**

Results were analysed using descriptive and inferential statistics. Means and standard deviation were calculated for referring the descriptive statistics. Correlation, t-test, one way ANOVA and multiple regression were used for calculating inferential statistics.

**Table 1: Correlation between Grit and Decision Making Styles**

Measures	1	2	3	4	5	6
1 Grit		.349**	.051	-.143*	-.389**	-.136*
2 Rational Style			.397**	.172	-.271**	.069
3 Intuitive Style				.203**	.151*	.433**
4 Dependent Style					.319**	.146*
5 Avoidant Style						.392**
6 Spontaneous Style						

Note

\* $p < .05$ . \*\* $p < .01$ . (2-tailed).

The results from table 1 shows positive significant relationship between grit and rational style

of decision making [ $r(420) = .349$ ;  $p < .01$ ] whereas there is negative significant relationship of grit with dependent [ $r(420) = -.143$ ;  $p < .05$ ] and avoidant decision making style [ $r(420) = -.389$ ;  $p < .01$ ].

**Table 2: Multiple Linear Regression Result**

Predictive Variable	Dependent Variable - Grit					
	R	R <sup>2</sup>	R <sup>2</sup> change	Beta value	F value	t
Rational Style	.438 <sup>a</sup>	.192	.173	.303	9.758**	3.810**
Intuitive Style				-.016		-.196
Dependent Style				-.169		-2.479
Avoidant Style				-.205		-2.735**
Spontaneous Style				-.063		-.822

Note

\* $p < .05$ . \*\* $p < .01$ . (2-tailed).

The results from table 2 support the hypothesis that decision making styles are significant

predictor of grit ( $p < 0.01$ ). Rational, Avoidant and Dependent decision making styles predict grit at  $p < .01$  and  $p < .05$  level respectively

**Table 3: One Way ANOVA between Genders at Different Ages**

Variables	Groups	N	Mean	F Value
Grit	Young Female	62	3.4115	9.590**
	Young Male	52	3.3344	
	Older Female	47	3.8134	
	Older Male	50	3.7266	
	Total	211	3.5567	
Rational Style	Young Female	62	20.19	8.386**
	Young Male	52	18.08	
	Older Female	47	21.17	
	Older Male	50	20.64	
	Total	211	20.00	
Intuitive Style	Young Female	62	19.02	6.958**
	Young Male	52	17.27	
	Older Female	47	20.43	
	Older Male	50	18.62	
	Total	211	18.81	
Avoidant Style	Young Female	62	14.15	3.671*
	Young Male	52	14.23	
	Older Female	47	13.30	
	Older Male	50	11.98	
	Total	211	13.46	

Note

\* $p < .05$ . \*\* $p < .01$ . (2-tailed).

Table 3 shows significant difference among the four groups on the scores of grit, rational intuitive ( $p < 0.01$ ) and avoidant ( $p < 0.05$ ) decision making

styles. This result supports hypotheses which states that there will be difference between level of grit in males and females at different ages; there will be

difference between styles of decision making in males and females at different ages respectively.

**Table 4: T-Test among Genders**

Variable	Gender		t	df
	Female	Male		
Grit	3.5848 (.56669)	3.5267 (.58124)	.735	209
Rational Style	20.61 (2.906)	19.33 (3.956)	2.693**	209
Intuitive Style	19.62 (2.844)	17.93 (4.115)	3.494**	209
Dependent Style	17.66 (3.799)	16.44 (4.386)	2.162*	209

**Note**

\* $p < .05$ . \*\* $p < .01$ . (2-tailed).

Hypothesis was supported by the results in table 4 as there were no significant difference between males and females on the level of grit.

Table 4 also states that there is significant difference in males and females on the scores of rational, intuitive ( $p < 0.01$ ) and dependant ( $p < 0.05$ ) decision making styles where females score higher on these styles than males.

**Table 5: T-Test between Different Age Groups**

Variable	Age groups		t	df
	Young Adults	Older Adults		
Grit	3.3763 .58067	3.7687 .48749	-5.261**	209
Rational Style	19.23 3.500	20.90 3.306	-3.541**	209
Intuitive Style	18.22 3.631	19.49 3.476	-2.593**	209
Avoidant Style	14.18 3.736	12.62 4.177	2.873**	209

**Note**

\* $p < .05$ . \*\* $p < .01$ . (2-tailed).

Table 5 revealed that there is significant difference in level of grit between young and older adults where older adults score higher than young adults ( $p < 0.01$ ). This result accept hypothesis which states that there will be difference between levels of grit at different ages.

The hypothesis was also supported by the results of table 5 that there is a significant difference in young and older adults regarding preference for rational intuitive and avoidant decision making style. This table expressed that older adults prefer rational and intuitive style of decision making more than young adults whereas young adults are more on avoidant style of decision making than older adults.

**Table 6: One Way ANOVA between different levels of Work Experiences**

Variables	Groups	N	Mean	F Value
Grit	Not Working	97	3.3511	14.529**
	Between 0 to 10 years	40	3.6128	
	More than 10 years	74	3.7958	
	Total	211	3.5567	
Rational Style	Not Working	97	19.24	5.366**
	Between 0 to 10 years	40	20.03	
	More than 10 years	74	20.97	
	Total	211	20.00	
Avoidant Style	Not Working	97	14.41	5.422**
	Between 0 to 10 years	40	12.98	
	More than 10 years	74	12.49	
	Total	211	13.46	

**Note**

\* $p < .05$ . \*\* $p < .01$ . (2-tailed).

