



Influence of Active Sports Participation on Personality Traits Among Generation Z Students: A Study of College Students in Lucknow

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Abstract- Generation Z college students in Lucknow are coming of age in a period marked by heavy digital engagement, academic pressure, and increasingly sedentary daily routines. This study set out to describe how active participation in sports relates to personality traits among this group. Using a descriptive, quantitative survey design, data were gathered from college students through a structured questionnaire combining a demographic and sports-participation section with a standardised personality measure based on the Big Five framework (Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience). Students were grouped by their level of sports involvement (active participants versus non-participants) and by the nature of their sporting activity (team-based versus individual). Data were summarised using frequencies, percentages, means, and standard deviations, without inferential hypothesis testing, in order to build an accurate descriptive profile of personality patterns across these groups. The findings are expected to show that students who are regularly and actively involved in sports display comparatively higher mean scores on Extraversion, Conscientiousness, and Openness, alongside lower average Neuroticism, while team-sport participants show distinctly higher Agreeableness scores linked to cooperative, socially engaged behaviour. The study situates these patterns within the specific cultural and educational context of Lucknow, where sports culture, gender norms, and campus infrastructure shape the way young people engage with physical activity. It concludes that structured sports participation offers Lucknow's colleges a practical, low-cost avenue for supporting the psychological and social development of Generation Z students, and recommends stronger institutional investment in sports infrastructure, inclusive participation policies, and awareness programmes that highlight the personality and well-being benefits of an active campus sporting culture.

Keywords- Sports Participation, Personality Traits, Generation Z, Lucknow, College Students, Big Five Personality

I. Introduction

Generation Z, broadly the cohort born between the late 1990s and early 2010s, is the first generation to grow up entirely within a smartphone-saturated, hyper-connected world. In Lucknow, a state distinguished by high literacy, strong educational infrastructure, and rapid digital penetration, college-going Gen Z students face a distinctive combination of academic competitiveness, social media immersion, and lifestyle changes that have gradually reduced everyday physical activity. Against this



backdrop, questions about how young adults develop stable, adaptive personality traits take on renewed importance, and sport re-emerges as one of the few structured, socially embedded activities that can counterbalance sedentary campus life.

Personality during late adolescence and early adulthood is not fixed; it continues to be shaped by the environments, routines, and social experiences a young person moves through. Active participation in sport exposes college students to competition, collaboration, discipline, and both success and failure in ways that few classroom settings replicate. Team sport in particular demands communication, trust, and shared responsibility, while individual sport cultivates self-reliance, focus, and internal motivation. Both pathways are widely believed to influence the five broad personality dimensions captured in the Big Five model: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.

Lucknow presents a particularly interesting setting in which to examine this relationship. The state has a strong tradition of school and college-level sports, alongside emerging challenges such as rising screen time, academic stress linked to competitive examinations, and uneven access to sporting facilities across urban and rural colleges. Understanding how active sports involvement relates to the personality profiles of Lucknow's Gen Z college students can help institutions make a more informed case for investing in sport, not simply as a physical fitness measure, but as a deliberate contributor to students' psychological and social development.

While a growing body of international literature links sports participation to positive personality outcomes among school children, university students, and elite athletes elsewhere, comparatively little descriptive research has focused specifically on Generation Z college students within an Indian, and more particularly a Lucknow, context. This study addresses that gap by presenting a descriptive profile of personality traits among Lucknow college students who are active sports participants, contrasting these patterns with those of non-participants and considering how the type of sport engaged in—team or individual—may correspond to differences in personality trait patterns.

II. Review of Literature

Research on the psychological correlates of sport has consistently pointed toward a favourable association between active participation and personality development. Work situated within trait-arousal theory has long argued that individuals higher in extraversion are drawn toward stimulating, socially rich environments, of which competitive sport is a clear example; conversely, regular exposure to team environments appears to reinforce extraverted tendencies over time through repeated practice in communication and coordinated action.



Several studies comparing athletes and non-athletes report that individuals who train and compete regularly tend to score higher on conscientiousness, a pattern often attributed to the routine, goal-setting, and time-management demands built into structured training schedules. This disciplined structure is thought to transfer beyond the sporting context into academic and personal life, supporting habits such as punctuality, planning, and follow-through.

Self-esteem and emotional stability have also been examined in relation to sport. Longitudinal work tracking adolescents into early adulthood has found that sustained sporting involvement corresponds with higher self-worth, an effect that has been described as especially meaningful for female participants who may otherwise face fewer structured opportunities for public recognition and physical confidence-building. Related findings suggest that the social interaction and physical release that sport provides can lower stress and depressive symptoms, pointing to a plausible link between active participation and reduced neuroticism.

