

Personality Traits, Risk-Taking Behaviors And Self-Regulation In Young Adults

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ABSTRACT

BACKGROUND

Personality traits intricately intertwine with risk-taking behaviors across health, finance, and social domains. The Five Factor Model posits that heightened extraversion and diminished neuroticism correlate with increased propensities for risk-taking. The essential in this dynamic is self-regulation, serving as the crucial mediator between personality traits and risk behaviors.

PARTICIPANTS AND PROCEDURE

A cross-sectional research consisted of sample size 400 young adults (200 men; 200 women) with an age range of 18-25 years ($M_{age} = 21.16$, $SD_{age} = 1.802$) using convenient sampling technique. The instruments used in the study were Mini International Personality Items Pool (IPIP, Donnellan et al., 2006), Domain-Specific Risk-Taking Scale (DOSPERT, Weber & Blais, 2006), and Short Self-Regulation Questionnaire (SSRQ, Carey et al., 2004).

RESULTS

The results of the research indicated that the personality traits (extroversion, openness, conscientiousness) were significantly positive correlation with risk-taking while the personality traits (agreeableness, neuroticism) had not significant effect on risk-taking. The self-regulation had negative significant relationship with risk-taking behaviors and predictor of these behaviors. The extroversion and openness were the predictor of the risk-taking rather than the other personality traits. The self-regulation was the partial mediator between the personality traits and risk-taking behaviors. The t-test results indicated the gender difference in risk-taking behaviors women performed less risk-taking behaviors as compared to the men and the open-ended questions also showed¹ that men smoked and vaped more as compared to women.

CONCLUSION

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The results pointed out the importance of the personality traits and self-regulation in the risk-taking behaviors. The findings of this study hold several significant implications across different domains like mental health, personalized interventions, career paths that align with their risk tolerance and policy making.

KEYWORDS *Personality traits, Risk-taking Behaviors, Self-regulation, Mediating role of Self-regulation, Young adults .*

Introduction

BACKGROUND

Personality traits, which refer to permanent patterns of thoughts, emotions, and actions that characterize how a person habitually interacts with the outside environment, have long been a major area of study in psychology (Costa & McCrae, 2017). From Allport's (1930s) foundational work to contemporary models like the Big Five, researchers have continuously deepened our understanding of how these traits shape human behavior, thoughts, and emotions. The distinctive ways of thinking, feeling, and acting are known as personality traits. The most prominent model commonly used are the Big Five also know Five-Factor models (FFM). Despite the fact that the model's underlying assumptions vary, which leads to slight discrepancies in the content of the domains, these variations are typically of little importance for comprehending the relationships between self-control and broad personality categories. Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism make up the five major attributes that make up this system (Goldberg, 1990; McCrae & John, 1992; Soto & Tackett, 2015). Personality traits are comparatively stable by middle childhood with regard to of rank-order stability, or how consistently the order among individuals from the highest to the lowest holds through time. The accumulative consistency standard explains the way rank-order stability increases with age as long as reaching an equilibrium in late middle life. Although not ideal at any age, the rank-order consistency of the personality traits shows that some people change over the course of their lives (Bleidorn et. al., 2022).

Among these aspects, the link among personality traits and risk-taking behaviors had garnered considerable attention in recent years. Risk-taking behaviors encompass a wide spectrum of actions that involve taking chances with potential negative consequences, spanning from thrill-seeking activities to impulsive decision-making (Zuckerman, 2016). The association with risk-taking behaviors in various domains, such as health, finance, and social relationships. However, the mechanisms underlying this relationship are not well understood. To investigate the personality characteristics of individuals who engage in risk-taking behavior, Joseph & Zhang (2021) took two independent samples and investigated the relationship between specific facets of the Big Five personality traits and risk-taking propensity. The results at the domain level of the Big Five personality traits indicated that the main predictors of risk-taking were extroversion and agreeableness. Combining the findings from both samples (total n = 764), risk-takers were found to be extraverted, receptive to new experiences, unpleasant, emotionally stable, and irresponsible.

The study conducted by Monika Czerwonka (2018) explored the relationship between cultural, cognitive, and personality traits and the inclination toward risk-taking behavior. The findings indicate that participants with higher scores on the cognitive reflection test exhibited lower propensities for risk-taking. The high scores in extraversion and low scores in conscientiousness were predictive of overall risk-taking behavior. Furthermore, the study revealed that men exhibited a significantly greater willingness to take risks compared to women.

