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RESEARCH PAPER

Personality related Determinants for General Self-Effacing: Comparing Varsity Basketball Players and Non-Players University Students

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ABSTRACT

This study explored that Personality related elements for general self-effacing: contrasting varsity Basketball players and non-players university students. We used a cross-sectional survey method, gathering responses from 209 under graduation students, 103 athletes of basketball and 106 were non-athletes from seven different universities. For data collection, we used the Big 5 Inventory-10 (BFI-10), the General Self-Efficacy Scale (GSE). Both tools showed good reliability. The results showed that, for athletes, Agreeableness was significantly and positively predicted self-efficacy. For non-athletes, traits of conscientiousness were linked positively to self-efficacy, while extraversion was linked negatively. Other personality traits were not seemed to have much effect in either group. However, GE, extraversion, conscientiousness and openness showed significantly higher mean score than non-athletes, neuroticism significantly higher scored in non-athletes compared to athletes. Overall, these findings suggested that personality traits influenced how self-efficacy feel in different ways depending on whether they participate in sports. Agreeableness was seemed more improving and protective trait for self-efficacy in student-athletes, while conscientiousness matters more for non-athletes. This research offers new insights into the psychological profiles of Pakistani university students, whether they play sports or not. Future studies should consider tracking changes over time and exploring different sports environments to better understand how personality traits linked to self-efficacy over the long run.

Keywords: Big Five Personality Traits, General Self-Efficacy, Agreeableness, Extraversion, Conscientiousness, Athletes, Non-Athletes, Basketball

Introduction

Big Five Personality Traits (BFPTs) and General Self-Efficacy are important psychological concepts that help explain how people succeed in personal, academic and professional areas (Shaninah & Mohd Noor, 2024). Among university students, these factors can influence how well they manage both their studies and sports commitments. Self-efficacy is about believing in your ability to organize and carry out actions to handle future challenges it is a key factor in what keeps us motivated, persistent and performing at our best (Murillo et al., 2024). When self-efficacy is high, it often goes hand-in-hand with resilience, good coping skills and success in many areas (Fawzy et al., 2023). On the other hand, feeling less confident in your abilities can lead to more stress, less motivation and lower overall well-being (Trpcevska, 2017).

Recently, researchers have been focusing on how personality traits relate to self-efficacy and other mental health outcomes. The Big Five Traits Extraversion, Openness, Neuroticism, Conscientiousness and Agreeableness considered among the most well-known

and comprehensive ways we understand individual differences (Haslam & Smillie, 2022). Each trait influences self-efficacy in its own way. For example, extroverted people tend to be more confident, social and enthusiastic, which can boost their belief in their abilities (Luong et al., 2022). Conscientious individuals considered more disciplined, organized and goal-oriented, the traits that believed to be linked to higher self-efficacy (Junça-Silva & Camaz, 2023). Conversely, high levels of neuroticism might exhibit lower self-efficacy because these individuals often experience higher level of doubt, anxiety and emotional ups and downs (Zhou et al., 2025). When it comes to university athletes, especially those in physically demanding sports like basketball, their personality traits and beliefs in themselves might differ from students who do not play sports. Basketball sports requires not only significantly greater level of physical skills but also it requires high level of mental toughness, confidence, resilience and the ability to perform under pressure (Foekh & Priambodo, 2025).

These unique psychological and physical demands suggest that basketball players might exhibit different level of scores in certain personality traits that may further effect self-effacing differently (Behrmann, 2024). Meanwhile, students who are not involved in sports might face different academic and social pressures that shape their personalities and confidence levels in unique ways (Liu et al., 2024). These differences can affect how student-athletes and non-athletes develop their self-efficacy in both academic work and sports competitions (Ferrell, 2019). Although much research has looked at BFPTs and self-efficacy in general populations, not as many studies have directly compared varsity athletes with non-athlete students, especially in sports like basketball that demand a special mix of resilience, teamwork and consistent pressure to perform at highest level (Wu & Kerdpitak, 2023). Understanding these differences could give us useful insights into how personality and self-efficacy interact to influence success, resilience and well-being among university students.

