

IMPACT OF ADAPTIVE PSYCHOPATHIC TRAITS AND BOLDNESS ON RISK TAKING IN UNIVERSITY STUDENTS

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ABSTRACT

This study examined the relationships among adaptive psychopathic traits, boldness, and risk-taking behavior in young adults of Pakistani universities. Psychopathy, traditionally studied in forensic settings, is increasingly recognized as a dimensional trait present in non-clinical populations, with boldness identified as its most adaptive component. Grounded in the Triarchic Model of psychopathy (Patrick et al., 2009), the study tested whether boldness and risk-taking relate to adaptive psychopathic traits, and whether these variables predict risk-taking behavior among university students. A cross-sectional survey design was employed with a sample of 200 university students (61.5% female; age range 18–25 years, 48.5%, male; age range 18-21 years) recruited from multiple academic institutions in Pakistan. Three self-report instruments were used: the Triarchic Psychopathy Measure Boldness Subscale (TriPM), the General Risk Propensity Scale (GRiPS), and the Adaptive and Psychopathic Traits Questionnaire (ADPTQ). Pearson correlation and linear regression analyses were used to test the hypotheses. Regression analysis confirmed that adaptive psychopathic traits significantly predicted risk-taking ($\beta = .285, p < .001$), whereas boldness did not ($\beta = -.128, p = .060$), with the overall model explaining 10% of the variance in risk-taking ($R^2 = .100$). The null findings for boldness are discussed in terms of cultural factors, measurement limitations, and sample characteristics. This study extends research on adaptive psychopathy to a non-Western population and highlights the need for culturally validated psychopathy measures within Pakistani contexts.

I. INTRODUCTION

Personality disorders are prevalent in people around the world and are linked to personal distress and social difficulties (American Psychiatric Association, 2013). Psychopathy has traditionally been associated with antisocial behavior, emotional deficits, manipulation, impulsivity, and lack of empathy (Cooke & Michie, 2001; Hare, 2003). However, contemporary research recognizes psychopathic characteristics as dimensional traits that can occur in non-clinical populations (Lilienfeld et al., 2012; Patrick et al., 2009). The Triarchic Model conceptualizes psychopathy through boldness, meanness, and disinhibition (Patrick et al., 2009). Boldness includes social confidence, emotional resilience, fearlessness, and the ability to remain calm under stress. Such characteristics

have been associated with leadership, social influence, and positive functioning in some contexts (Lilienfeld et al., 2012; Smith et al., 2013). This perspective led to the idea of successful or adaptive psychopathy, in which some psychopathic characteristics may support effective functioning while other traits remain maladaptive (Mullins-Sweatt et al., 2010). Risk-taking refers to behavior involving uncertainty and possible gains or losses and may occur in financial, physical, social, recreational, and moral domains (Figner & Weber, 2011; Boyer, 2006). Young adulthood is particularly relevant because it involves increasing autonomy, identity development, and elevated risk-taking tendencies (Arnett, 2000). Risk-taking is not necessarily harmful; functional risk-taking may contribute to learning, development, and success, whereas impulsive risk-taking may produce negative outcomes (Duell & Steinberg, 2019; Romer et al., 2017).

Previous research has reported relationships among boldness, risk taking, and adaptive psychopathic traits. Drislane et al. (2021) found that boldness and careful risk-taking were positively related, while risk-taking was also associated with adaptive traits. A meta-analytic review by Patrick et al. (2024) further reported moderate-to-strong relationships among these constructs. However, much of this evidence comes from Western populations. Cultural norms may influence how confidence, assertiveness, and risk-taking are expressed, making research in Pakistan important. The rationale for conducting the present study is rooted in the limited evidence concerning adaptive psychopathic traits, boldness, and risk-taking within the Pakistani cultural context. Although previous studies have established positive relationships among these constructs, most research has been conducted in Western populations. There has been limited empirical work examining whether the same pattern is observed among Pakistani university students. This is important because psychopathic traits and risk-taking behaviors may be shaped by cultural expectations, family values, social norms, and opportunities available to young adults. The present study therefore examines these relationships among Pakistani university students and contributes culturally relevant evidence to the growing literature on adaptive psychopathy. It also helps distinguish adaptive characteristics such as confidence, emotional resilience, and calculated risk-taking from maladaptive or impulsive behavior.