However, the manifestation of risk-taking behaviors is not solely determined by personality traits. The aptitude to be able to control thoughts, emotions, and behaviors—self-regulation—is essential for regulating the relationship among personality and risk-taking behaviors (Baumeister et al., 2018). A regulatory system that either encourages or discourages risky behaviors is self-regulation. Strong self-controllers are more inclined to think about the implications of their decisions, balance the dangers involved, and show restraint when it is necessary. They are better equipped to resist impulsive urges and make reasoned decisions, considering both short-term gratification and long-term goals (Duckworth & Seligman, 2017). Conversely, individuals with weaker self-regulation may struggle to control their impulses, leading to impulsive and reckless risk-taking behaviors. They may prioritize immediate rewards or thrill-seeking experiences without adequately considering the potential negative outcomes. This lack of self-regulation can have detrimental consequences on various aspects of life, including relationships, careers, and overall well-being (Hofmann & Kotabe, 2018).

CURRENT STUDY

This research seeks to deepen our understanding of the intricate connections between personality traits, risk-taking behaviors, and self-regulation within the framework of psychological theory. Grounded in the well-established Five-Factor Model (Costa & McCrae, 1992), our study aims to explicate how individual differences in personality, particularly extraversion, neuroticism, openness, agreeableness, and conscientiousness, may influence an individual's propensity for engaging in risk-taking behaviors.

However, the mechanisms underlying this relationship are not well understood. One possible mediator is self-regulation, which may influence how personality traits affect risk-taking behaviors. Therefore, the aim of this study is to examine the role of self-regulation as a mediator between personality traits and risk-taking behaviors among young adults. Young adults are a relevant population to study because they are in a developmental stage characterized by increased autonomy, exploration, and experimentation, which may entail higher levels of risk-taking behaviors. Initially, we anticipated a positive correlation between extraversion, openness to experience, conscientiousness, neuroticism, and risk-taking behaviors, drawing upon foundational research as exemplified by Briley and Tucker-Drob (2014). Additionally, we posited a negative correlation between agreeableness and risk-taking behaviors, aligning with established patterns in personality research.

A subsequent hypothesis proposed an inverse relationship between self-regulation and risk-taking behaviors. This statement aligned with the well-established notion that heightened self-regulation serves as a protective factor against engaging in risky behaviors, as evidenced by findings in studies such as that by Crandall et al. (2017). Furthermore, we hypothesized that both personality traits and self-regulation, encompassing impulse control and goal-setting, would emerge as significant predictors of risk-taking behaviors, echoing the comprehensive study conducted by Bleidorn et al. (2022).

To delve further into the intricate interplay, our hypothesis suggested a mediating role for self-regulation in the connection between personality traits and risk-taking behaviors among young adults. This proposal aligned with research indicating that self-regulation acts as a crucial mechanism mitigating the impact of personality traits on behavioral outcomes, as demonstrated by Duell and Steinberg (2020). Specifically, we expected that higher levels of self-regulation would reduce the positive or negative effects of personality traits on risk-taking behaviors, contributing to a more nuanced understanding of these relationships. This investigation aimed to provide a comprehensive exploration of the intricate connections between personality traits, self-regulation, and risk-taking behaviors, thereby contributing to a nuanced understanding of individual differences and their implications for intervention strategies.

Lastly, we anticipated significant gender differences in the study variables among young adults. Building on existing literature, such as the work by Steinberg et al. (2018), our expectation was rooted in the recognition of gender disparities in the prevalence and expression of personality traits, self-regulation, and risk-taking behaviors. This investigation aimed to provide a comprehensive exploration of the intricate connections between personality traits, self-regulation, and risk-taking behaviors, thereby contributing to a nuanced understanding of individual differences and their implications for intervention strategies.

PARTICIPANTS AND PROCEDURE

PARTICIPANTS

The participants ($N=400$, $M = 1.50$, $SD = .50$) are taken from Government College University, Faisalabad, using convenient sampling technique. The sample size was 400 young adults in which there was 200 men and 200 women who was taken from the university. The participants' age range is 18-25 ($M_{age} = 21.16$, $SD_{age} = 1.802$). The data was collected between the age of 18 to 25 and were studying in the second semester of BS and M.Phil./MS program. The participants below the age 18 and above the age 25 were not selected and participants from privates' sectors universities. The participants of 1st semester were also excluded.