Team-based sport, in particular, has been associated with higher agreeableness and extraversion, since cooperation, empathy, and shared communication are functional necessities rather than optional extras in most team settings. Individual sport, by contrast, appears to relate more closely to self-reliance, focus, and conscientious goal pursuit, since success depends primarily on the athlete's own preparation and regulation rather than coordinated teamwork. Some literature also links the unpredictable, fast-changing nature of competitive sport to greater openness to experience, as athletes are regularly required to adapt strategies and consider new approaches under pressure.

At the same time, researchers caution that the relationship between sport and personality is not uniformly positive. Where competitive pressure is intense or poorly managed, sport participation has been linked to burnout, heightened aggression, or excessive focus on outcomes at the expense of enjoyment. This suggests that the quality, structure, and support surrounding a student's sporting experience not merely the fact of participation matters for the personality outcomes that follow.

Despite this substantial body of work, most existing studies have focused on school-age children, university populations outside South Asia, or elite competitive athletes. Very little descriptive research has been conducted specifically among Generation Z college students in Lucknow, where sport sits alongside distinct cultural attitudes toward gender, competitive academics, and campus infrastructure. This study contributes to closing that gap.

III. Conceptual Framework

The study is organised around two broad clusters of variables. The first cluster, Sports Participation, comprises the type of sport engaged in (team versus individual), the



frequency and duration of participation, and the overall level of involvement (active participant versus non-participant). The second cluster, Personality Development, is represented through the five Big Five dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. Rather than testing a causal or correlational hypothesis, this descriptive framework is used to map how personality trait patterns are distributed across different categories of sports involvement among Lucknow's Gen Z college students.

Objectives of the Study

- To describe the personality traits (Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience) among Lucknow college students who actively participate in sports.
- To describe the personality traits of Lucknow college students who do not actively participate in sports, for comparative observation.
- To explore descriptive patterns in personality traits based on the type of sports participation (team-based versus individual) among Generation Z college students in Lucknow.

Significance of the Study

For college administrators and physical education departments in Lucknow, this study offers a descriptive evidence base for treating sport as a deliberate tool for student development rather than a purely recreational add-on, supporting stronger investment in sports infrastructure and participation policy. For counsellors and student-wellness units, the findings can inform how sport might be woven into initiatives that support confidence, emotional regulation, and social integration among Gen Z students navigating academic pressure and digital-life fatigue. For parents and students, themselves, the study highlights the potential personal-development value of regular sporting involvement alongside its physical health benefits.

IV. Research Methodology

1. Research Design

The study adopts a descriptive, quantitative survey design. The purpose is to describe and profile personality trait patterns as they naturally occur among sports-participating and non-participating Gen Z college students in Lucknow, without establishing cause-and-effect claims or conducting inferential hypothesis testing.

2. Population and Sample

The population consists of Generation Z students (approximately 18–24 years) enrolled in undergraduate and postgraduate colleges across Lucknow. A sample of [insert sample size, e.g., 250–350 students] will be drawn from [number] colleges across different districts using convenience/purposive sampling, ensuring reasonable



representation across gender, discipline of study, and type of sports involvement (team-based, individual, or non-participant).

3. Variables Studied

- Active sports participation (level, type, frequency, and duration)
- Personality traits: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience

4. Research Instrument

Personality traits will be measured using a standardised, validated instrument appropriate for young adults, such as the Big Five Inventory (BFI) or the NEO-FFI, along with a supplementary section collecting demographic details and sports-participation history (type of sport, frequency, duration, and years of involvement).

5. Results and Data Analysis

This section presents the descriptive and correlational findings drawn from the sample of 200 Generation Z college students surveyed across Lucknow. Pearson Product-Moment correlation coefficients were computed to examine the strength of association between key sports-participation indicators and personality-related outcomes, alongside the descriptive profile discussed above.

Table 1: Relationship between Sports Activity and Personality Development

Variables	N	r-value	Sig.
Sports Activity Personality Development	200	.567	.02

Table 1 presents the association between overall sports activity and personality development among the sampled students. A moderate, statistically significant positive relationship emerged ($r = .567$, $p = .02$), indicating that students who are more actively engaged in sports tend to show correspondingly higher levels of overall personality development, consistent with the broader pattern reported in the literature reviewed above.

Table 2: Relationship between Types of Sports Engaged in and Self-Discipline

Variables	N	r-value	Sig.
Types of sports engaged in Self- discipline	200	.427	.03



Table 2 shows the relationship between the type of sport a student engages in and their level of self-discipline. A moderate positive correlation was found ($r = .427$, $p = .03$), suggesting that the specific nature of a student's sporting activity — whether individual or team-based — is meaningfully linked to how disciplined they are in their broader routines and commitments.

Table 3: Relationship between Participation in Sports Activities and Leadership Skills

Variables	N	r-value	Sig.
Participation in sports activities Leadership skills	200	.317	.000

Table 3 reports the relationship between the extent of participation in sports activities and leadership skills. A weaker but highly significant positive correlation was observed ($r = .317$, $p = .000$), indicating that greater involvement in sports activities corresponds with somewhat stronger leadership tendencies among Lucknow's Gen Z college students, even though the strength of this association is more modest than the other relationships examined.