Objectives

1. To examine the relationship between boldness and adaptive psychopathic traits in young adults.
2. To investigate the relationship between risk-taking propensity and adaptive psychopathic traits in young adults.
3. To examine the relationship between boldness and risk-taking behavior in young adults.
4. To assess whether adaptive psychopathic traits and boldness predict risk-taking behavior in young adults.
5. To contribute culturally relevant data on subclinical psychopathic traits in a Pakistani university student sample.

Hypotheses

1. There is a significant positive relationship between boldness and adaptive psychopathic traits in young adults.
2. There is a significant positive relationship between risk-taking and adaptive psychopathic traits in young adults.
3. There is a significant positive relationship between boldness and risk-taking in young adults.
4. Adaptive psychopathic traits and boldness significantly predict risk-taking behavior in young adults.

II. METHOD

Participants

This study used a cross-sectional survey research design to examine the relationship between adaptive psychopathic traits, boldness, and risk-taking among young adults in Pakistan. Data was collected from students in various educational institutions using self-report questionnaires. The design was suitable for examining relationships among variables without manipulating the environment. The sample comprised of N=200 university students aged 18–25 years. Participants were recruited from multiple academic institutions in Pakistan using purposive and convenience sampling. The sample included male and female participants from different educational levels and academic disciplines. Participants were eligible for inclusion in the study if they were between 18 and 25 years of age, were currently enrolled at an academic institution, and had provided informed

consent to take part in the research. Individuals were excluded from the study if they fell outside the specified age range of 18 to 25 years, were not enrolled at an academic institution, or did not provide informed consent for participation.

Table I: Mean, Standard Deviation, Range, and Cronbach's Alpha Reliability of Risk Taking, Adaptive Personality and Boldness Scale (N = 200)

Variables	M	SD	Range	α
General Risk Propensity Scale	27.07	6.85	31	.87
Durand Adaptive Psychopathic Traits Questionnaire	130.28	16.77	104	.43
Boldness subscale of the Triarchic Psychopathy Measure	43.18	5.38	37	.73

Note. M = Mean; SD = Standard Deviation; α = Cronbach's alpha reliability.

The mean score of Risk-Taking was 27.07 (SD = 6.85), Adaptive Personality was 130.28 (SD = 16.77), and Boldness was 43.18 (SD = 5.38). Reliability coefficients were .879 for Risk-Taking, .438 for Adaptive Personality, and .738 for Boldness, indicating high, low, and acceptable internal consistency, respectively.

Measures

The demographic information sheet was used to collect academic and personal information from participants. It included age, gender, education, and academic discipline. The categories included age groups of 18–21 and 22–25 years; male and female gender; Bachelor's, Master's, and MPhil education; and from different departments as Management Sciences, Social Sciences, Natural Sciences, Engineering and Computing, and Languages. **[I]** The Boldness subscale of the Triarchic Psychopathy Measure (TriPM; Patrick, 2010) was used to assess social confidence, emotional resilience, and fearlessness. Boldness refers to social confidence, emotional resilience, low fear reactivity, and the ability to remain calm and composed under stressful or unfamiliar situations. In the present study, higher scores indicated greater levels of boldness. The reliability reported for the Boldness scale in the present sample was $\alpha = .738$. **[II]** Risk-taking tendency was assessed using the General Risk Propensity Scale (GRiPS; Zhang et al., 2012). The scale measures an individual's general willingness to take risks across different life situations. Risk-taking refers to the tendency or willingness to engage in behaviors involving uncertainty, potential loss, or danger in pursuit of a desired outcome. The reliability reported in the present sample was $\alpha = .879$. **[III]** Adaptive psychopathic traits were evaluated using the Durand Adaptive Psychopathic Traits Questionnaire (DAPTQ), which assesses positive characteristics such as charm, resilience, goal orientation, and calculated risk-taking. Adaptive psychopathic traits refer to the non-pathological and functional expression of psychopathic characteristics, including charm, stress immunity, goal-directedness, and the ability to remain composed and effective in challenging or high-pressure situations. Higher scores indicate greater levels of adaptive psychopathic traits. The reliability reported in the present sample was $\alpha = .438$.