PROCEDURE

After getting the approval of Board of Study of university the research was started. The data was collected from public sector Government College University Faisalabad, Pakistan. Then the formal permission was taken from the university authorities to take the data from participants. After getting formal permission the participants were approached and briefed about the nature of the research, and confidentiality regarding personal information were assured. After taking the informed consent from the participants the demographic forms along with the measurements were administrated. The participants had the right to withdraw from the research at any time.

MEASURES

The demographic sheet included the personal details of the participants like their gender, academic details, marital status, family details excluding their names and along with the questions related to the smoking and vaping.

Personality traits. The Mini International Personality Items Pool Scale (IPIP, Donnellan et al., 2006) contained 20 items. The scale used to measure the personality traits in five domains: extraversion, agreeableness, conscientiousness, neuroticism, and openness each domain contains four items. Reliability of each sub-scale was Openness $\alpha = .65$, Conscientiousness, $\alpha = .65$, Extraversion, $\alpha = .71$, Agreeableness, $\alpha=.70$, and Neuroticism, $\alpha = .62$. The items rated on 5-point Likert scale ranging from 1 (Very inaccurate) to 5 (Very accurate).

Risk-taking behaviors. The Domain-Specific Risk-Taking Scale (DOSPRT, Weber & Blais, 2006) consisted of 30 items, and it evaluates risk-taking tendencies in five distinct domains, with each domain having six corresponding items. These domains included Ethical, Financial, Health and Safety, Recreational, and Social. Participants used a 7-point Likert scale, ranging from 1 (extremely unlikely) to 7 (extremely likely), to rate these items. The internal consistency, as measured by Cronbach's α , for the over-all score in the Social domain was $\alpha = .78$, for the Ethical domain it was $\alpha = .89$, for the Financial domain $\alpha = .77$, for the Health/Safety domain $\alpha = .66$, for the Social domain $\alpha = .74$, and for the Recreational domain $\alpha = .80$.

Self-regulation. Short Self-Regulation Questionnaire (SSRQ, Carey et al., 2004) contained 31-items with reverse scoring items. The reliability of the scale was $\alpha = .91$. SSRQ was based on two factor which access Impulse control $\alpha = .79$ and goal setting $\alpha = .81$. Likert 5-point rating scale was used for rating from Strongly Disagree to Strongly Agree. The measure had one total scale computed by summing the items (after reverse-coding certain items, as needed).

RESULTS

Table 1 presented the descriptive statistic and correlation coefficients of the study variables. The study variables showed significant correlations with each other, with some exceptions. The personality traits of extroversion, openness to experience, and conscientiousness were strongly correlated with the DOSPERT subscales, especially the ethical and recreational domain. The SSRQ subscales of impulse control and goal setting were strongly correlated with the personality traits and the DOSPERT subscales, except for the health & safety domain. The Mini IPIP scale and DOSPERT were positively correlated, while the DOSPERT and SSRQ were negatively correlated. The Mini IPIP scale and SSRQ were positively correlated.

Table 2 revealed Multiple Linear Regression Analysis of Mini International Personality Item Pool (IPIP) and its subscales as predictors of risk-taking behaviors young adults. It indicated that in step 1 Mini IPIP proved to be a significant predictor of risk-taking behaviors ($\beta = .354$, $p < .001$) by accounting for 12.4% of variance. During the step 2, Mini IPIP and Openness were significant predictors ($F(2, 397) = 44.538$, $p < .001$) by accounting for 18.2% of variance in this step. Whereas on step 3, Mini IPIP, Openness and Extroversion came out as significant predictors as $F(3, 396) = 43.538$, $p < .001$ and accounted for 24.8% of variance in risk-taking behaviors. At step 4 of the multiple regression analysis only two factors Openness and Extroversion accounted for 24.8% of variance by attaining $F(2, 397) = 65.324$, $p < .001$. Whereas all the non-significant variables (agreeableness, conscientiousness and neuroticism) were excluded from each succeeding step.

Table 3 revealed Multiple Linear Regression Analysis of short self-regulation questionnaire (SSRQ) and Domain Specific Risk-taking Behavior Scale (DOSPERT) young adults. It indicated that in step 1 goal sitting proved to be a significant predictor of risk-taking behaviors ($\beta = -.578$, $p < .001$) by accounting for 33.4% of variance. During the step 2, goal sitting and impulse control were significant predictors ($F(2, 397) = 105.509$, $p < .001$) by accounting for 34.9% of variance in this step. Whereas on step 3, goal sitting, impulse control and SSRQ came out as significant predictors as $F(3, 396) = 85.033$, $p < .001$ and accounted for 39.2% of variance in risk-taking behaviors. Whereas all the non-significant variables were excluded from each succeeding step.