Therefore, this study aims to explore the Personality related parameters for general self-effacing: evaluating varsity Basketball players and non-players university students. In addition, it would identify differences in personality traits and self-efficacy of both groups that may further help us to understand unique psychological profile of student athletes and non-athletes in the context of higher education. More specially, it may help to better understand how personality factors contribute to both athletic and academic success and to identify differences that could help inform future training, interventions and student support programs.

Literature Review

Lately, there has been a renewed interest among researchers in understanding how personality traits relate to a person's overall belief in their ability to handle challenges and reach goals what we often call self-effectiveness. This concept is especially relevant for young adults dealing with the pressures of school and sports. For varsity basketball players, their confidence tends to build through competing, training and feedback from coaches, while for regular university students, academic workload and social expectations play a bigger role in shaping their sense of capability (Korpipää et al., 2020). The Big Five personality traits offer a useful way to look at how these lasting character tendencies influence self-effectiveness either helping people bounce back from setbacks or making them more vulnerable (Stajkovic et al., 2018).

Recent research showed the clear link between the Big Five traits and general self-effectiveness. A large study over time found that being conscientious and less neurotic were the strongest predictors of confidence, followed by traits like extraversion and openness. Overall, these personality traits together explain a big part of why people's self-belief varies over time (Haider & von Stumm, 2022). Similar results by Dasigan et al. (2024) studies in

classrooms, where conscientiousness, extraversion and openness were connected to higher academic self-confidence, while neuroticism tends to lower confidence and flexibility.

Interestingly, agreeableness showed mixed results some studies suggested, it helps with teamwork and collaboration, but when competition in school gets tough, its influence seems weaker or even negative (Rani Bhattacharjee & Ramkumar, 2025).

When we look at sports psychology, personality traits were often linked to both how confident athletes feel and how they actually perform. A recent review showed that all traits, except Neuroticism, were connected to better sports results. In particular, traits like Conscientiousness and Extraversion stand out for team sports that need stamina, discipline and good social skills (Shuai et al., 2023).

For NCAA athletes, research has shown that Conscientiousness was a strong predictor of game outcomes, emphasizing how personality plays a role in both how athletes are perceived and how they truly perform (Li et al., 2024). For sports like basketball, which was fast-paced and team-based, qualities like Extraversion help with communication and confidence, while Conscientiousness supports consistency and preparation. On the other hand, Neuroticism was often linked to pre-game anxiety and lower confidence. Some new ideas suggested that different traits were not work alone but interact to shape self-belief. For example, Graham et al. (2020) talk about "healthy Neuroticism," which means that when Neuroticism was combined with high Conscientiousness, the anxiety might actually motivate better preparation and boost self-confidence.

Similarly, research showed that having both Extraversion and Openness can make athletes more adaptable when solving problems, which can improve confidence both in school and sports (Mak, 2019). These findings suggested that personality impacts self-effectiveness not just based on separate traits but also through how different traits work together in complex ways.

Recent research showed that the Big Five personality traits was help predict self-confidence in both college athletes and students who were not play sports. Being organized and outgoing often leads to higher beliefs in one's abilities, while feeling anxious or worried tends to lower them. Traits like openness and agreeableness can be more important depending on the situation, especially when teamwork or creativity comes into play. Because these findings were consistent across sports and academics, understanding personality can be a helpful tool in identifying students who might struggle with confidence. It also opens the door to creating new strategies to boost resilience, self-belief and overall performance (Rani Bhattacharjee & Ramkumar, 2025).

Material and Methods

This study used a cross-sectional survey approach to gather data from participants at a single point in time. The main goal was to explore the Personality related factors for general self-effacing, comparing varsity Basketball players and non-players university students.

