

Research Paper

## Self-Esteem and Assertiveness Among Young Adult Women: A Comparative Study of Geared Motorcycle Riders and Non-Riders

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### ABSTRACT

This study explores the differences in self-esteem and assertiveness between young adult women who ride geared motorcycles and those who do not. Riding geared motorcycles is often associated with confidence, independence, and a challenge to traditional gender roles. The sample included 132 women aged 21 to 25 from Chennai, Tamil Nadu 66 geared motorcycle riders and 66 non-riders selected using purposive sampling. Psychological assessments were conducted using the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and the Rathus Assertiveness Schedule (Rathus, 1973). Statistical analysis revealed a significant difference in both self-esteem and assertiveness levels, with motorcycle riders scoring higher on both dimensions. These findings suggest that the ability to ride geared motorcycles may contribute to greater self-confidence and assertive social behaviour among young women. The study contributes to ongoing research on gender, mobility, and psychological well-being in emerging adulthood.

**Keywords:** *Motorcycling, Self-esteem, Assertiveness, Young adult women, Sports psychology*

Motorcycling, once regarded as a male-oriented activity, has seen a noticeable shift in recent years with more women actively participating in riding geared motor vehicles. This trend reflects broader societal changes around gender roles, mobility, and autonomy. In countries like India, where gender norms have traditionally restricted women's access to public spaces and certain types of transportation, the increasing visibility of women motorcyclists signifies not only a lifestyle shift but also a form of socio-psychological empowerment (Mohan, 2021). Motorcycling today is more than just a means of transport it represents freedom, independence, and resistance against societal stereotypes. The experience of riding a geared motorcycle offers both individual exhilaration and a deeper sense of identity and self-expression (Yamaguchi, 2018). While globally motorcycling has been studied as a recreational, competitive, and therapeutic activity, its intersection with psychological well-being particularly for women has received limited scholarly attention in India. Female riders are still navigating a terrain historically dominated by men. In this context, the psychological traits that enable and emerge from this behavior, particularly self-esteem and assertiveness, become highly relevant.

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Self-esteem refers to an individual's sense of personal worth and self-respect (Rosenberg, 1965). It influences how people perceive themselves and how they expect to be treated by others. High self-esteem is associated with greater emotional resilience, decision-making ability, and the capacity to challenge restrictive norms (Shrestha, 2019). In the Indian context, societal expectations and cultural pressures often influence a woman's self-image. Studies like that of Das and Ghosh (2016) revealed that self-esteem in young Indian women was often linked to autonomy, decision-making, and career aspirations areas that closely align with the ability to ride a geared motorcycle confidently.

Assertiveness, on the other hand, is the ability to express thoughts, emotions, and needs in a direct yet respectful way. Assertive individuals communicate with confidence while respecting the rights and opinions of others (Yesodharan, 2020). In contrast to aggression or passivity, assertiveness reflects emotional intelligence, self-regulation, and interpersonal skill. In patriarchal cultures where women are expected to be submissive or deferential, assertiveness becomes a marker of empowerment. Balakrishnan and Fernandez (2018) highlight that assertive behavior among Indian youth is crucial in building resistance to peer pressure, discrimination, and bullying. Research by Sharma and Mehta (2014) examined assertiveness training among Indian college girls and found a significant improvement in their ability to handle interpersonal conflicts and build self-confidence. Similarly, a study by Joseph and Thomas (2021) showed that young Indian women participating in skill-based physical activities like martial arts or sports exhibited higher levels of self-esteem and assertiveness compared to those involved in sedentary or traditionally feminine activities. These findings suggest that physically engaging activities that involve control, strength, and independence, such as riding geared motorcycles, may be associated with greater psychological well-being.