Table 1 Descriptive Statistic and Correlation coefficient of study variables (N = 400)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Mean	SD
1. Mini IPIP	1	.689**	.214**	.694**	.435**	.489**	.352**	.512**	-.037	.162**	-.013	.383**	.257**	.310**	.118*	55.85	9.99
2. O		1	-.212**	-.250**	-.014	.044	.311**	.152**	.632**	.618**	.195**	-.340**	-.568**	-.441**	-.658**	11.15	3.76
3. C			1	.962**	-.031	.070	.290**	.568**	-.337**	-.114*	-.095	.637**	.554**	.554**	.445**	11.40	3.82
4. E				1	-.019	.082	.298**	.588**	-.367**	-.099*	.676**	.590**	.588**	.479**		11.39	3.83
5. A					1	.088	-.048	-.057	-.003	-.009	-.043	-.038	.056	.071	.015	10.77	4.03
6. N						1	.053	.065	-.009	.057	.001	.046	.032	.028	.023	11.20	3.85
7.DOSPERT							1	.771**	.562**	.652**	.633**	.617**	-.099*	-.089	-.105*	101.26	21.24
8. SD								1	.137**	.265**	.322**	.626**	.140**	.137**	.104*	23.19	6.88
9. ED									1	.699**	.380**	-.135**	-.544**	-.443**	-.578**	18.69	5.90
10. FD										1	.334**	.015	-.396**	-.318**	-.430**	20.18	5.93
11. H\SD											1	.177**	-.220**	-.329**	-.075	18.10	5.48
12. RD												1	.433**	.408**	.401**	21.11	8.54
13. SSRQ													1	.912**	.876**	92.81	13.22
14. IC														1	.611**	47.50	7.84
15. GS															1	42.31	6.68

Note. Mini IPIP= Mini international item pool scale, E = extroversion, O = openness to experience, C = conscientiousness, A = agreeableness, N = neuroticism, DOSPERT= Domain specific risk-taking scale, SD = social domain, ED = ethical domain, FD = financial domain, H\SD = health & safety domain, RD = recreational domain, SSRQ= Short self-regulation questionnaire, IC = impulse control, GS = goal sitting, ** p < 0.01, * p < 0.05, SD= Standard deviation

Table 2. Stepwise Multiple Linear Regression of Mini IPIP and Subscales as Predictors of Domain Specific Risk-taking Behavior Scale

Predictors	B	SE	β	T	R ²	ΔR^2	F	df
Step 1								
Mini IPIP	.748	.100	.352***	7.500	.124	.122	56.256	1, 398
Step 2								
Mini IPIP	.636	.099	.299***	6.432	.182	.178	44.230	2, 397
Openness	1.397	.262	.247***	5.323				
Step 3								
Mini IPIP	-.072	.153	-.034	-.471	.248	.242	43.538	3, 396
Openness	2.404	.305	.426***	7.893				
Extroversion	2.371	.403	.428***	5.887				
Step 4								
Openness	2.325	.254	.412***	9.155	.248	.244	65.324	2, 397
Extroversion	2.223	.249	.401***	8.914				

Note. N= 400, p < .001.

Table 3. Stepwise Multiple Linear Regression of SSRQ and Subscales as Predictors of Domain Specific Risk-taking Behavior Scale (DOSPERT)

Predictors	B	SE	β	T	R ²	ΔR^2	F	df
Step 1								
Goal Sitting	-.511	.036	-.578***	-14.130	.334	.332	199.644	1, 398
Step 2								
Goal Sitting	-.433	.045	-.490***	-9.566	.349	.344	105.509	2, 397
Impulse Control	-.109	.039	-.144**	-2.812				
Step 3								
Goal Sitting	-1.668	.233	-1.887***	-7.161	.392	.387	85.033	3, 396
Impulse Control	-1.353	.234	-1.796***	-5.793				
SSRQ	1.227	.224	2.745***	5.397				

