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Health Risk Behaviour and Personality Traits Among Male and Female Adolescents

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ABSTRACT

This study investigates the link between health risk behaviors and personality traits in male and female adolescents. This research examines how personality traits, extraversion, neuroticism, conscientiousness, and openness interact with risky behaviors. It also examines gender differences in risk behaviors and their association with distinct personality profiles. This research employed quantitative measures and included 100 adolescents aged 10 to 19 from diverse backgrounds. Participants completed standardized assessments, specifically the Big Five Inventory-2 (BFI-2), to evaluate their personality traits and a risk-taking scale to assess health-related risk behaviors. Findings suggest that male adolescents exhibited higher risk-taking behaviours than females, and there were no significant gender differences observed in personality traits. Additionally, personality traits like high neuroticism were linked to higher chances of engaging in risk behaviors for both genders, but with some variation in intensity. This study emphasizes the importance of considering personality traits and gender when addressing adolescent risk-taking behaviors.

Keywords: adolescents, health risk behaviour, personality traits, gender difference

INTRODUCTION

Adolescence is a vital stage marked by significant developmental changes and an increased tendency to engage in risky health behaviors. Personality traits such as extraversion, neuroticism, conscientiousness, openness to experience, and agreeableness can influence these behaviors. However, the interaction between these traits and health risk behaviors may differ between genders, emphasizing the need for a more detailed examination to develop targeted interventions.

Personality traits

Personality encompasses unique behavior patterns, including thoughts and emotions that shape how individuals adapt to life's situations (Mischel, 1976). It is a dynamic organization of psychophysical systems defining one's adjustment to the environment (Allport, 1937). This includes stable traits, motivations, attitudes, and beliefs, forming an integrated self-structure (Harre et al., 1983). Personality reveals commonalities and differences in psychological behaviors, thoughts, feelings, and actions across time, influenced by various social and biological pressures (Maddi, 1976). Human personality relies on interactions with others, creating a system of responses behaviors. A personality trait is a "mode of behavior." It refers to a specific quality of behavior, such as cheerfulness or self-reliance that characterizes an individual across a wide range of activities and remains relatively consistent over time. A cheerful and

self-reliant person, or gloomy and hesitant, does not imply that these traits define them solely. Rather, they exhibit more complexity than just being the sum of their cheerfulness or gloominess. Total personality is a combination of traits, emphasizing that personality is more than just a collection of qualities. The Big Five personality traits are a psychological framework that outlines five essential dimensions of personality. These five factors are Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism (Costa &McCrae, 1992). These five factors are used to define or judge a person's personality. Research on identifying personality dimensions began in the 1960s but seemed to wane until the 1980s. During this time, many researchers concluded that these dimensions were fundamental to personality (McCrae & Costa, 1986; McCrae & John, 1992). The descriptions of the Big Five traits highlight higher scores: extraversion is characterized by being energetic, talkative, and sociable; agreeableness is defined as being friendly, trusting, generous, and tolerant. Conscientiousness is considered as being cautious, orderly, dependable, graceful, and responsible; neuroticism is characterized as being terse, anxious, and emotionally unstable; openness is supposed to be imaginative, and focused on wisdom, art, knowledge, and objectivity (Friedman & Schustack, 2003; Goldberg, 1990; McCrae & John, 1992).

Health risk behaviour

The concept of health risk behaviour has been used to describe behaviours with potentially negative effects on health, such as substance use, early onset of sexual activity or unsafe sexual practices, risky driving, violent or suicidal behaviours, antisocial behaviours, and disordered eating. Many behaviors associated with illness, injury, mortality, or other negative outcomes begin in adolescence. One of the most prevalent health-risk behaviors is violence, which is the primary cause of death among children and young adults. Violence can manifest in different forms such as child abuse or neglect, youth violence, intimate partner violence, sexual violence, elder abuse, self-harm, and collective violence. Adolescents and young adults have a higher tendency to engage in violent behaviors. According to the global school-based student health survey, 42% of adolescent boys and 37% of adolescent girls were exposed to bullying. Sexual violence also affects a significant proportion of youth: 1 in 8 young people report sexual abuse. Experiencing violence during adolescence can lead to various negative consequences such as increased risk of injury, HIV and other sexually transmitted infections, mental health issues, poor academic performance and dropping out, early pregnancy, reproductive health complications, and communicable as well as non-communicable diseases. Approximately 80% of lifetime smoking and alcohol consumption starts during this period in both high- and middle-income countries. Additionally, initiation of illicit drug use is uncommon after the age of 25. In most countries, the age at which sexual risk behaviors begin is primarily during the teenage years. Adolescent aggression and delinquency tend to remain moderately stable into adulthood. These risky behaviors are associated with various negative outcomes in later life, which has made the prevention of adolescent health risk behaviors a focus of international policy. Health-risk behaviors (HRBs) have emerged as the leading cause of mortality among adolescents, particularly in low- and middle-income countries (Weiss & Ferrand, 2019). In 2019, over 1.5 million deaths were reported among individuals aged 10 to 24, most of which were due to preventable or treatable causes, including HRBs (World Health Organization, 2021). In India, previous studies have indicated that approximately 10 to 30 percent of young people engage in health-impacting behaviors such as poor diets, sedentary lifestyles, violence, unsafe sexual practices, and risky behaviors on the roads (Sunitha & Gururaj, 2014). To prevent adverse health outcomes among adolescents, it is crucial to understand the underlying dynamics of this age group and the causal mechanisms behind health-promoting behaviors and HRBs.