Data was collected from seven top-tier universities in Lahore, Pakistan, all of which host high-level basketball players competing in inter-university, national and international tournaments. All the basketball players from these universities were invited to take part and a comparison group of students who do not participate in sports was also included. In total, 209 students took part both males and females with 103 being basketball players and 106 non-athletes. The athletes had a wide range of experience levels (M = 6.35 years, SD = 1.88) and all students were enrolled in undergraduate programs across all four years of study. The basketball players, who were part of their university teams, had competed at various levels and their average age was approximately 21 (M = 20.98, SD = 1.87). The non-athletes,

who hadn't participated in any sports competitions, were regular university students with an average age of about 21 as well (M = 20.75, SD = 1.99). Both groups were enrolled in different academic programs at their universities.

Data was collected using a self-administered survey with three sections. The first section gathered personal details, including 10 items such as athletic status, age, gender, marital status, university name, highest level of sports participation, training days per week and hours trained daily. This study focused on basketball players and non-athlete students from various universities.

The brief version of the Big Five Inventory (BFI-10) is a simple and easy-to-use tool created by Rammstedt et al. (2013) to analyze the traits of personality. That was created from the authentic BFI-44, developed by John et al. (1991). This optimized version focuses on five main personality dimensions: Openness, Neuroticism, Conscientiousness, Agreeableness and Extraversion. And maintains acceptable levels of validity and reliability. In our study, the Cronbach's alpha for every factor was: Agreeableness = 0.711, Conscientiousness = 0.894, Neuroticism = 0.871, Openness = 0.771 and Extraversion = 0.752. Thats results indicated that the instrument is both were reliable and valid.

To measure general self-effectiveness, we used the shortest, most widely adopted tool the General Self-Effectiveness Scale developed by Schwarzer and Jerusalem (1995). This 10-item self-report questionnaire assesses the efficacy of general. The scale has been broadly used across different populations and settings. In our study, the Cronbach's alpha for this scale was 0.752, confirming its validity and reliability.

Data collection involved a combination of a demographic questionnaire, the BFI-10 and the GES. Participants were fully knowledgeable that their participation was voluntary and provided explicit consent. Confidentiality of all data was guaranteed and we focused that the information not distributed along with any third group. The data was collected solely for research purposes and posed no harm or consequence on the participants' lives. Before filling out the questionnaires, participants received clear instructions to ensure understanding. The researcher personally collected the data through face-to-face interactions, allowing each participant about 10-15 minutes to complete all sections. Permission to use the questionnaires was obtained from the respective authors via email.

We analyzed the data using descriptive statistics, Hierarchical Multiple Linear Regression (HMLR) and independent sample t-tests through SPSS version 27. A p-value < .05 was examined statistically major. Before conducting the main analyses, all necessary assumptions for HMLR such as normality, linearity, homoscedasticity, multicollinearity and independence of errors were checked and all assumptions were satisfied.

Results and Discussion

Table 1
Demographic information of University Students: Athletes of Basketball and non-athletes

		Athletes		Non-athletes	
Variable	**Category**	**N**	**%**	**N**	**%**
Gender	Male	52	50.5	53	50.0
	Female	51	49.5	53	50.0
Residence	Family	68	66.0	71	67.3
	Hostel	35	34.0	35	32.7
Participation level of sports	Inter-university	41	39.8		
	National	54	52.4		
	International	8	7.8		

The data was collected from students at seven different universities in Lahore, including both government and private institutions. Among these students, 103 were

athletes, with 52 males (about 50.5%) and 51 females (roughly 49.5%), showing that the gender distribution was pretty balanced among athletes. All 103 athletes were single, which makes sense given the typical age group for university students. When it came to where they lived, the numbers were fairly evenly split: 68 students lived with their families (66%), while 35 stayed in hostels (34%). We also looked at their level of sports participation. Most of them competed at the national level (54 students, 52.4%), followed by those at the inter-university level (41 students, 39.8%) and only a small number reached the international level (8 students, 7.8%). Interestingly, every athlete reported that their highest level of competition was the national level. Among the non-athletes, the gender split was perfectly even with 53 males (50%) and 53 females (50%). All 106 non-athlete students were unmarried, which fits what we expect for this age group. As for where they lived, a slight majority stayed in university accommodations (35 students, 32.7%), while the rest (71 students, 67.3%) lived with their families.