Procedure

Before starting data collection, permission was taken from the Departmental Review Committee of the Department of Psychology. The department also provided a formal authority letter, which was shown to different educational institutions to obtain approval before data collection. Participants were approached individually or in small groups in their institutions. The researcher briefly explained the purpose of the study and informed participants that participation was voluntary, that they could withdraw at any time without any problem, and that their responses would remain anonymous and confidential. Informed consent was obtained from each participant. Each participant received a questionnaire booklet containing the demographic form, TriPM Boldness subscale, GRiPS, and ADPTQ. Participants self-administered the questionnaires in the presence of the researcher, who was available to answer questions. The completed questionnaires were collected after completion. The entire process took approximately 15–20 minutes. Ethical considerations were maintained throughout the study. Permission was obtained from the Departmental Review Committee and written approval was sought from the educational institutions before data collection. Participation was entirely voluntary, informed consent was obtained from every participant, and participants were informed of their right to withdraw at any time without consequences. Responses were kept anonymous and confidential and were used only for research purposes.

III. RESULTS

Descriptive statistics, demographic characteristics, correlation analysis, and linear regression were used to examine the study variables and test the hypotheses.

Table II: Frequency and Percentage of Participants (N = 200)

Variables	n	%
Gender		
Male	77	38.5
Female	123	61.5
Education		
Bachelors	193	96.5
Masters	4	2.0
MPhil	3	1.5
Discipline		
Management Sciences	20	10.0
Social Sciences	52	26.0
Natural Sciences	8	4.0
Engineering and Computing	109	54.5
Languages	11	5.5
Age		
18–21	136	68.0
22–25	64	32.0

Note. % = percentage.

The demographic characteristics of the participants are shown in Table 2. The majority (68%) were aged 18–21 years, while 32% were aged 22–25 years. Women represented 61.5% of the sample and men 38.5%. Most participants were enrolled in Bachelor's programs (96.5%), followed by Master's (2.0%) and MPhil (1.5%). In terms of academic discipline, 54.5% were from Engineering and Computing, 26.0% from Social Sciences, 10.0% from Management Sciences, 5.5% from Languages, and 4.0% from Natural Sciences.

Table III: Correlation Between Boldness, Adaptive Personality and Risk Taking (N = 200)

Variables	1	2	3
1. Adaptive Psychopathic Traits	—	-.036	.289**
2. Boldness		—	-.139
3. Risk Taking			—

Note. ** $p < .01$.

Risk-taking was significantly positively correlated with adaptive psychopathic traits ($r = .289$, $p < .01$). Boldness was not significantly correlated with adaptive psychopathic traits ($r = -.036$, $p > .05$) or risk-taking ($r = -.139$, $p > .05$).

Table IV: Linear Regression Analysis Predicting Risk-Taking from Adaptive Psychopathic Traits and Boldness (N = 200)

Predictors	B	p
Adaptive Psychopathic Traits	.285	< .001
Boldness	-.128	.060
Model	$R^2 = .100$	$p < .001$

The linear regression model was statistically significant overall ($p < .001$) and explained 10% of the variance in risk-taking ($R^2 = .100$). Adaptive psychopathic traits significantly predicted risk-taking ($\beta = .285$, $p < .001$), whereas boldness did not reach statistical significance ($\beta = -.128$, $p = .060$).