Literature review

A study on health risk behaviour of mid-adolescent school students. The sample consists of 788 students from west Bengal, India. The study revealed that dietary high-risk behaviour occurred more in urban students than rural students. Regarding violence, occurrence of high-risk behavior was also higher among urban students. The number of mentally disturbed girls is more than boys (Nivedita Das, Dipankar Chattopadhyay, 2015).

A study on risk-taking behaviour involved 240 secondary and higher secondary students (120 from urban and 120 from rural areas, with 60 students per group: 30 male and 30 female). Results indicate that gender significantly affects RTB; male students average RTB, while females are below average. There was no significant difference in RTB between urban and rural areas. School type affected RTB, with secondary students averaging RTB and higher secondary students below average. Gender, area, and type of school had no significant interactive effect on RTB (Prof. Dr. Suresh M. Makvana et al., 2020).

Parwindar Singh (2022) conducted a study to explore the moderating effect of conscientiousness in the relationship between neuroticism and HRBs among 648 adolescents through a multi-stage stratified random sampling. The finding indicates that a higher level of conscientiousness may reduce neuroticism's negative impact on HRBs.

Adam A. Terres (2009) examined personality characteristics as predictors of risky behaviour among 272 undergraduate students. The result was that agreeableness is correlated with most delinquent behaviour. Researchers also found gender differences in agreeableness, extraversion, emotional stability, and various health-risk behaviours.

A.Caspi, D. beg, N. Dickson, H. Harrington, J. Langley, T. Moffitt, Phil A. Silva (1997), research personality differences predict health risk behaviour in young adulthood evidence from a longitudinal study. Results showed that a similar constellation of adolescent personality traits, with developmental origins in childhood, is linked to different health risk behaviour at 21. Associations between the same personality traits and different behaviour were not an artefact of the same people engaging in different health risk behaviour. Rather these associations implicated the same personality type in different but related behaviour.

Statement of the problem: Health risk behaviour and personality traits among male and female adolescents

Objectives:

- To assess the relationship between personality traits and health risk behaviour among male and female adolescents.
- To examine the differences in personality traits between male and female adolescents, and how these traits relate to health risk behaviors.

Hypotheses:

H1: There would be a significant relationship between personality traits and health risk behaviour.

H2: There would be a significant difference in the prevalence of health risk behaviour between males and females.

H3: There would be no significant difference in personality traits among males and females.

METHOD

Sample: Using purposive sampling, the sample consisted of 100 adolescents (50 male, 50 female) aged 10-19 from the Varanasi district, including both urban and rural areas.

Measures

The risk Taking Scale (R.T.S, 2017) by Subhas Sarkar (2017) consists of 15 items across 6 situations. Reliability was determined using the Test-Retest method with a randomly selected sample of 100 males and females aged 14 to 30. Validity was established through expert opinion, achieving 100% agreement on the selected situations. Item analysis informed further evaluations, leading to the final draft of the scale, which exhibits internal consistency and can be accepted as a valid tool.

Big Five Inventory-2 (BFI-2) by Christopher J. Soto, Oliver P. John (2017) Hindi version, This scale developed to measure the prototypical features of each Big Five domain and 15 facets and consists of 60-item questionnaire based on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Alpha reliabilities are .86 for Extraversion, .82 for Agreeableness, .83 for Conscientiousness, .85 for Negative Emotionality, and .84 for Openness. The scale reports good reliability (0.83) and validity (.75).

Data procedures: The participants received an Informed Consent Form that explained the objectives of the study, the measures taken to protect their data privacy, and the voluntary nature of their participation. They were instructed to fill out the questionnaires anonymously, which guaranteed that their answers would represent their individual experiences without any outside pressure.