Table 2
ANOVA table of university basketball athletes for hierarchical regression analysis

Modal	Variables	Sum of Square	df	Mean Square	F	*P*
1	Regression	270.834	2	135.422	6.721	.002[b]
	Residual	2015.021	100	20.150		
	Total	2285.864	102			
2	Regression	402.977	7	57.568	2.905	.009[c]
	Residual	1882.888	95	19.820		
	Total	2285.864	102			

The ANOVA table of basketball athletes described that in model 1, only two demographic characteristics age and gender included as predictors. This model reached statistical significance F = 6.721, *P* = .002, demonstrated that age and gender demographic factors explained a meaningful proportion of the variation in general self-efficacy.

Model 2, added the all five traits of personality: conscientiousness, extraversion, agreeableness, openness and neuroticism This model was also statistically significant, F = 2.905, *p* =. 009, indicated that adding personality factors increased the explained variance in the general self-efficacy.

Table 3
ANOVA table of non-athlete university students for hierarchical regression analysis

Modal	Variables	Sum of Square	df	Mean Square	F	*P*
1	Regression	30.712	2	15.356	2.077	.130[b]
	Residual	761.372	103	7.392		
	Total	792.085	105			
2	Regression	143.902	7	20.557	3.108	.005[d]
	Residual	648.183	98	6.614		
	Total	792.085	105			

The summary of ANOVA table for non-athletes indicated, the first model, that included only the two demographic variables age and gender for non- athlete students, did not reach statistical significance F = 2.077, *p* = .130. This suggested that the basic model did not explain a significant portion of the variance in general self-efficacy.

In model 2, When all Big five personality traits were added along with the same demographic variables, the second model become significant F = 3.108, p = .005. This indicated that augmenting the model with personality factors meaningfully improved its explanatory power.

Table 4
Hierarchical regression table for university basketball athletes

model	variables	B	SE	β	t	*P*
1	Age	.627	.240	.247	2.611	.010
	Gender	-2.593	.893	-275	-2.904	.005
2	Age	.490	.250	.193	1.963	.053

	Gender	-2.353	.961	-.250	-2.449	.016
	Extroversion	-.146	.553	-.026	-.264	.792
	Agreeableness	1.020	.462	.215	2.207	.030
	Conscientiousness	-.559	.539	-.103	-1.038	.302
	Neuroticism	.006	.474	.001	.013	.990
	Openness	.689	.550	.125	1.253	.213

Note: Modal 1, R^2 = .118 Modal 2, R^2 = .176

The table of hierarchical regression for athletes showed that in model 1, demographic characteristics age positive predictor (B = .627, *p* = .010) and gender negative predictor (B = -2.593, *p* = .005) both were statistically significant with GES.

In model 2, Age was not significant (*p* = .053). Gender was found to be a significant negative predictor (B = -2.353, *p* = .016), indicated that self-efficacy decreases as we move from male to female. Among the big five traits, only agreeableness significant predicted the self-efficacy (B = 1.020, *p* = .030), suggested that more agreeable individuals tend to have higher self-efficacy. On the other hand, extroversion, (*P* = .792), Conscientiousness (*p* = .302), Neuroticism (*p* =.990) and openness (*P* = .213) were not significant predictors.