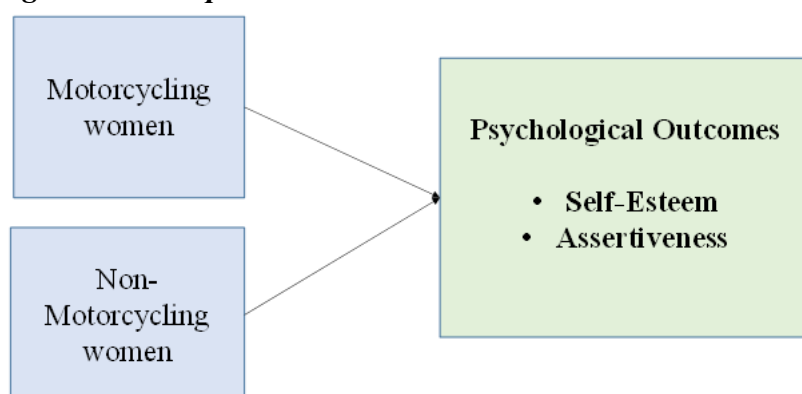
Further, Uttra et al. (2020) explored gender-based behavioral differences among motorcyclists, suggesting that women who ride demonstrate distinctive traits shaped by both personal confidence and the desire to challenge traditional gender expectations. Yamaguchi (2018) emphasized that women who learned to ride motorcycles in supportive environments not only acquired technical skills but also experienced boosts in confidence and leadership tendencies. These findings are echoed in Kumar's (2015) work, which found that individuals participating in physical, skill-based pursuits like boxing had higher self-perceptions of competence and confidence. Despite the relevance of these themes, the Indian literature still lacks focused studies on the psychological characteristics of women motorcyclists. Most motorcycling research in India centers around traffic behavior, safety, helmet use, and accident statistics (Ranganathan et al., 2018). Few studies examine the motivations, psychological profiles, or socio-emotional impacts of riding among women. Even fewer distinguish between geared and non-geared vehicle riders—an important distinction given the added physical and technical demands of riding geared motorcycles.

This gap in literature becomes crucial considering the broader implications of mobility, agency, and empowerment in modern India. As urbanization and exposure to global culture increase, young Indian women are navigating multiple identities balancing tradition with autonomy, and familial roles with personal aspirations. Riding a geared motorcycle can symbolically and practically embody these transitions. However, limited empirical studies have explored whether such behaviors are correlated with traits like self-esteem and assertiveness in Indian women.

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Thus, there is a clear need for this study. First, it fills a gap by empirically examining the psychological attributes specifically self-esteem and assertiveness of women who ride geared motorcycles compared to those who do not. Second, it offers insights into how lifestyle choices intersect with psychological well-being in young Indian women, especially in a socio-cultural context where women's mobility is still often policed or questioned. Third, it provides a balanced perspective on motorcycling, not merely as a transport-related or risky behavior, but as an avenue for personal growth, empowerment, and gender equality. Lastly, it contributes to the relatively sparse but growing body of Indian psychosocial research on women's agency in unconventional domains. In conclusion, this study seeks to compare self-esteem and assertiveness among young adult women who ride geared motorcycles with those who do not, within the Indian urban context as shown in Figure 1. Through this, it aims to contribute to a deeper understanding of the psychological and social dimensions of women's mobility, autonomy, and empowerment.

**Figure 1. Conceptual Framework**



## METHODS

This study employed a comparative research design to examine differences in self-esteem and assertiveness between motorcycling and non-motorcycling young adult women in Chennai, India. A total of 132 unmarried women aged 18 to 29 years participated, with 66 individuals in each group. Participants were selected using purposive sampling, targeting college students and working professionals. Data collection was conducted both in person and via Google Forms. Inclusion criteria included being female, aged between 18 and 29 years, and, for the motorcyclist group, having at least three months of riding experience. Exclusion criteria encompassed married women, individuals with physical or mental disabilities, and those who participated in professional motorcycle racing. Sample size estimation was based on power analysis conducted using G\*Power 3.1 software (Faul et al., 2009). All participants were briefed about the purpose of the study and gave informed consent prior to participation.