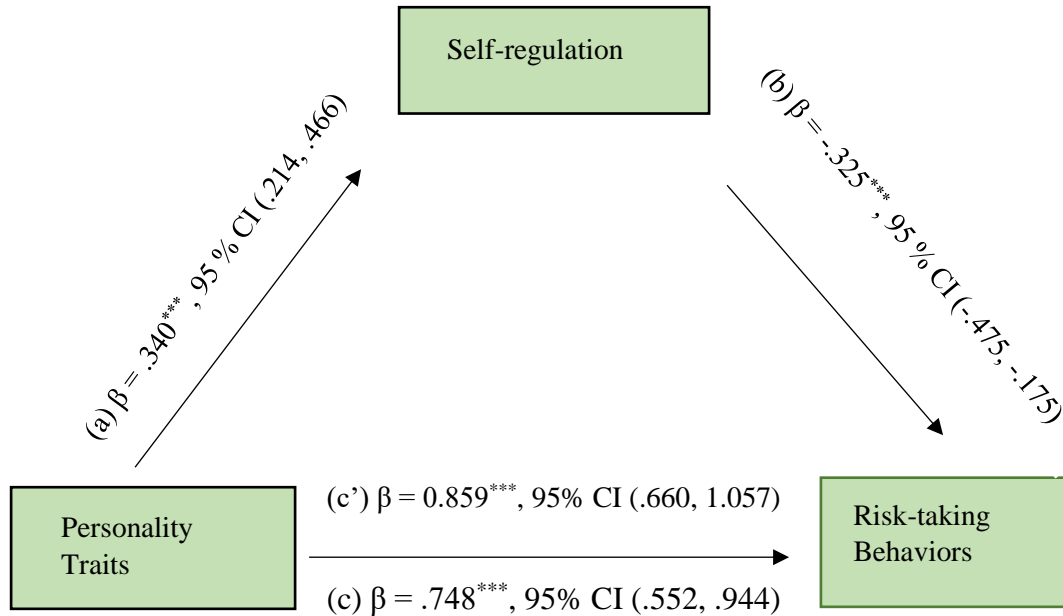
Note N= 400, ** p < .01, *** p < .001

The mediation analysis focused on total, direct, and indirect effects of the predictor variable, personality traits, on two outcome variables, risk-taking behaviors and self-regulation, through the mediator SSRQ. The total effect of personality traits on risk-taking was significant ($\beta = .748$, SE = .099, $p < .0001$ 95% CI [.552, .9443], $t = 7.500$). This indicated that high levels of personality traits were accompanying with increased risk-taking scores. The direct effect of personality traits on risk-taking, while controlling for self-regulation, remained significant ($\beta = .859$, SE = .101, $p < .0001$, 95% CI [.660, 1.057], $t = 8.4997$).

This implied that even after accounting for the mediator self-regulation, personality traits continued to exert a substantial positive impact on risk-taking. The indirect effect of personality traits on risk-taking through self-regulation was negative ($\beta = -0.110$, SE = .031, $p < .0001$, 95% CI [-.1820, -.056], $t = -4.265$), indicating that high levels of personality traits were associated with decreased self-regulation, which in turn were linked to lower risk-taking. The direct effect of personality traits on self-regulation was significant ($\beta = -.325$, SE = .0764, $p < .0001$, 95% CI [-.475, -.175], $t = -4.265$). This suggested that high level of personality traits

was related to lower self-regulation. In summary, the personality traits had a significant direct effect on both risk-taking and self-regulation. Additionally, self-regulation acted as a partial mediator in the relationship between personality traits and risk-taking, partially explaining the effect of personality traits on risk-taking.

Figure 1. Schematic Presentation of mediating role of Self-Regulation between Personality Traits and Risk-Taking Behaviors



Note: N = 400, *** p < .0001, CI = Class Interval

The table 4 revealed the difference of gender on risk-taking behaviors among young adults. The finding indicated that there was a significant gender difference on Domain specific risk-taking scale (DOSPERT) as (t (398) = 4.410, p < .001). The result indicated that men exhibited higher mean on DOSPERT (M = 105.84, SD = 19.68) as compared to the women (M = 96.68, SD = 21.893) and the Cohn’s d = 0.44 value indicated the small effect size. The DOSPERT subscale social domain shown the gender difference as (t (398) = 3.875, p = .021), the men exhibited higher mean (M = 23.98, SD = 6.909) as compared to women (M = 22.40, SD = 6.788) with Cohn’s d = 0.23 indicating small effect size. The ethical domain revealed the significant gender difference as (t (398) = 3.923, p < .001), the men exhibited higher mean (M = 19.16, SD = 5.698) as compared to women (M = 17.56, SD = 5.913) with Cohn’s d = 0.38 indicating small effect size. Similarly, the health & safety domain indicated the significant gender difference as (t (398) = 1.664, p < .001), the men exhibited higher mean (M = 19.16, SD = 5.550) as compared to women (M = 17.04, SD = 5.227) with Cohn’s d = 0.39 indicating small effect size. While the recreational domain also indicated the gender difference as t (398) = 2.314, p = .009 with Cohn’s d = 0.26. These Cohn’s d values indicated the small effect size.

