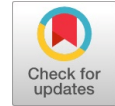


# Personality Traits and Risk Tolerance among Young Investors

Garima Mathur, Navita Nathani



**Abstract:** India is a developing nation with highest number of youths in world. The youth is growing in the era of internet, least fare Wi-Fi connections. They have ample of knowledge available at one click. For any decision they search multiple options which give them sense that they are opting for the best and will reduce the chances of setbacks. Although every individual vary in their risk taking capacity and the capacity to tolerate setbacks is mostly related to kind of personality characteristics an individual carry. Present study is an attempt to identify the kind of relationship between personality types in (BIG Five model) and risk tolerance among youth. There are five personality traits measured through BIG Five namely; Extraversion, Agreeableness, Conscientiousness, Neuroticism (Emotional Instability) and Openness to Experience. The study intended to ask whether these personality types play an important role in deciding tolerance behavior among young investors. The data was collected on a five point scale for all five personality traits. Each trait was evaluated through five statements on a scale developed by Mayfield, Perdue & Wooten (2008) modified by Wong, Chuah, Kui, Soo & Ang (2016). There were 25 statements in totality for measuring personality traits. The data was collected for risk tolerance, inclusive of eight items developed by Grable and Lytton (1999). There were 102 respondents from whom data was collected. The sampling respondents were in the age range of 22 to 27 years, who either have just started earning or having less than 5 years of total earning tenure. These investors are considered a bit selective but high in risk tolerance. We also intend to find out the kind of relationship between variables. Results indicated that Agreeableness, Neuroticism and Openness were strongly correlated to risk tolerance, but there was no significant relationship of extraversion and conscientiousness with risk tolerance. Furthermore, risk tolerance was checked on the basis of gender. The results indicated that there was no difference in risk tolerance of male and female investors unlikely suggested by Mishra, Lalumiere & William (2011) who stated that risk propensity varies from male to female.

**Keywords:** Big Five, Neuroticism, Openness to Experience, Conscientiousness, Extravert, Agreeableness, risk tolerance.

## I. INTRODUCTION

The institution of financial systems has gained importance in recent years. People now a day talks about investments, interested in taking risk in expectations of earning profits in near future. Risk comes inbuilt with

investment as most options carry varied level of risk, when it comes to making decision role of risk come in to play. Risk includes all those modes of investment where probability of financial loss or gain is uncertain (Raheja & Dhiman, 2017). It is generally viewed that higher the risk higher should be returns. Corter and Chen (2005) reported that risk taking is domain specific. Although, the risk taking capacity varies from individual to individual, so is the capacity of risk tolerance. Not everyone have enough capacity to take risk as risk tolerance may be viewed as the ability to bear losses in expectations of good returns (Grable & Lytton, 1999) as it might not a case always. Risk taking capacity varies from high risk taker to risk averse. In fact risk tolerance is opposite of risk aversion (Barsky et al, 1997). Studies also revealed that those who are high on risk tolerance tend to invest in risky modes (Pak & Mahmond, 2015).

### Risk Tolerance

Risk tolerance is the capability of investor to invest in varied amounts for a long duration. It indicates the individual's tolerance power for market fluctuations with respect to investment. Those who invest frequently are more likely to have higher risk tolerance. Similarly, male investors have high risk tolerance in comparison to female investors (Falahati and Paim, 2012).

The researchers explained that risk tolerance varies from gender (Falahati and Paim, 2012) and among age of the investors. For example, young investors having less knowledge of investment avenues but intend to invest are more likely to take risk in comparison to those having enough knowledge (Kanadhasan, 2015). When it comes to gender males show higher risk tolerance than female investors (Chen and Volpe, 2002).

Moreover, there are other factors as well such as attitudes, personality traits that affect investment decision (Zaleskiewicz, 2001; Bye & Lamvik, 2007). Similarly, Laing (2010) proposed the effect of psychological biases on decision making and financial risks. Anchoring, Overconfidence, Availability, over-optimism, Herd Behavior and Big five traits were studied in connection with risk tolerance in addition to financial decision making (Oehler & Wedlich, 2018). In a different study similar results were reported where researchers suggest that personality traits affect risk tolerance behavior and an implication is also given that while suggesting investment option's, investor's personality factors along with risk tolerance should be kept in the mind. Risk tolerance is a kind of attitude, could be defined as a psychological trait (Davies, 2014). This is how risk tolerance is related to other traits of personality.