The instruments used in this study included the Rosenberg Self-Esteem Scale (RSES) and the Rathus Assertiveness Schedule (RAS), along with a demographic questionnaire. The RSES, developed by Rosenberg (1965), is a 10-item measure of global self-esteem using a 4-point Likert scale ranging from "strongly agree" to "strongly disagree," with five items reverse scored. It has demonstrated strong internal consistency ( $\alpha = .77$  to  $.88$ ) and test-retest reliability ( $r = .82$  to  $.85$ ), and shows significant negative correlations with related constructs such as anxiety ( $r = -.64$ ), depression ( $r = -.54$ ), and anomie ( $r = -.43$ ), indicating good construct validity (Rosenberg, 1965; Blascovich & Tomaka, 1991). The RAS, developed by

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Rathus (1973), consists of 30 items designed to measure assertive behaviour, covering a range from passive to aggressive tendencies. Certain items are reverse scored, and higher scores indicate greater assertiveness. Both tools have been widely validated in psychological research and are suitable for use with young adult populations.

Participants were provided with clear instructions and assured of anonymity and confidentiality. They were asked to answer all questions honestly and were encouraged not to overthink any item. The average time for completion ranged from 15 to 29 minutes. Ethical procedures were strictly followed, including informed consent, voluntary participation, and the right to withdraw at any stage. Participants who exhibited low levels of self-esteem or assertiveness were offered brief supportive counselling. Data were analysed using z-tests for independent samples to determine whether significant differences existed between motorcycling and non-motorcycling groups on the variables of interest. All procedures adhered to ethical research practices in accordance with the Declaration of Helsinki.

### RESULTS

**Table 1. Shows the difference of mean and Standard Deviation for Self-esteem among motorcycling and non-motorcycling young adult women.**

Self Esteem	N	Mean	SD	“t”	“p”
Motorcycling women	66	3.41	0.23	8.72	.000
Non-motorcycling women	66	2.32	0.97		

*P* < 0.01 \* *t* value is significant at 0.01

An independent samples t-test was conducted to examine differences in self-esteem scores between motorcycling and non-motorcycling young adult women. As presented in Table 1, the motorcycling group ( $M = 3.41$ ,  $SD = 0.23$ ) scored significantly higher on self-esteem compared to the non-motorcycling group ( $M = 2.32$ ,  $SD = 0.97$ ). The difference was statistically significant,  $t(130) = 8.72$ ,  $p < .001$ . This indicates a meaningful difference in self-esteem between the two groups, with the motorcycling group reporting higher self-worth and self-confidence. Therefore, the null hypothesis ( $H_1$ ), which stated that there would be no significant difference in self-esteem between the two groups, is rejected.

**Figure 2. Bar diagram depicts the difference in Self-Esteem among motorcycling and Non- motorcycling young adult women**

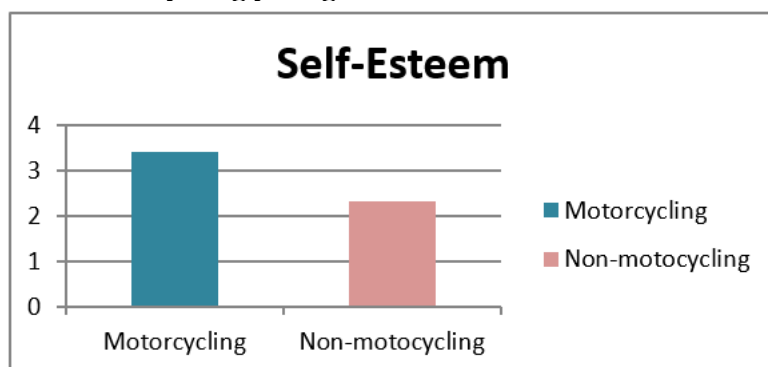


Figure 2 visually represents this difference, illustrating higher self-esteem levels among motorcycling women. The observed difference may be attributed to the empowering nature

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of riding, which is often associated with autonomy, confidence, and self-efficacy. Engaging in an activity traditionally considered masculine may foster a sense of independence and self-worth among women who ride, potentially explaining the elevated self-esteem scores in this group.