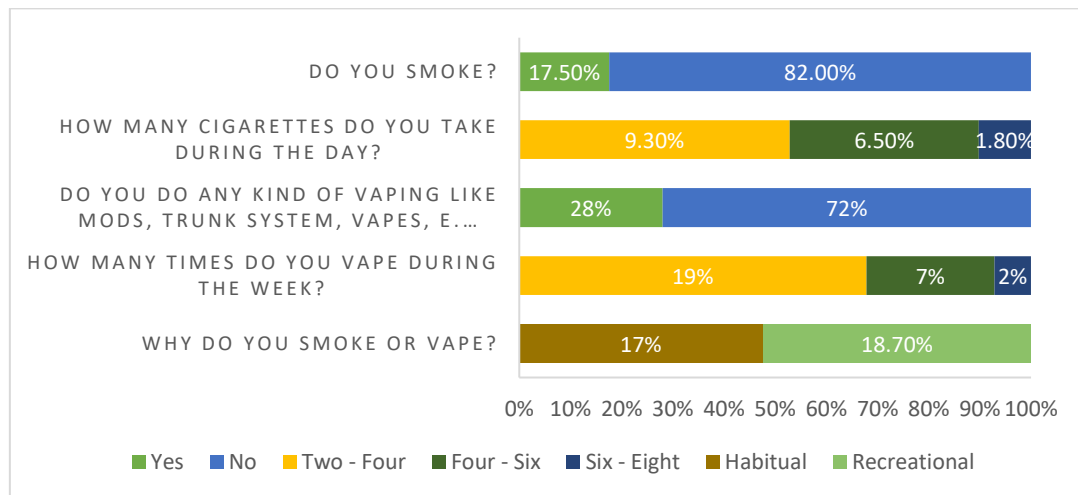
Table 4. Gender difference in risk-taking behaviors among the young adults

Variables	Men(n = 200)		Women(n=200)		t(398)	p	Cohn's d
	M	SD	M	SD			
DOSPERT	105.84	19.583	96.68	21.893	4.410	.001	0.44
Social domain	23.98	6.909	22.40	6.788	3.875	.021	0.23
Ethical domain	19.81	5.698	17.56	5.913	3.923	.001	0.38
Health & safety domain	19.16	5.550	17.04	5.227	1.664	.001	0.39
Recreational domain	22.22	8.133	20.00	8.827	2.314	.009	0.26

Note. N = 400, DOSPERT = Domain Specific Risk-taking Scale, M= Mean, SD= Standard deviation, p= Level of significance

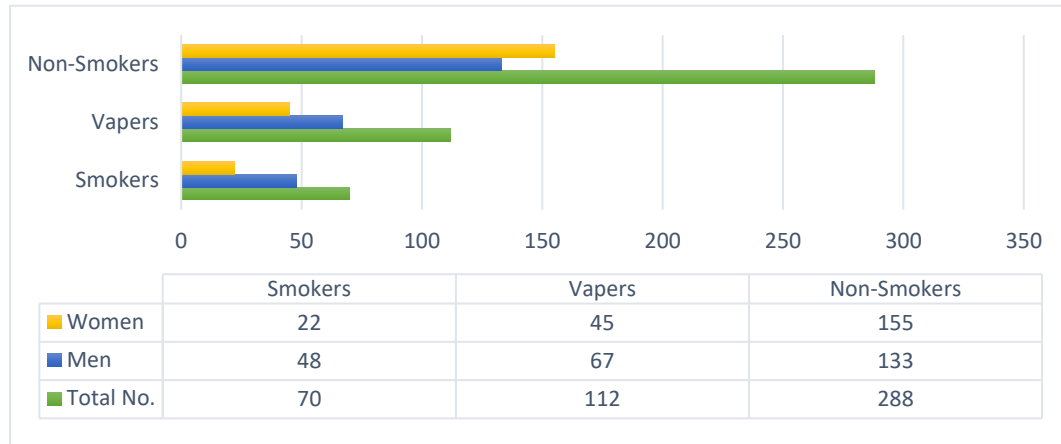
The chart 1 included the smoking and vaping related question the table showed that there was 17.5 % participants who were the smokers, among them 9.3 % took 2 – 4 cigarettes, 6.5 % took 4 – 6 cigarettes and 1.8 % took 6 – 8 cigarettes per day. Whereas, there were 28 % participants who did vaping, among them 19 % vape 2 - 4 time, 7 % vape 4 – 6 time and 2 % vape 6 – 8 time per week. Among the 35.8 % smokers and vapers 17 % who did as habitual and 18.7 % did for recreational purposes. There was 64.2 % participants who did not smoke or vape.