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Most evident among them is BIG FIVE (Sadiq & Amna, 2019; Weller and Thulin, 2012). The model covers five dimensions of individual's personality. Big Five has been elaborated as one of the significant measure of personality traits. The dimensions of Big Five are Extraversion, Conscientiousness, Agreeableness, Neuroticism (Emotional instability) and Openness to experience. Thanki (2015) found a significant relationship between traits of personality and risk tolerance. Bye & Lamvik (2007) also proposed that personality traits and risk tolerance are correlated. In most of the researches neuroticism, conscientiousness and agreeableness were negatively related to risk taking behaviours and extroversion and openness to experience as positively correlated (Nicholson, Soane, Fenton - O'Creevy & Willman, 2005).

### Extraversion

One of the dimensions is Extraversion which emphasizes on sociability aspect of an individual. This indicate that individual intend to stay in touch with others, like to surrounded by people, love talking to them contrary to introvert individuals who enjoy their own company, love to stay alone (Sadi et al., 2011). Extraverts take energy from social activities, enthusiastic, visible in groups, like to be with others and are assertive in nature. Introverts are those who are less involved with others and less in energy than extravert individuals. They love to work independent of others, quiet and love to remain calm and alone. They are reserved kind of individuals.

Oehler & Wedlich (2018) studied the relationship between extraversion and risk attitude along with perception of risk and expectations of return. They stated that extravert people are high on risk tolerance. On the other hand introverts are considered as low risk takers (Sadi et al., 2011). The results were further supported by Raheja & Dhiman (2017) who found few traits to be positively related to risk tolerance and few negatively related. For example, extraverted individuals were more likely to take risk. On the basis of above reviews following hypothesis is framed:

**H1: Extraversion is positively related to risk tolerance.**

### Conscientiousness

Another significant trait is conscientiousness which indicates reliable, punctual, deliberate and self-disciplined and competent aspect of individual's personality. Conscientious people are those who are able to control themselves, manage themselves more diligently and work with a planning in place of acting impulsively. These are the people who pay attention to details, prepared, follow orderliness and in most cases have proper scheduling of things. The people who are self content and considered as those who takes decision after proper evaluation. This implies that those high on conscientiousness, will avoid taking risk (Anic, 2007). This entails another hypothesis:

**H2: Conscientiousness is negatively related to risk tolerance.**

### Agreeableness

The individuals who are high on agreeableness takes care of people, considerate and kind yet check things for authenticity, are critical evaluators and look for details (Halder at al. 2010). These are generous people and place others before them, optimistic in nature, like to help others and can be trusted, make compromises for the sake of others

(Costa & McCrae, 2002).

On the other hand disagreeableness aspect of personality reflects cynical behavior of individuals. They place self interest over others, skeptical in nature and do not involve themselves in other's problems. They are considered as uncooperative, not willing to offer help, try to hide things for own benefits. Disagreeable people lack empathy, kind heartedness and show less concern for others.

In an interesting study by Pak & Mahmood (2015) have resulted in showing significant negative relationship between agreeableness and risk tolerance. Following hypothesis has been framed based upon the findings:

**H3: Agreeableness is negatively related to risk tolerance.**

### Neuroticism

Neuroticism refers to unstable aspect of individuals with respect to emotions. As in the fast pace world it is a big challenge to keep a check upon one's emotions. However, those who have quality of stable emotions, considered as strong individual (Costa and McCrae, 1992). There are categories of people, those who are self confident, free mind, do not take tension, these people are considered as emotionally stable where as there are individuals who are moody, nervous, feel sad, tensed, depressed, guilty, are termed as Neurotic (John et al., 2008). In the late 60s Eysenck came up with the findings that neurotic people generally experience negative feeling, anxious for relatively longer periods of time. They are not able to regulate their emotions which affect their personal life, their ability to take decisions and live happily. They get upset easily and experience stress and frustration quite often. Neuroticism hence considered as negative feelings thus contributes negatively towards tolerance (Pak & Mahmood, 2015, Eysenck's, 1967).