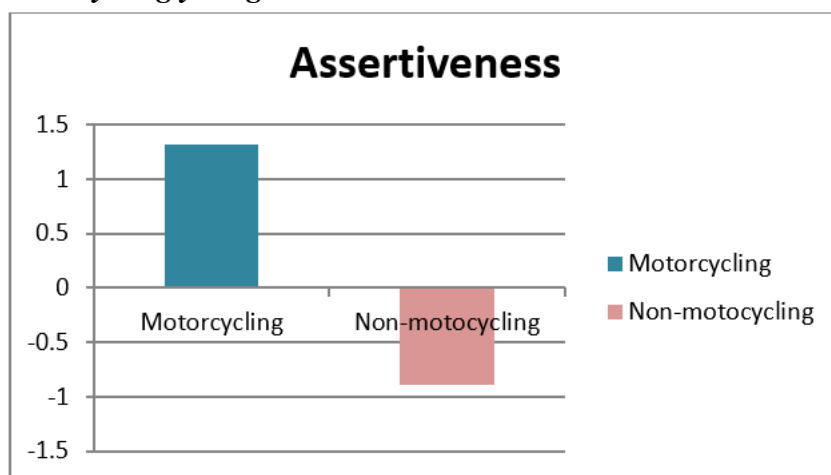
**Table 2. Shows the difference of mean and Standard Deviation for Assertiveness among motorcycling and non-motorcycling young adult women**

Assertiveness	N	Mean	SD	“t”	“p”
Motorcycling women	66	1.32	0.46	12.56	.000
Non-motorcycling women	66	-0.89	1.36		

*P* < 0.01 \* *t* value is significant at 0.01

In terms of assertiveness, an independent samples t-test also revealed a significant difference between the groups (Table 2). The motorcycling group ( $M = 1.32$ ,  $SD = 0.46$ ) demonstrated significantly higher levels of assertiveness than the non-motorcycling group ( $M = -0.89$ ,  $SD = 1.36$ ),  $t(130) = 12.56$ ,  $p < .001$ . Hence, the null hypothesis ( $H_2$ ) regarding assertiveness is also rejected. These findings suggest that motorcycling women may be more confident in expressing their thoughts, standing up for their rights, and managing interpersonal boundaries.

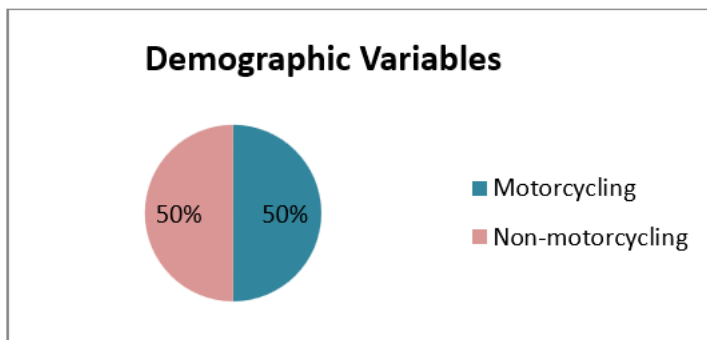
**Figure 3. Bar graph depicts the difference in Assertiveness among motorcycling and Non-motorcycling young adult women.**



As shown in Figure 3, assertive behaviors were more prevalent among riders. This may be due to the greater sense of control, boldness, and self-determination linked to riding behavior. Assertiveness is often enhanced through mastery of challenging tasks, which may include motorcycling. In contrast, the non-motorcycling group may exhibit passive tendencies or avoidance of confrontational situations, possibly linked to social conditioning and lower self-confidence.