IV. DISCUSSION

The present study examined whether adaptive psychopathic traits and boldness are related to risk-taking among Pakistani university students. Psychopathy was long studied mainly in forensic samples and linked to antisocial behavior (Cooke & Michie, 2001; Hare, 2003), but the Triarchic Model (Patrick et al., 2009) and later work on non-clinical samples have shown that psychopathic traits vary dimensionally in the general population and that some of them may support effective functioning (Lilienfeld et al., 2012; Mullins-Sweatt et al., 2010). Against this background, four hypotheses were tested in a sample of 200 students aged 18–25 years. The findings were mixed. Adaptive psychopathic traits were positively correlated with risk-taking ($r = .289$, $p < .01$) and significantly predicted it ($\beta = .285$, $p < .001$), whereas boldness was unrelated to adaptive psychopathic traits ($r = -.036$) and to risk-taking ($r = -.139$), and did not significantly predict risk-taking ($\beta = -.128$, $p = .060$). The regression model was significant and explained 10% of the variance in risk-taking ($R^2 = .100$). Hypotheses 2 and 4 were therefore supported in part, while Hypotheses 1 and 3 were not supported.

The first hypothesis proposed a positive relationship between boldness and adaptive psychopathic traits, and the near-zero correlation observed here did not support it. This result departs from a fairly consistent body of research. Patrick et al. (2009) described boldness as the dimension reflecting social efficacy, emotional resilience, and low fear reactivity, and Lilienfeld et al. (2012) found that boldness-related traits were associated with leadership and social influence in university samples without a matching rise in antisocial behavior. Patrick et al. (2013) showed that boldness is distinguishable from meanness and disinhibition and relates to socially valued outcomes, and Smith et al. (2013) found that boldness-related traits appear in both psychopathic and heroic samples, which supports the view that the same dispositional core can be directed toward positive ends. Sellbom et al. (2015) added that boldness corresponds to low neuroticism and high extraversion in the Five-Factor Model, and Drislane et al. (2021) and Patrick et al. (2024) reported moderate-to-strong associations between boldness and adaptive traits in largely Western samples. Compared with this evidence, the association found here is clearly smaller than expected. Two explanations deserve attention. The adaptive-traits questionnaire had low internal consistency ($\alpha = .438$), so measurement error alone may have suppressed its correlations with other variables. At the same time, the boldness subscale was acceptably reliable ($\alpha = .738$), which suggests that the problem lies mainly with the adaptive-traits measure and not with boldness. A cultural explanation is also plausible, because items describing charm, self-assurance, and goal-directed risk-taking may be understood and endorsed differently by students raised to value modesty and deference.

The second hypothesis, that risk-taking would be positively related to adaptive psychopathic traits, was supported, and the regression analysis confirmed that adaptive traits uniquely predicted risk-taking. This is consistent with the idea that adaptive psychopathic traits do not indicate recklessness but a capacity to tolerate uncertainty and act deliberately. Skeem et al. (2011) argued that psychopathy is not a unitary construct and that its adaptive features have different behavioral correlates from its impulsive and antisocial features, and Kyranides et al. (2017) similarly distinguished disinhibited risk-taking, driven by poor self-control, from risk-taking that accompanies emotional regulation. Drislane et al. (2021) reported a positive association between adaptive traits and careful risk-taking in a large sample, and the meta-analysis by Patrick et al. (2024) reached comparable conclusions across many studies. The effect found here was somewhat smaller than those reported in Western research, which is understandable given a smaller sample, a culturally distinct population, and a questionnaire with limited reliability. Even so, the direction and significance of the relationship replicate the Western pattern.

This finding also fits the developmental context of the sample. Arnett (2000) characterized the late teens and twenties as a period of identity exploration and experimentation, and Duell and Steinberg (2019) argued that risk-taking at this stage frequently serves positive functions such as skill development and identity formation. Romer et al. (2017) cautioned against treating young people's risk-taking as uniformly pathological and emphasized the role of developmental context. Neurodevelopmental accounts propose that the reward system matures earlier than the systems that support self-control, which heightens reward sensitivity in young adulthood (Casey et al., 2008; Steinberg, 2008). Within such a period, students who are resilient and emotionally steady may channel their motivation into calculated risks, such as applying for competitive opportunities or taking on leadership roles. Tymula et al. (2012) found that risk-taking in adolescents was driven largely by tolerance of ambiguity, which is

compatible with the idea that students comfortable with uncertain situations report higher general risk propensity. It should be noted, however, that the model explained only 10% of the variance, so a substantial portion of risk-taking remains unexplained. Sensation seeking (Zuckerman, 1994), disinhibition (Patrick et al., 2009), and reward and punishment sensitivity (Fowles & Dindo, 2017; Gray & McNaughton, 2000) are likely contributors that were not measured here.