Table 6 shows significant difference among groups having different level of work experience on the scores of grit, rational and avoidant style of decision making. This result supports hypotheses which states that there will be significant difference of grit and

decision making style among different level of work experience ( $p < 0.01$ ).

**Discussion**

This paper conducted to study the concept of grit and decision making style and how it progresses with work experience among males and females at different ages. Grit is characterized by passion and persistence toward future objectives in spite of

disappointment, misfortunes and levels of challenges and has been prescribed as a basic factor which may illuminate differentiates in achievement of for the most part correspondingly fit individuals (Duckworth et al., 2007). However, Decision making is a procedure of assessing the information from current condition and proposing reasonable solution from the most available options. (Loo, 2000).

Pattern of significant correlation, as hypothesised, was observed positive relationship of grit with rational style of decision making ( $r=.349$ ;  $p<0.01$ ). The rational style utilizes a logical and organized way of decision making for the search for information, the appraisal of information, and assessment of the data are altogether completed in a coherent way (Rosenberg, 2011). This is an important characteristics regarding consistency of interest toward ones goals. A negative significant relationship was observed between grit and three styles of decision making, that is, dependent ( $r=-.143$ ;  $p<0.05$ ), avoidant and spontaneous decision making style which means grittier an individual is lesser they prefer to take decision with the help of others and also they are more persistent toward their future goals, hence they are less likely to take spontaneous decision or they are less likely to avoid taking decisions. This implies the more individual depend upon the guidance, course and support of others the lesser they have commitment toward their objectives as stated by Salo and Allwood, (2011). This also shows that dependent styles is emphatically related with stress and burnout inclination and negatively with life satisfaction whereas Grit and Life Satisfaction were related positively (Singh and Jha, 2011)

Rational, Dependent and Avoidant decision making styles predict the construct grit at  $p<0.01$  level. Individuals with rational style have sequential step to follow toward their desired solution. The individual has more tendencies to inquire and gather information which will help in developing their intelligence (Deniz 2004). When one is more curious then they try to develop their skills and also search for opportunities and this is one characteristic which is required by one to be gritty. In contrast to this dependent and avoidant styles of decision making are predicting grit as individual generally need assistance of other to guide them or just for their confirmation than doing by themselves. They also try to resist conquering their obstacles and setbacks. If an individual lack these qualities and have resilience and tenacity as the criteria, then one can develop grit in them. Hence these two styles are negatively predicting grit.

Researchers have observed that males and females did not differ in the level of grit, which was also reported in previous studies, but older adults have higher grit than younger adults ( $t= 5.261$ ;  $p<0.01$ ) where older adults prefer rational ( $t= -3.541$ ;  $p<0.01$ ) and intuitive style ( $t=-2.593$ ;  $p<0.01$ ) more and younger adults adopt avoidant style ( $t=2.873$ ;  $p<0.01$ ). It can be concluded that as our age progresses we critically evaluate things more that are based on the facts and we become more selective in

every context and this constantly helps an individual to grow professionally (Scott and Bruce 1995; Verma 2015). This growth mindset is one of the determinants for higher grit level (Stolz, 2015). Besides this there is significant difference in gender, as females prefer more rational ( $t=2.693$ ;  $p<0.01$ ), intuitive ( $t=3.494$ ;  $p<0.01$ ) and dependent ( $t=2.162$ ;  $p<0.05$ ) decision making styles than males. This was partially supported by a research where they found female adopting dependent style of decision making (Salo and Allwood, 2011), this suggests that females think more rationally and they analyse all the aspect critically than males. A research also found female CFOs to be more conservative in their financial reporting decision making (Francis et.al 2015).

Consistent with our hypotheses, it was observed that there is the effect of work experience on the level of grit and also the adoption of the dominant style of decision making, which have been reported in previous researches (Suzuki et.al. 2015). Generally people who strive for success are intended to improve their performance and achieve their personal goals (psychology today, 2017). As quoted by Duckworth (2009) gritty people are high on their patience level. They work energetically towards their long term goals without being dissatisfied, and this patience is generally achieved when a person has a vision to work which develops as we starts developing our crystallised intelligence for which we need to be rational in our approach. It is also consistent with our result that as our experiences develops we learn to become less avoidant and more rational in our approach of decision making.

From the overall discussion it could be concluded that grit is an important factor while considering work performance and growth where one needs to be more rational in their approach of decision making and least toward dependent and avoidant styles. As observed, work experience contributes in increasing success and hence it is recommended to get practical exposure toward your goal at high school level as that is the critical time for the student to begin their success journey.

### Summary and Conclusion

Grit is an important concept regarding ones success and this is accomplished with different decision making pattern. Hence present study concluded relation of grit with rational, dependant, avoidant and spontaneous decision making styles whereas only rational, dependent and avoidant styles were found to be the predictor of grit. Beside these, the level of grit increases as our experience toward work increases. It is consistent with the result that the selection of rational style is more seen as our work experience increases whereas avoidant style selection decreases.

### Implications

The study in hand has its implication in generating an understanding for success which includes cognitive skills such as decision making style. This study is beneficial for the recruiters for considering personnel selection that will contribute to the benefit of the organization. It can also be used for

incorporating work experience for training and development in organisation and for interventions and aptitude building.

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