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The Influence of Smartphone Usage on The Self-Esteem of Prospective Teachers

Ezhilarasan Gunasekaran,

Associate Professor of Education
Government College of Education for Women,
Coimbator, Tamil Nadu, India

Abstract

The present study investigates the influence of Smartphone usage on self-esteem among prospective teachers in Coimbatore district. The study adopted the survey method with a sample of 300 prospective teachers selected through stratified random sampling from various colleges of education. The tools used for the study include a self-developed Smartphone Usage Rating Scale and a standardized Self-esteem Inventory developed by Karunanidhi (1996). Statistical techniques such as mean, standard deviation, t-test, ANOVA, chi-square test, and correlation were employed for data analysis. The findings revealed that there is no significant difference in Smartphone usage with respect to gender and type of institution, whereas significant differences were observed based on locality and marital status. The study also revealed that there is no significant difference in self-esteem based on gender, marital status, and type of institution, while locality showed significant differences. Further, the study found a significant positive relationship between smartphone usage and self-esteem among prospective teachers. The findings highlight the importance of balanced smartphone usage in enhancing self-esteem and promoting the personal and professional development of prospective teachers.

Keywords: Smartphone usage, self-esteem, prospective teachers, teacher education, social media, digital competence.

1. Introduction

In the modern digital age, Smartphone have become an inseparable part of everyday life. They are widely used for communication, accessing information, entertainment, social networking, and educational purposes. Among prospective teachers, Smartphone play a vital role in supporting academic activities, online learning, and interaction with peers and educators. The rapid growth of Smartphone technology has significantly influenced the lifestyle, behaviour, and learning habits of students in teacher education institutions.

At the same time, self-esteem is an important psychological factor that influences an individual's confidence, self-worth, emotional stability, and social adjustment. Prospective teachers with healthy self-esteem are more likely to develop positive attitudes toward teaching and perform effectively in their professional careers. However, excessive Smartphone usage, social media exposure, online comparisons, and digital dependency may influence self-esteem either positively or negatively.

The increasing use of Smartphone among prospective teachers has created a need to examine how Smartphone usage affects their self-esteem. Understanding this relationship is important because future teachers are expected to maintain emotional balance, confidence, and responsible digital behaviour. Therefore, the present study attempts to investigate the influence of Smartphone usage on self-esteem among prospective teachers.

Literature Review

The review of related literature indicates that several studies have examined Smartphone usage and self-esteem among prospective teachers, students and adolescents.

Ratanasiripong, P.,et al., (2024) have examined the predictors of mental health including self-esteem and Smartphone addiction among secondary school students in Thailand using a survey method. The study aimed to analyse how psychological variables influence student well-being. Data were collected from a large sample using standardized mental health and self-esteem scales. Statistical analysis revealed that higher Smartphone addiction was associated with lower self-esteem and increased stress levels. Students with strong self-esteem showed better emotional stability. The findings highlighted the protective role of self-esteem in mental health. The study concluded that reducing Smartphone usage can improve students' psychological well-being.

Ceylan, B.,et al., (2024) have conducted a study on self-esteem, digital literacy, and professional competence among dental students. The objective was to identify relationships among these variables using a descriptive survey design. Data were collected from 285 students through standardized tools. Correlation analysis showed a significant positive relationship between self-esteem and professional competence. Students with higher digital literacy also demonstrated better confidence levels. Gender differences were minimal in self-esteem levels. The study emphasized the role of digital skills in enhancing self-worth. It concluded that both self-esteem and digital literacy contribute to professional development of a budding student.

Liang, X.,et al., (2024) have performed a meta-analysis on the relationship between self-esteem and mobile phone addiction among adolescents. The study analysed data from multiple research papers involving large sample sizes. Results revealed a consistent negative correlation between self-esteem and mobile phone addiction. Adolescents with lower self-esteem were more prone to addictive behaviors. Moderator analysis indicated age as a significant influencing factor. The findings confirmed that psychological variables play a key role in technology use. The study highlighted the need for awareness programmes. It concluded that improving self-esteem can reduce mobile phone addiction in the long run.