The third hypothesis, that boldness would be positively related to risk-taking, was not supported, and this was the most surprising result. Lykken's (1995) fearlessness hypothesis holds that a reduced fear response removes a major barrier to risky behavior, and the Triarchic Model places fearlessness at the center of boldness (Patrick et al., 2009). Empirical studies have generally agreed. Miller et al. (2017) found a positive association between psychopathy-related traits and risk-taking in their meta-analytic review, Drislane et al. (2021) found that boldness was related to careful risk-taking, Anderson et al. (2016) reported longitudinal links between boldness and risk-taking in emerging adults, and Anderson et al. (2022) extended this over five years, finding that boldness, risk-taking, and adaptive traits predicted one another over time. Lynam et al. (2018) further showed that boldness relates most strongly to financial, social, and recreational risk and least strongly to ethical risk. The present results therefore differ from what theory and prior evidence would predict, and several explanations can be considered without any single one being conclusive.

One explanation is that boldness and risk-taking, although related, are not the same thing. Boldness includes social dominance and assertiveness, which can be expressed in low-stakes ways, such as speaking in class, introducing oneself to strangers, or leading a group project, that involve no real exposure to loss. A student may be socially confident and emotionally steady yet still avoid physical, financial, or moral gambles. Figner and Weber (2011) emphasized that risk-taking depends on the interaction between the person and the situation, so a stable trait does not translate automatically into risky behavior, and Fowles and Dindo (2017) found that reward sensitivity accounts for a substantial part of the link between boldness and risk-taking. If the students did not perceive meaningful rewards for taking risks, the usual pathway from boldness to risk would be weakened. A second explanation concerns measurement. The General Risk Propensity Scale yields a global score, whereas the strongest associations with boldness in prior work were found in specific domains (Lynam et al., 2018). Forms of risk that matter for Pakistani students, such as choosing an unconventional career or challenging family expectations, may not be captured by items developed elsewhere. Blonigen et al. (2020) reported that the types of risk related to boldness differed across the United States, the United Kingdom, and Australia, so some variation across cultures is to be expected.

A third explanation is the social environment. Many young adults in Pakistan remain closely tied to their families, and educational and career decisions are often shaped by parental expectations. A dispositionally fearless student may therefore be constrained from acting on that disposition, and values of humility and conformity may reduce honest endorsement of items about dominance and fearlessness. Statistical power is a further consideration. The boldness coefficient ($p = .060$) fell just short of conventional significance, and a sample of 200 may be too small to detect a small effect, so the result should be treated as inconclusive instead of as evidence of no relationship. The negative sign of the correlation should likewise not be over-interpreted, as it did not reach significance. Benning et al. (2019) found that the benefits of boldness and risk-taking depend on other characteristics such as intelligence, and Hicks et al. (2017) showed that boldness can interact with other trait dimensions in shaping outcomes, which indicates that its effects may depend on factors not examined in the present study.