Statistical analysis: Statistical analyses, including the mean, SD, t-test, one way ANOVA and correlation, were employed to examine the associations between personality traits and health risk behaviors, as well as to identify significant gender differences. The Statistical Package for the Social Sciences (SPSS) was utilized for data processing and quantitative analysis.

RESULTS

Table no. 1, Correlation between personality traits and health risk behaviour (n=100)

Variables	Neuroticism	Extraversion	Agreeableness	Openness	Conscientiousness	HRB
Neuroticism	1					
Extraversion	-.158	1				
Agreeableness	.011	.034	1			
Openness	-.102	-.084	.268**	1		
Conscientiousness	-.813**	.120	.005	.132	1	
Health-risk behaviour	.608**	-.069	-.140	-.069	-.521**	1

HRB. Health risk behaviour

**. Correlation is significant at the 0.01 level (2-tailed)

Table no.2, Comparison between male adolescents and female adolescents on personality traits and health risk behaviour (n=100)

	Male		Female		. *Sig.*
Variables	*Mean*	*SD*	*Mean*	*SD*	
Neuroticism	36.70	12.13	37.20	11.99	.836

Extraversion	39.18	4.94	40.50	3.54	.128
Openness	39.02	5.00	37.74	4.78	.194
Agreeableness	36.16	4.56	35.88	3.50	.732
Conscientiousness	35.88	12.63	39.74	13.19	.671
Health-risk behviour	48.86	14.25	39.46	13.10	.001

Note. N=100.

A Pearson correlation analysis investigated the relationship between personality traits and health risk behaviours. Table 1 indicates that conscientiousness is negatively correlated with health risk behaviors, and this correlation is significant at the 0.01 level ($r = -.521^{**}$; $p < 0.01$). Neuroticism positively and significantly correlates with risk-taking behaviour at the 0.01 level ($r=.608^{**}$; $p<0.01$). The study findings suggest that adolescents high on neuroticism tend to indulge in health risk behaviour and Conscientiousness seems to be the most protective factor against HRB. Table 2 shows a clear difference in health-risk behavior between males and females. Males engage in more health-risk behaviors (48.86) than females (39.46). While gender doesn't seem to influence Neuroticism, Openness, Extraversion, Agreeableness, or Conscientiousness significantly.

Discussion:

The current study identifies notable gender disparities in risk-taking behaviors among adolescents. Male adolescents often reported engaging more frequently in various risky activities. This finding is consistent with earlier research suggesting that boys are generally more predisposed to risk-taking, perhaps due to biological influences and socialization that promotes risk-taking as a means to assert masculinity (Steinberg, 2008). The incidence of various health risk behaviour rises with age for both males and females, although there are gender specific influences on these behaviour. For boys, the use of tobacco and alcohol among peers is significantly linked to engaging in multiple risk behaviour, whereas for girls, peer influences related to alcohol consumption and sexual activity are more significant (Sychareun et al., 2011). Moreover, exposure to violence correlates with HIV risk behaviour in both sexes, but boys who have experienced family violence are more likely than girls to report having multiple partners and using drugs during sexual activities (Voisin, 2005). In contrast, female adolescents in this research exhibited lower levels of participation in these risky behaviours. This difference may be attributed to social pressure faced by teenage girls, in addition to societal expectations and mental health issues.

The study also found important links between specific personality traits and risk-taking behavior. Adolescents exhibiting higher neuroticism tended to participate more in risky activities. This indicates that those high in neuroticism may turn to maladaptive coping mechanisms to handle emotional turmoil, resulting in risk-taking actions to mitigate negative feelings (Muris et al., 2017). In contrast, there was a negative correlation between conscientiousness and risk-taking behavior, suggesting that adolescents with higher conscientiousness scores were less inclined to partake in risky endeavors.

Conclusion:

This study offers valuable insights into the relationship between personality traits and health risk behavior among male and female adolescents. It examines the impact of different personality traits, such as neuroticism, on engagement in risky behaviors, emphasizing the importance of considering both personality and gender in developing effective prevention strategies programs. While the findings enhance

our understanding of adolescent risk-taking, further research is needed to explore causal mechanisms and refine intervention strategies suited to specific personality traits.

Implications:

This study highlights the role of personality traits and gender in adolescent risk-taking. Tailoring interventions to these differences can enhance decision-making safety. More research is needed on how personality interacts with social influences.

Interventions should address gender differences and personality traits. For male adolescents, focus on peer influence, social approval, healthier coping strategies, and self-regulation. Activities like team sports or adventure therapies in safe settings may be effective. For female adolescents, interventions should target emotional regulation and mental health, especially for those high in neuroticism. Programs that improve self-esteem, body image, and mental health awareness can encourage help-seeking for emotional issues instead of risky behaviors.

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