Table 5
Hierarchical regression table for non-athletes' university students

model	variables	B	SE	β	t	P
1	Age	.251	.134	.181	1.865	.065
	Gender	.325	.531	.059	.612	.542
2	Age	.315	.131	.228	2.401	.018
	Gender	.148	.518	.027	.287	.775
	Extroversion	-.563	.212	-.257	-2.648	.009
	Agreeableness	.202	.236	.088	.855	.395
	Conscientiousness	.439	.184	2.43	2.382	.019
	Neuroticism	.156	.210	.079	.739	.461
	Openness	.256	.218	.113	1.172	.244

Note: Modal 1, R^2 = .039 Modal 2, R^2 = .182

The table of hierarchical regression for non-athletes showed that in model 1, age was not significant (*p* = .065), with self-efficacy. Meanwhile the gender was also not significant (*p*=.542).

In model 2, age was founded to be significant predictor of self- efficacy (B = .315, *p* = .018), while the gender (*p* =.775) remained non-significant. Among non-athletes' personality traits, the extraversion (B = -.563, *p* = .009), was negatively significant predictor of self-efficacy along with Conscientiousness (B = .439, *p* = .019) was positively significant with GES. Additionally, other personality traits, agreeableness (*p* =.395), Neuroticism (*P* = .461) and openness (*P* = .244) were not significant predictors.

Table 6
Independent sample t-test between basketball players and non-players

	players		Non-players				
Variables	**Mean**	**SD**	**Mean**	**SD**	**t**	***P***	**Cohens d**
GE score	27.78	4.734	17.65	2.747	18.844	.001	2.617
Extraversion	3.89	.854	2.96	1.254	6.322	.001	.866
Agreeableness	3.80	.996	3.72	1.199	.551	.582	.072
conscientiousness	3.90	.872	3.30	1.524	3.512	.001	.483
Neuroticism	2.07	1.003	2.58	1.391	-3.031	.003	.420
Openness	3.70	.856	2.97	1.215	5.016	.001	.694

The results of independent sample t-test showed a significant mean difference in GE score and BFPTs. Athletes of basketball showed significantly higher GE score (M = 27.78, SD = 4.734) then non-athletes (M = 17.65, SD = 2.747) with t = 18.844, P = .001 and demonstrated large effect size (d = 2.617). On the other hand, Personality traits: Extraversion in athletes showed significantly higher (M = 3.89, SD = .854) compared to non-

athletes (M = 2.96, SD = 1.254) with *P* = .001 and demonstrated large effect size (d = .866). Similarly, Conscientiousness in athletes was significantly greater (M = 3.90, SD = .872) than in non-athletes (M = 3.30, SD = 1.524) with *P* = .001 and revealed a moderate effect size (d = .483). Additionally, Neuroticism in athletes significantly lower level (M = 2.07, SD = 1.003) than non-athletes (M = 2.58, SD = 1.391) with *P* = .003 and indicated to moderate effect size (d = .420). lastly, openness in athletes was also significantly higher (M = 3.70, SD = .856) compared to non-athletes (M = 2.97, SD = 1.215) with *P* = .001 and revealed the moderate effect size (d = .694). However, trait of agreeableness (*P* = .582) was not reveled significant mean difference between athletes and non-athletes.

Discussion

The main goal of this study was to explore the Personality related components for general self-effacing, between varsity basketball players and non-players university students. Interestingly, no previous research has focused on university athletes, especially basketball players, making this study novel. The results showed a moderate link between self-efficacy and certain personality traits among both basketball players and non-players. Specifically, agreeableness was positively related with self-efficacy among the student-athletes of basketball. On the other hand, extraversion was found negatively related with self-efficacy, while conscientiousness was positively linked with efficacy in non-athlete students.

This study found that agreeableness was positively linked with self-efficacy among university basketball players. In other words, athletes who were more agreeable tended to feel more capable overall. Since no previous research has, specifically looked at this group, the findings were quite new. However, earlier studies support this idea. likewise, Zhang et al. (2019) found that agreeableness, along with conscientiousness and extraversion, was positively related to self-efficacy, while neuroticism was linked to lower self-efficacy in Chinese boxers. Similarly, Barańczuk (2021) conducted a meta-analysis of 53 studies and concluded that agreeableness, conscientiousness and extraversion were all positively related to general self-efficacy. Another study by Weinschenk et al. (2022) showed that agreeableness and openness were positively associated with self-efficacy in the general population of Denmark. Importantly, there have been no studies on contradicting these findings. Overall, athletes who score high in agreeableness tend to be cooperative, supportive and open to feedback. This attitude helps them feel more confident when facing challenges and boosts their overall sense of self-efficacy.