Chen, C., et al., (2023) have studied the relationship between self-esteem and mobile phone addiction among college students. The study aimed to analyse mediating variables like peer relationships and social avoidance. Data were collected using standardized questionnaires. Results showed that self-esteem negatively predicted mobile phone addiction. Social avoidance acted as a mediator in this relationship. Students with low self-esteem were more socially withdrawn in real life. Peer relationships also influenced Smartphone dependency. The study emphasized psychological mechanisms behind addiction. It concluded that enhancing self-esteem requires reduced mobile phone addiction.

Acun, I.(2023) has examined self-esteem, trust, life satisfaction, and social media use among university students. The objective was to identify relationships among these variables. Data were analysed using correlation and regression techniques. Results indicated a negative relationship between social media usage and self-esteem. Students with higher trust and life satisfaction showed better self-

esteem. Social media overuse reduces psychological well-being. The study highlighted the role of balanced usage. It concluded that excessive social media negatively affects self-esteem.

Minnelkodi, M., & Bai, M.(2006) have conducted a study of Self-esteem of Annamalai University students. The objectives of this study are to find out if there is any significant difference in the Self-esteem of male and female students, Day scholars and hostellers Professional and Non-Professional students studying in Annamalai University. As many as 96 Annamalai university students were selected purposive and this consists 35 female and 61 male students and 44 day scholars and 52 hostlers and 32 professional and 64 non-professional students. The multidimensional Self-esteem inventory Standardized by Karunanidhi (1996) was used in this study. There is no significant difference between mean Self-esteem scores of male and female students studying in Annamalai University. There is no significant difference between mean Self-esteem scores of day scholars and hostellers studying in Annamalai University. There is any significant difference between mean Self-esteem scores of Professional students and non-professional students studying in Annamalai University.

These studies collectively indicate that Smartphone usage and digital behaviour have a strong influence on self-esteem and psychological well-being among prospective teachers.

Significance Of The Study

Smartphone usage of future teachers plays the main role in educating young minds. Smartphones are useful for prospective teachers because they can help with communication, assessment and access to information. Prospective teachers can use Smartphone to improve collaboration between students, teachers, parents and the school community. This study is significant because it explores the relationship between Smartphone usage and self-esteem among prospective teachers. It provides insights into how digital habits influence personal development. The findings of this study may help educators and institutions create awareness about balanced Smartphone usage and promote healthy self-esteem among future teachers.

For prospective teachers, self-esteem is crucial as it directly impacts their ability to effectively teach, positively influence students, and create a supportive learning environment a prospective teacher with high self-esteem is more likely to feel confident in their abilities, which can lead to better classroom management, positive student interactions, and a greater sense of fulfilment in their role. Ultimately contributing to improved student learning outcomes. Hence, the investigator being interested studied the Influence of Smartphone usage on Self-esteem of Prospective Teachers. Self-esteem improves the prospective teacher's self-confidence and self-reliance. Hence the investigator interested to study Influence of Smartphone Usage on Self-Esteem of Prospective Teachers.

Statement Of The Problem

The Influence of Smartphone Usage on the Self-Esteem of Prospective Teachers.

Operational Definition

For the purpose of the present study, the following terms are operationally defined

Smartphone Usage

According to the investigator, the Smartphone Usage refers to the way a person uses a Smartphone, including how often, for how long, and for what kind of activities such as communication, learning, social networking and entertainment.

Self-Esteem

According to the investigator, self-esteem refers to the individual's overall sense of self-competence and self-worth in private and public setting.

Prospective Teachers

According to the investigator, the Prospective Teachers refers to students enrolled in the B.Ed. Programme who are undergoing professional teacher training.

Objectives Of The Study

- To find the level of Smartphone usage among prospective teachers.
- To find out the Smartphone usage of prospective teachers with regard to the following variables:
  Gender, Age, Locality of the college, Marital status, Type of Family, Type of the Institution, Subject, Degree, Father's Occupation, Mother's Occupation, Father's Qualification, Mother's Qualification, Type of Residence and Family Annual Income.
- To find the level of self-esteem among prospective teachers.
- To find out the self-esteem of prospective teachers with regard to the following variables:
  Gender, Age, Locality of the college, Marital status, Type of Family, Type of the Institution, Subject, Degree, Father's Occupation, Mother's Occupation, Father's Qualification, Mother's Qualification, Type of Residence and Family Annual Income.
- To find out the relationship between Smartphone usage on self-esteem among prospective teachers.