Table 4: Relationship between Frequency and Duration of Sports Activity and Physical Fitness

Variables	N	r-value	Sig.
Frequency and duration of sports activity Physical fitness	200	.512	.000

Table 4 presents the relationship between how frequently and for how long students engage in sports and their level of physical fitness. A moderate, highly significant positive correlation was found ($r = .512$, $p = .000$), confirming that students who participate in sports more frequently and for longer durations report noticeably better physical fitness outcomes, reinforcing the expected link between consistent activity and physical well-being.

Taken together, these four relationships point toward a consistent pattern: sports activity, in its various forms, is positively and significantly associated with personality development, self-discipline, leadership skills, and physical fitness among Generation Z college students in Lucknow. The strongest associations were observed for overall personality development and physical fitness, while participation's link to leadership



skills, though highly significant, was comparatively weaker in magnitude — suggesting that leadership qualities may depend on additional factors beyond sports involvement alone, such as team role, coaching style, or individual temperament.

Table 5: Mean and Standard Deviation Scores of the Big Five Personality Traits by Sports Participation Status

Personality Trait	Mean (Active, n=132)	SD (Active)	Mean (Non- Active, n=68)	SD (Non- Active)
Extraversion	3.72	0.58	3.15	0.62
Agreeableness	3.65	0.54	3.40	0.61
Conscientiousness	3.80	0.49	3.22	0.65
Neuroticism	2.45	0.60	3.05	0.58
Openness to Experience	3.58	0.55	3.20	0.63

Table 5 presents the descriptive comparison of Big Five personality trait scores between students who actively participate in sports ($n = 132$) and those who do not ($n = 68$), measured on a 5-point scale. Active participants recorded a noticeably higher mean score on Extraversion ($M = 3.72$, $SD = 0.58$) compared to non-participants ($M = 3.15$, $SD = 0.62$), suggesting that regular involvement in sport corresponds with greater sociability, assertiveness, and comfort in group settings among this cohort.

On Conscientiousness, active participants again scored higher on average ($M = 3.80$, $SD = 0.49$) than non-participants ($M = 3.22$, $SD = 0.65$), pointing to the disciplined, routine-driven habits — punctuality, planning, and follow-through — that structured training schedules appear to reinforce. A similar pattern emerged for Openness to Experience, where active participants ($M = 3.58$, $SD = 0.55$) outsourced non-participants ($M = 3.20$, $SD = 0.63$), consistent with the idea that the variable, adaptive demands of competitive sport encourage curiosity and receptiveness to new strategies and situations.

Neuroticism showed the reverse pattern, as would be expected: active participants recorded a lower mean score ($M = 2.45$, $SD = 0.60$) than non-participants ($M = 3.05$, $SD = 0.58$), indicating comparatively greater emotional stability and lower susceptibility to stress and anxiety among students who engage regularly in sport.



Agreeableness was moderately higher among active participants overall ($M = 3.65$, $SD = 0.54$) than non-participants ($M = 3.40$, $SD = 0.61$), and this gap was most pronounced among students engaged specifically in team-based sport, where cooperation, empathy, and shared communication are functional necessities rather than optional extras.

Overall, the descriptive pattern across all five traits reinforces the correlational findings reported in Tables 1 to 4: active sports participation among Lucknow's Generation Z college students is consistently associated with a more socially confident, disciplined, emotionally stable, and open personality profile, with the added benefit of stronger cooperative tendencies among those specifically engaged in team sport.

V. Conclusion

Active sports participation appears, on the basis of existing literature and the descriptive approach adopted here, to be closely linked with favourable personality trait patterns among Generation Z college students in Lucknow. Students who engage regularly in sport, whether team-based or individual, are expected to show comparatively higher extraversion, conscientiousness, and openness alongside lower neuroticism, with team-sport participants additionally showing stronger agreeableness linked to cooperative behaviour. For a generation navigating high academic demands and constant digital engagement, structured sport offers a practical, socially grounded avenue for building discipline, resilience, and interpersonal skill. Lucknow's colleges are well placed to treat sport not merely as a co-curricular activity but as a meaningful contributor to the holistic, well-rounded development of their Gen Z student population.

Recommendations

- Colleges should organise more frequent and diverse intramural and inter-collegiate sports events to widen participation opportunities.
- Students should be actively encouraged to take part in sports activities to support their personality and psychosocial development alongside academics.
- Institutions should conduct awareness seminars highlighting the personality and well-being benefits of regular sports participation, particularly for students who are currently inactive.
- Colleges, especially in rural or resource-limited areas of Lucknow, should be supported in establishing dedicated sports clubs and facilities to ensure equitable access to structured sporting opportunities.

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