This study found that, among non-athlete university students, extraversion personality was negatively linked with general self-efficacy that indicated university students who were more extraverted tended low general self-efficacy. Since no previous research has explored this specific relationship in this group, it makes this study quite unique. It seemed that being outgoing might actually be linked to less confidence in one's own abilities. This could be because extraversion people often rely on feedback from buddy and external appreciation to detect well about own selves. As a result, those possibly not detect as confident of themselves when they have to operate objects alone. While some other studies showed different results, Barańczuk (2021) conducted a meta-analysis of 53 studies and found that agreeableness, conscientiousness and extraversion were all positively related to self-efficacy. Similarly Weinschenk et al. (2022) looked at the general population in Denmark and discovered that extraversion and openness were positively linked to self-efficacy.

The study also found that conscientiousness was positively associated with self-efficacy among non-athlete students, indicated that more conscientious students tended to have higher efficacy in their abilities. Since no prior research has focused on this specific group, it adds something new to the field. Past studies support these findings, like Lightsey Jr et al. (2014), showed that conscientiousness were positively link with self-efficacy among

college students of American. Also, Zhang et al. (2019) found that conscientiousness, agreeableness, and extraversion all had positive correlation with self-efficacy, furthermore, neuroticism was negatively related in Chinese boxers. Additionally, Barańczuk (2021) meta-analysis also suggested that agreeableness, conscientiousness and extraversion were all positively related to general self-efficacy. Conscientious students tend to be organized, disciplined and goal-oriented, which helps them believe in their ability to succeed, boosting their confidence overall.

Additionally, the results showed that basketball players tended greater self-efficacy compared to non-athletes. This probably happens because playing basketball repeatedly in competitive settings pushes players to develop trust in themselves, stick with challenges and bounce back from setbacks. Their higher level of extraversion makes sense because basketball is a team sport that involves lots of talking and social interaction, which boosts their communication skills and energy around others. The fact that they scored higher on conscientiousness reflects the discipline, focus on goals and sense of responsibility that come with regular practice and performing well. Their lower levels of neuroticism suggested, they have better control over their emotions and can handle stress more effectively, important skills when facing the pressure of competition. Finally, their greater openness came from experiencing a variety of strategies, ideas and lessons learned from their time on the court. On the other hand, there was not much difference between athletes and non-athletes when it came to agreeableness trait like kindness, cooperation and trust seemed to stay the same regardless of sports participation.

Conclusion

This study provided some fresh insights by looking at the personality related determinants for general self-effacing, between varsity Basketball players and non-players university students up until now, this connection has not been explored much in this specific group. The findings showed that personality traits have a moderate impact on self-efficacy in both groups. Likewise, Agreeableness was positively linked with higher self-efficacy among basketball players, while traits of personality like extraversion were linked to lower self-efficacy among non-athletes. Conscientiousness, on the other hand, was associated with greater self-efficacy in non-athletes. Athletes of basketball tended high score of GE, Extraversion, Conscientiousness and openness compared to non-athletes while Neuroticism tended high in non-athletes than athletes. Overall, these results emphasized that personality influence confidence differently depending on whether someone was an athlete or not.

Recommendations

Looking ahead, future studies would benefits from larger, more diverse samples, covering different sports and academic areas, to make the findings more widely applicable. Conducting long-term research would also help us understand better how personality traits shape self-efficacy over time. Adding qualitative approaches, like interviews, could give us a clearer picture of the psychological mechanisms connecting personality and confidence. On a practical level, these results suggest that training, mentoring and support programs personalized to individual personality traits could help improve both athletic success and academic achievement by boosting self-efficacy.

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