Null Hypotheses

The following are the major null hypotheses framed for the present investigation. The following hypotheses are framed for the present study.

1. There is no significant difference between male and female prospective teachers in their Smartphone usage.
2. There is no significant difference between rural and urban prospective teachers in their Smartphone usage.
3. There is no significant difference between married and unmarried prospective teachers in their Smartphone usage.
4. There is no significant difference among prospective teachers in Government, Government aided and Self-financing colleges in their Smartphone usage.
5. There is no significant association between the father's occupation of the prospective teachers and their Smartphone usage.
6. There is no significant association between the mother's occupation of the prospective teachers and their Smartphone usage.
7. There is no significant association between the family's annual income of the prospective teachers and their Smartphone usage.
8. There is no significant difference between male and female prospective teachers in their self-esteem.

9. There is no significant difference between rural and urban prospective teachers in their self-esteem.
10. There is no significant difference between married and unmarried prospective teachers in their self-esteem.
11. There is no significant difference among prospective teachers in Government, Government aided and Self-financing colleges in their self-esteem.
12. There is no significant association between the father's occupation of the prospective teachers and their self-esteem.
13. There is no significant association between the mother's occupation of the prospective teachers and their self-esteem.
14. There is no significant association between the family annual income of the prospective teachers and their self-esteem.
15. There is no significant correlation between Smartphone usage and self-esteem of prospective teachers.

Method Used

In the present study, the investigator used the descriptive survey method to study the Influence of Smartphone Usage on Self-Esteem of Prospective Teachers.

Population For The Study

The population of the study consists of prospective teachers in Coimbatore district, Tamil Nadu, India.

Sample For The Study

The investigator selected 300 prospective teachers from 8 Colleges of Education in Coimbatore district, Tamil Nadu, India.

Tools Used

Structured questionnaires were used to measure Smartphone usage and self-esteem based on defined dimensions.

1. Personal Data
2. Smartphone Usage – Rating Scale (self-made tool).
3. Self-esteem Inventory developed by S. Karunanidhi (1996)

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Statistical Techniques Used

The statistical Techniques Mean, Median, Standard Deviation, Percentage analysis,
t-test, ANOVA, and Chi-square test were used for analysis and testing the hypotheses.

Data Analysis And Interpretation Of The Study

Table 1
Level Of Smartphone Usage

Variable	Low		Moderate		High	
Level of Smartphone usage	N	%	N	%	N	%
	45	15.0%	200	66.7%	55	18.3%

It is inferred from the above Table that out of 300 prospective teachers, 45 (15.0%) have low, 200 (66.7%) have moderate, and 55 (18.3%) have high level of Smartphone usage. This indicates that the majority of the prospective teachers possess a moderate level of Smartphone usage. The findings show that most of the prospective teachers use Smartphones moderately for academic and personal purposes. Only a smaller number of respondents fall under the low and high level categories of Smartphone usage.