The fourth hypothesis was partially supported. Only adaptive psychopathic traits made a significant unique contribution to the prediction of risk-taking. Because boldness and adaptive traits were essentially uncorrelated ($r = -.036$), multicollinearity cannot explain the weak contribution of boldness; it reflects a genuinely weak relationship in this sample. These findings are consistent with the position that psychopathy is not a single entity and that its components behave differently (Skeem et al., 2011; Lilienfeld et al., 2015). They also relate to research indicating that psychopathic characteristics occur at modest levels in the general population and in some competitive occupations (Babiak et al., 2010; Sanz-García et al., 2021). At the same time, the results should not be read as endorsing risk-taking. Hare (2003) and Miller and Lynam (2012) noted that traits that appear adaptive in one setting can be linked to interpersonal harm in another, and Glenn et al. (2011) discussed psychopathy from an

evolutionary perspective in which such traits are neither inherently pathological nor inherently beneficial. The present findings suggest only that students who are resilient, composed, and goal-oriented feel more comfortable taking on uncertainty. Because meanness and disinhibition were not measured, maladaptive routes to risk-taking could not be examined (Frick & Morris, 2004).

Culture and measurement are recurring themes in this discussion. Most research on boldness, risk-taking, and adaptive psychopathy comes from Western, individualistic societies, and cross-national evidence suggests that broad associations are similar across countries but their expression varies with cultural values (Blonigen et al., 2020). The present data fit that pattern: the link between adaptive traits and risk-taking was preserved, while the links involving boldness were not. In a society that emphasizes family obligation and social approval, boldness may be directed toward socially accepted outlets such as academic persistence or assertiveness within peer groups rather than toward physical or financial gambles. Instruments written in English for Western respondents may also be interpreted differently by students for whom English is a second language, and the low reliability of the adaptive-traits scale is consistent with this concern. Lilienfeld et al. (2015) argued that psychopathy is best understood as an assembly of more basic traits whose relationships depend on how each is measured, and Drislane et al. (2014) stressed the need for reliable, validated instruments in non-clinical samples. Until the instruments are formally validated in Pakistani samples, these results should be regarded as provisional.

Several limits on interpretation remain. The cross-sectional design cannot establish the direction of influence, and longitudinal evidence suggests that boldness, risk-taking, and adaptive traits influence one another over time (Anderson et al., 2016, 2022), so risk-taking experiences may strengthen adaptive characteristics instead of, or in addition to, the reverse. Self-report measures are open to social desirability, convenience sampling limits representativeness, and the sample was dominated by Engineering and Computing students. Taken together, the results offer partial support for the Triarchic Model in a non-Western sample. The association between adaptive psychopathic traits and risk-taking was replicated, whereas the expected role of boldness was not. These findings highlight the need for culturally validated measures, domain-specific assessments of risk, and larger and more diverse samples before firm conclusions are drawn about the generality of the Triarchic Model across cultures.

Implications

The findings may be useful for university counselors, psychologists, educators, and researchers. Understanding the distinction between calculated and maladaptive risk-taking can help universities promote constructive forms of risk-taking, such as leadership, entrepreneurship, academic exploration, and career development, while discouraging harmful or impulsive behaviors. The findings also emphasize the importance of culturally appropriate assessment when studying personality traits in Pakistani students.

Limitations

First, the cross-sectional design prevents causal conclusions. Second, the ADPTQ demonstrated low internal consistency ($\alpha = .438$), which may have introduced measurement error. Third, the sample was obtained through purposive and convenience sampling and may not represent all Pakistani university students. Finally, reliance on self-report measures may have introduced response biases and may not fully capture culturally specific expressions of boldness and risk-taking.

Recommendations for Future Research

Future studies should use larger and more representative samples and longitudinal designs. Psychometric validation of the TriPM, ADPTQ, and risk-taking measures in Pakistani populations is also needed. Future research should examine the full Triarchic Model by including meanness and disinhibition, investigate gender and academic discipline as potential moderators, and use qualitative or mixed-method approaches to identify culturally specific forms of boldness and risk-taking.

V. CONCLUSION

This study examined adaptive psychopathic traits, boldness, and risk-taking among 200 Pakistani university students. Risk-taking was significantly positively related to adaptive psychopathic traits, and adaptive psychopathic traits significantly predicted risk-taking. In contrast, boldness was not significantly related to adaptive psychopathic traits or risk-taking and did not significantly predict risk-taking. The findings extend the literature to a Pakistani context while highlighting the importance of culture, measurement reliability, and representative sampling.

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