**H4: Neuroticism is negatively related to risk tolerance.**

### Openness to Experience

People who love to explore new things, brave have tendency to listen to their heart, creative, sensitive, imaginative and unconventional are considered as ones who have openness to experience (Costa and McCrae, 1992). The individuals have faith in external happenings and are more likely to take risk. They invest in long term opportunities as they are open to wait for returns (Mayfield, Perdue & Wooten, 2008). Those who want to explore, would like to invest in risky avenues. For example, Nicholson et al. (2005) found negative linkage between openness to experience and risk tolerance. The hypothesis for the same is:

**H5: Openness to Experience is negatively related to risk tolerance.**

## II. RESEARCH METHODOLOGY

**Procedure:** The study intended to collect data from the youngsters in order to understand their risk behavior. In order to find out this 200 respondents from the age range of 22 to 27 years were contacted.

A care has been taken while collecting the data as only those respondents who have started earnings were considered for the study and the maximum earning tenure is 5 years. Out of 200 questionnaires distributed only 110 were used for final analysis as many of them were incomplete and others did not respond. The data was further tested to check outliers and reduced to 102 responses. Both male and female respondents

Table 1 showing results of Levene's Test of Equality of Error Variances<sup>a</sup>  
Dependent Variable: TotalRiskTolerance

F	df1	df2	Sig.
.600	1	100	.440

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Extraversion + Agreeableness + Conscientiousness + Neuroticism + OpennessToExperience + GenderNumeric

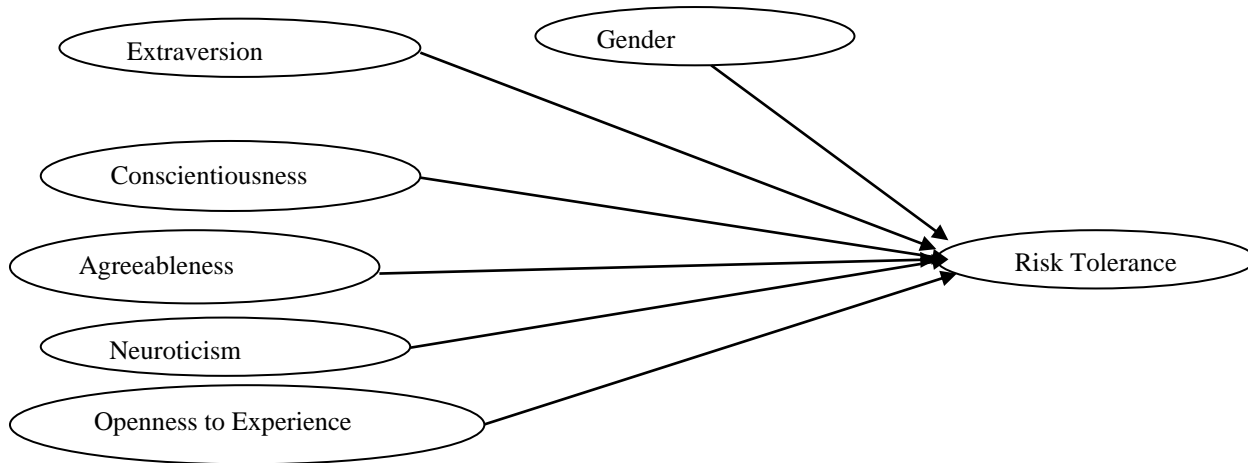


Figure 1: Proposed Model showing relationship between Variables

from Gwalior and nearby cities of Central India were contacted for collecting data. There were 63 males and 39 females in total.

**Measures**

There were two major variables namely, Personality traits and risk tolerance in addition to gender.

**Risk Tolerance:** Risk tolerance was measured using eight itemed scale developed by Grable and Lytton (1999). The alpha value for Risk Tolerance was .838 indicating acceptable values of alpha for all the items.

**Personality Traits:** Each of the personality trait was measured with the help of twenty five statements (five statements each for all five traits) on a scale developed by Mayfield, Perdue & Wooten (2008) modified by Wong, Chuah, Kui, Soo & Ang (2016). The alpha values for Extraversion- .820, Agreeableness-.725, Conscientiousness-.823, Neuroticism- .659, Openness to experience- .755.