Figure 1
Level Of Smartphone Usage Of Prospective Teachers

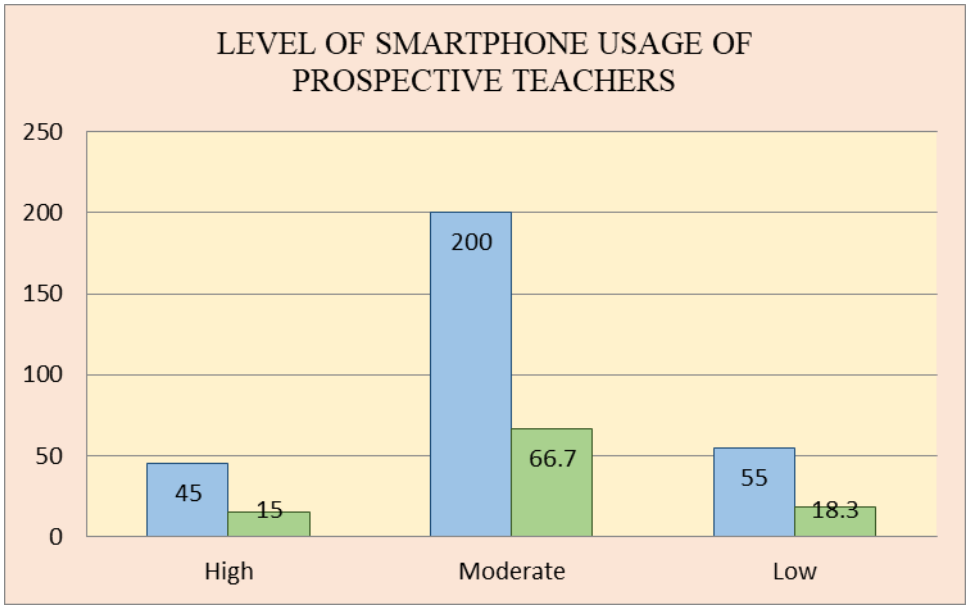


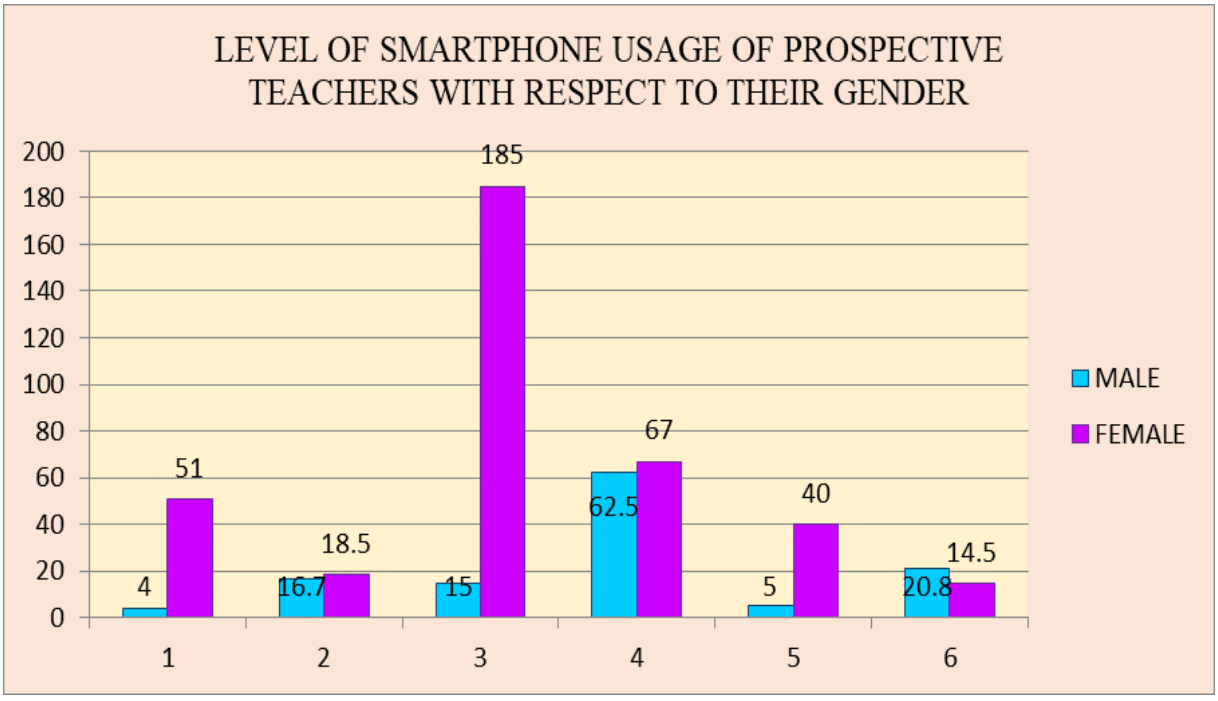
Table 2

Level Of Self-Esteem

Variable	Low		Moderate		High	
Level of Self-Esteem	N	%	N	%	N	%
	40	13.3%	197	65.7%	63	21.0%

It is inferred from the above Table 2 that out of 300 prospective teachers, 40 (13.3%) have low, 197 (65.7%) have moderate, and 63 (21.0%) have high level of self-esteem. This indicates that the majority of the prospective teachers possess a moderate level of self-esteem. The findings reveal that most of the prospective teachers have an average level of confidence and self-worth. Only a smaller number of respondents fall under the low and high level categories of self-esteem.