Chart 1. Smoking Related Questions



The chart 2 included the total number of smokers, vapers and non-smoker. As the 400 participants were participated in the study in which the 200 men and 200 were women. Among the 200 men the 48 were the smokers and vapers, only 19 men did vaping only so the total men who do smoking and vaping were 67 out of 200. The 22 women did smoking and vaping whereas 23 women only did vaping, so the total no. of smoker and vapers among the women were 45 out of 200 women.

Chart 2. Gender Difference in Smoking Related Questions



DISCUSSION

The initial result revealed that the positive associations between extraversion, openness to experience, and conscientiousness with risk-taking behaviors, whereas neuroticism exhibited no significant effect (table 1). Further domain-specific associations, with positive correlations observed between the social and recreational domains of risk-taking and extraversion and conscientiousness. Conversely, negative correlations were found between the ethical, financial, health & safety domains and extraversion and conscientiousness. Openness displayed positive correlations with the social, ethical, financial, and health & safety domains, but a negative correlation with the recreational domain of risk-taking behaviors. This positive correlation of these personality traits with the risk-taking behaviors was the consistent with the previous researches as the personality traits extroversion, openness, neuroticism (Kipman et al., 2021; Lauriola & Weller, 2018) and conscientiousness (Gamache et al., 2023; Spielmann et al., 2022). The personality trait extroversion's characteristics, such as a preference for being at the center of attention, outgoingness, optimism, dominance, low social adjustment, and a penchant for excitement and sensation seeking, were closely linked with risk-taking behaviors (Ishfaq et al., 2020; Kipman et al., 2021). So, the individual with high level of this personality trait have the more probabilities to engage himself/herself in more risk-taking behaviors.

Likewise, the openness personality trait characterized by a preference for novelty and variety, a cognitive style of curiosity and ambiguity, and an inclination towards fantasy and imagination. So, these characteristics played a pivotal role in predicting risk-taking behaviors of an individual (De-Juan-Ripoll et al., 2021; Lauriola & Weller, 2018). The other personality trait that was conscientiousness, emphasizing a desire for achievement within defined rules and regulations, avoidance of uncertainty and impulsiveness, self-discipline, and consistent evaluation of outcomes. These facets demonstrated the conscientiousness association with risk-taking behaviors (Lauriola & Weller, 2018; Salameh et al., 2022). While the neuroticism personality trait that involved emotional instability, anxiety, self-doubt, depression, and other negative feelings. Some aspects of neuroticism, such as anxiety and worry, self-consciousness, diligent and organized may reduce risk-taking behavior, while others, such as anger and depression, might increase it. Therefore, neuroticism was not a unidimensional trait that predicts risk-taking in a consistent way (Bressert & Grohol, 2018; Lauriola & Weller, 2018).

Contrary to the second hypothesis, which anticipated a negative correlation between agreeableness and risk-taking behaviors among young adults, but the findings did not reveal any significant effect of agreeableness on risk-taking behaviors. These outcomes also aligned with the researches which stated that the personality traits agreeableness and neuroticism had no effect on the risk-taking behaviors (Kipman et al., 2021; Zhang et al., 2020). As the

agreeableness personality trait involved being cooperative, compassionate, friendly, and trusting. Individual who score high in agreeableness tend to avoid conflict, care for others, and get along well with others. Some aspects of agreeableness, such as being unassertive, compliant, and altruistic, may reduce risk-taking behavior, while others, such as being trusting and optimistic, may increase it (Salameh et al., 2022). So, the personality trait like neuroticism the agreeableness was not a simple predictor for the risk-taking.