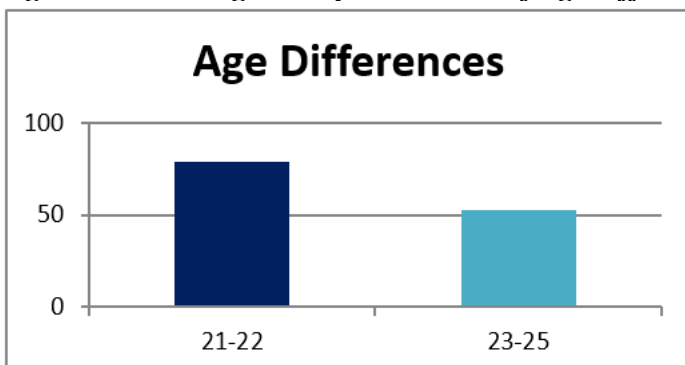
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**Figure 4. Pie Chart representation of demographic variables**

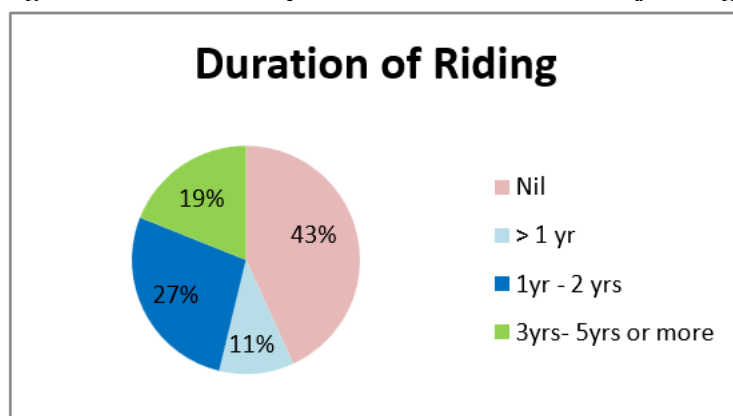


Figures 4 through 7 illustrate relevant demographic distributions. Figure 4 indicates an even split between motorcycling and non-motorcycling participants (50% each;  $N = 66$  per group). Figure 5 shows that the majority of participants ( $n = 79$ ) were aged 21-22, while 53 fell within the 23-25 age group. Figure 6 illustrates riding experience: 50% had no riding experience, while 5% had <1 year, 27% had 1–2 years, and 18% had >3 years. Figure 7 highlights occupational data: among riders, 38 were students and 28 were employed; among non-riders, 35 were students and 31 were employed.

**Figure 5. Bar Diagram representation of age difference**

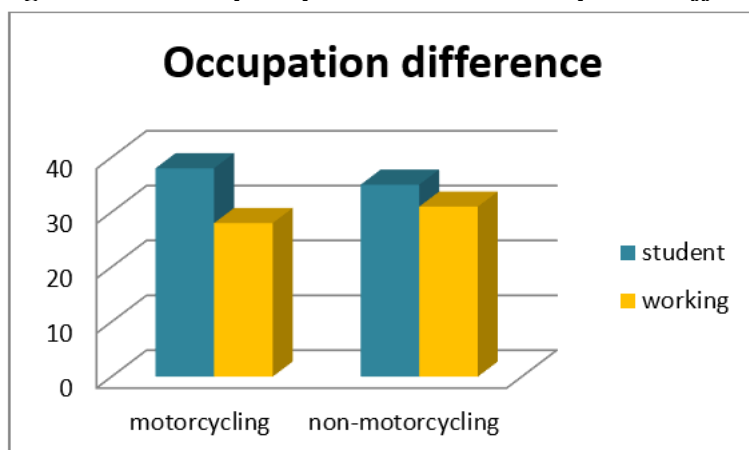


**Figure 6. Pie Chart representation on duration of riding**



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Figure 7. Bar Graph representation on occupation differences



### DISCUSSION

The current study sought to compare self-esteem and assertiveness among motorcycling and non-motorcycling young adult women in Chennai, India. The results revealed statistically significant differences between the two groups across both psychological dimensions. Motorcycling women reported higher self-esteem and assertiveness levels than their non-motorcycling counterparts, affirming the influence of lifestyle practices on psychological attributes.