**ANALYSIS**

The data was analysed with the help of SPSS software. To measure the effect of all five personality traits of Big Five and gender together Analysis of Covariances (ANCOVA) was used.

The data was tested for equality of variance across groups. Since, F=.600, p=.440 showing insignificant F value the error variance of the dependent variable can be considered as equal across groups.

Table 1 showing results of Levene's Test of Equality of Error Variances<sup>a</sup>  
Dependent Variable: TotalRiskTolerance

F	df1	df2	Sig.
.600	1	100	.440

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

The adjusted R square indicate that 65.9% variance in risk tolerance is explained by personality traits and gender together. Although F is not significant in all cases, still the independent variables are contributing towards risk tolerance.

Table 2 showing results of Tests of Between-Subjects Effects  
Dependent Variable: TotalRiskTolerance

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1869.009 <sup>a</sup>	6	311.501	33.536	.000
Intercept	.027	1	.027	.003	.957
Extraversion	23.720	1	23.720	2.554	.113
Agreeableness	65.949	1	65.949	7.100	.009
Conscientiousness	.651	1	.651	.070	.792
Neuroticism	54.533	1	54.533	5.871	.017
OpennessToExperience	222.997	1	222.997	24.008	.000
GenderNumeric	.038	1	.038	.004	.949
Error	882.403	95	9.288		
Total	85430.000	102			
Corrected Total	2751.412	101			

a. R Squared = .679 (Adjusted R Squared = .659)

The parameter estimates indicate that t=1.598, p=.113 for Extraversion showing insignificant relationship between Extravert behavior and risk tolerance. For agreeableness t=-2.665, p=.009 and Neuroticism t= -2.423, p=.107 stating significant negative relationship between agreeableness, neuroticism and risk tolerance. Further conscientiousness t= -.265, p=.792 showed a negative insignificant effect on risk tolerance. The variable Openness to experience t= 4.900, p=.000 stated a positive significant relationship with Risk tolerance.

# Personality Traits And Risk Tolerance Among Young Investors

**Table 3 showing results of Parameter Estimates**

Dependent Variable: TotalRiskTolerance

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
					Intercept	18.737
Extroversion	.228	.143	1.598	.113	-.055	.511
Conscientiousness	-.040	.150	-.265	.792	-.338	.258
OpennessToExperience	.671	.137	4.900	.000	.399	.942
Agreeableness	-.400	.150	-2.665	.009	-.699	-.102
Neuroticism	-.221	.091	-2.423	.017	-.402	-.040
[GenderNumeric=1]	.041	.639	.064	.949	-1.228	1.310
[GenderNumeric=2]	0 <sup>a</sup>	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

Moreover, the gender was also not a deciding factor for risk tolerance. Unlike many studies where the impact of gender is significant indicating that male are more risk taker than females (Kanadhasan, 2015). Hence H3 (Agreeableness), H4 (Neuroticism) & H5 (Openness to Experience) were well supported through results and literature. Although, H1 (Extroversion) & H2 (Conscientiousness) were not supported and reflected that on the young investors these two traits do not make much impact on tolerance level. As pointed out in literature Neurotic people have less tolerance level (Costa and McCrae, 1992). Similarly, Agreeableness is also a sign of individual's tendency to look for details and those who do this are less likely to take risk hence indicate less risk tolerance (Pak & Mahmood, 2015). On the other hand Openness to Experience enhances tolerance level of investors (Mayfield, Perdue & Wooten, 2008).

## CONCLUSION

The study resulted in an interesting finding which states that when young investors are checked for their tolerance level, those who are even extravert also are less likely to take risk. The individuals who are punctual, organized are not affected for risk tolerance. Although the individuals curious, intellectuals, love to learn new things are quite high on risk tolerance. The investment companies should pay attention to the fact that these days risk tolerance does not differ among gender. Male and female both have same risk tolerance capabilities. So while looking for prospective investor they should focus on those who want to explore new things and are high on emotional stability in addition to low agreeableness, as they are driven by fears rather than adventure.

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