The farther analysis revealed that the self-regulation exhibited a significant negative correlation with risk-taking. These findings aligned with previous research that underscores the connection between low self-regulation and heightened risk-taking tendencies, as well as the association between high self-regulation and more cautious behavior (Crandall et al., 2016; Lui et al., 2019; Liang et al., 2022). The investigation was substantiated as both personality traits and self-regulation demonstrated predictive power concerning risk-taking behaviors. The findings indicated that the total score of the Mini IPIP, as well as the personality traits of extraversion and openness, played a pivotal role in predicting overall risk-taking tendencies (table 2). The personality profiles of risk-takers found that individuals characterized by high levels of extraversion and openness exhibited a proclivity for engaging in risk-taking behaviors, surpassing other personality traits (Joseph & Zhang, 2021). Moreover, the self-regulation, impulse control, and goal setting emerged as predictors of risk-taking behaviors (table 3). As the predictive capacity of self-regulation and its components (impulse control and goal setting) in shaping risk-taking behaviors and the relevance of reward-seeking tendencies in understanding the dynamics of risk-taking behaviors, emphasizing the multifaceted nature of the interplay between self-regulation and risk propensity (Duell et al., 2016).

Moving toward the main focus of the study, self-regulation proved as mediator in the association between personality traits and risk-taking behaviors among young adults. This hypothesis was confirmed, as the study's findings revealed that self-regulation acted as a partial mediator in the relationship between personality traits and risk-taking behaviors (see Figure). Notably, higher levels of self-regulation were found to partially mitigate the adverse effects of personality traits on risk-taking behaviors. These findings aligned with a body of previous research that highlights the mediating role of self-control in risk-taking behaviors (Jia et al., 2021; Liang et al., 2022; Moilanen, 2014; Watson-Brown et al., 2019). Furthermore, our results resonated with the pervious (Crandall et al., 2016), which emphasized that self-regulation operates as a mediator rather than a moderator in the context of risk-taking behavior.

The final hypothesis posited that the existence of significant gender differences in the study variables among young adults. This hypothesis was substantiated, as findings indicated that men exhibited a greater inclination toward risk-taking in comparison to women (table 5). As the men engaged themselves in more risk-taking behavior either it's social, ethical, health & safety, or recreational risk-taking as compared to the women (Hoogstraaten et al., 2021; Rolison et al., 2013). Similarly, the smoking related questions analysis also show that the men were likely to do the smoking and vaping rather than the women (chart 1 & 2).

By unraveling the interplay between personality traits and self-regulation, it charts a course for tailored interventions. In the domain of mental health, the findings advocate for precision in addressing risky behaviors through personalized strategies. Career counselors can now fine-tune their guidance, aligning students with professions that resonate with their specific risk tolerance. In the policy making, targeted prevention programs can emerge, enhancing in on personality traits linked to risk. Organizations stand to gain by leveraging this knowledge to compose teams with complementary traits, cultivating leaders adept at self-regulation. The study not only paints a vivid picture of the present but also beckons future research to delve

into longitudinal aspects and intervention efficacy. In essence, it unfurls a roadmap for navigating the nuanced terrain of risk in diverse facets of life.

LIMITATIONS

The study's based on self-report measures introduces potential response biases and cultural incongruities, necessitating the adoption of culturally relevant scales in future research. Longitudinal studies are imperative for a better understanding of condition development, particularly since the focus on young adults may limit generalizability across age groups, emphasizing the need for comparative studies. A comprehensive approach to risk-taking behavior must extend beyond individual traits, incorporating environmental and cultural factors. The study's omission of exploration into cultural and societal impacts on risk-taking behavior underscores the importance of future research incorporating diverse samples in terms of age, culture, and socioeconomic backgrounds to enhance generalizability.

CONCLUSION

This study explored how personality traits, risk-taking behaviors, and self-regulation are connected among young adults. The research showed that personality traits like extraversion, openness, and conscientiousness are linked to how much risk people take. It also found that having good self-regulation is important those with lower self-regulation tended to take more risks, while those with higher self-regulation were more careful. The study discovered that personality traits and self-regulation can predict risk-taking in different areas like social, ethical, health & safety, financial, and recreational. Specifically, extraversion and openness were found to make people more likely to take risks. Additionally, the research found that self-regulation acts as a partial mediator, lessening the impact of personality traits on risk-taking. The study also uncovered that men tend to take more risks than women, and factors like relationship status and birth order are connected to risk-taking, showing how individual characteristics can influence risk behavior.

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