Self-esteem, as conceptualized by Rosenberg (1965), reflects an individual's overall sense of personal worth. The elevated self-esteem scores among motorcycling participants align with literature suggesting that engaging in physically and mentally challenging activities enhances a sense of competence and autonomy (Deci & Ryan, 2000). Riding a motorcycle demands spatial awareness, confidence, and risk management—traits that reinforce an internal locus of control, a known contributor to high self-esteem (Judge et al., 2002). Moreover, in a sociocultural context where motorcycling is often considered a male-dominated domain, young women who ride may experience greater psychological empowerment through defying gender norms (Schalkwyk et al., 2021).

Assertiveness, measured using the Rathus Assertiveness Schedule (Rathus, 1973), was similarly higher among motorcycling women. Assertiveness encompasses the ability to express emotions, thoughts, and needs confidently without violating others' rights. The results are consistent with Bandura's (1997) self-efficacy theory, which posits that mastering difficult tasks—such as riding enhances one's belief in their ability to handle life's challenges, a core component of assertive behavior. Additionally, engaging in activities that require navigating public spaces, decision-making, and situational risk-taking may further facilitate assertiveness development.

The findings also align with feminist psychological perspectives, which suggest that participation in non-traditional roles can increase women's self-perceptions and social agency (Gilligan, 1982; Moradi & Huang, 2008). The act of motorcycling may provide a symbolic and literal sense of mobility, autonomy, and control, which translates into psychological empowerment. Conversely, the non-motorcycling group may exhibit reduced assertiveness and self-esteem due to internalized social restrictions, fear of judgment, or lack of exposure to autonomy-enhancing experiences.

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Another important aspect is the demographic makeup of the sample. With a relatively young cohort (ages 18-29) and balanced representation in employment status, the findings are likely to reflect a broad cross-section of urban young women in Chennai. Importantly, the study also accounts for riding experience, showing a progression of self-confidence and assertiveness correlated with longer riding durations. This suggests that skill acquisition and confidence-building over time are central to these psychological developments. While this study did not explore causality, the findings are consistent with existing theories in positive psychology, gender role theory, and behavioural learning. It underscores the potential for lifestyle interventions—such as motorcycling or similar autonomy-promoting activities to support mental health and empowerment among young adult women. Furthermore, it supports the growing dialogue around women’s mobility and independence in urban Indian contexts (Gurumurthy & Chami, 2014).

### **Limitations**

Despite the promising results, this study is not without limitations. First, the cross-sectional design limits causal inference; it cannot be determined whether riding leads to higher self-esteem and assertiveness or if individuals with such traits are more likely to ride. Second, the use of purposive sampling may limit generalizability beyond urban educated women in Chennai. Third, self-report measures are subject to social desirability bias. Additionally, the sample size, while statistically adequate, could be expanded to improve external validity and explore subgroup analyses (e.g., based on riding frequency or socioeconomic status).

### **Future Research**

Future studies should consider longitudinal designs to track changes in psychological traits as women gain riding experience over time. Including qualitative interviews could also uncover personal narratives around freedom, identity, and empowerment associated with riding. More of intervention studies could also take place to analyse before and after effects. Moreover, exploring similar variables across different regions of India or in rural areas could reveal the cultural and infrastructural barriers to women’s mobility and psychological well-being. Studies might also examine the role of family support, peer influence, or safety perceptions in moderating the effects of riding on psychological outcomes.

## **CONCLUSION**

In conclusion, the findings of this study demonstrate significant differences in self-esteem and assertiveness between motorcycling and non-motorcycling young adult women. These results suggest that motorcycling may be associated with greater psychological empowerment, potentially due to its demands on skill, autonomy, and confidence. The study contributes to emerging research on women’s mental health and self-development through lifestyle choices, highlighting the importance of encouraging gender-inclusive spaces and promoting self-efficacy through alternative mobility practices.

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***Conflict of Interest***

The author(s) declared no conflict of interest.

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