Figure 2
Level Of Smartphone Usage Of Prospective Teachers With Respect To Their Gender



Null Hypotheses

There is no significant difference between gender, locality and marital status of prospective teachers in their Smartphone usage.

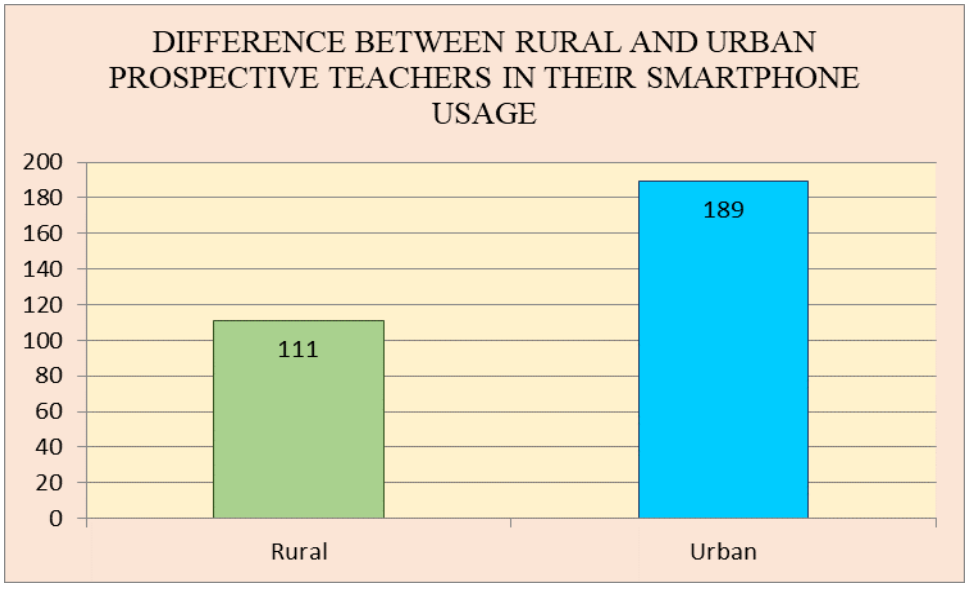
Table 3
Difference Between Gender, Locality And Marital Status Of Prospective Teachers In Their Smartphone Usage

Demographic Variable	Category	N	Mean	SD	't' value	Table value	Remarks at 5% Level
GENDER	Male	24	148.58	18.545	0.326**	1.96	Not Significant
	Female	276	147.47	15.808			
LOCALITY	Rural	111	152.18	20.327	3.921*	1.96	Significant
	Urban	189	144.85	15.764			
MARITAL STATUS	Married	54	151.57	17.224	2.045*	1.96	Significant
	Unmarried	246	146.68	15.633			

** - Not Significant at 0.05 level * - Significant at 0.05 level

From the above table 3, it is inferred that the calculated 't' value for gender (0.326) is less than the table value at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant difference in the mean scores with respect to gender. Similarly, the calculated 't' value for locality (3.921) and marital status (2.045) are greater than the table value at 0.05 level of significance. Hence, the null hypothesis is rejected. Thus, there is a significant difference in the mean scores with respect to locality and marital status. The findings indicate that locality and marital status have an influence on the variable under study, whereas gender does not show any influence. Therefore, prospective teachers differ significantly based on locality and marital status.

Figure 3
Difference Between Rural And Urban Prospective Teachers In Their Smartphone Usage



Null Hypothesis

There is no significant difference between types of institution of prospective teachers in their Smartphone usage.

Table 4

Difference Between Types Of Institution Of Prospective Teachers In Their Smartphone Usage

Category	Source of Variation	Sum of squares	df	Mean square	'F' value	Table value	Remarks at 5% Level
Types of Institution	Between Groups	599.808	2	299.904	1.171**	3.00	Not Significant
	Within Groups	76058.112	297	256.088			

** - Not Significant at 0.05 level * - Significant at 0.05 level

From the above table, it is inferred that the calculated 'F' value for types of institution is 1.171, which is less than the table value of 3.00 at the 5% level of significance. Hence, the null hypothesis is accepted. This indicates that there is no significant difference in the mean scores among prospective teachers studying in different types of institutions. Therefore, the type of institution does not significantly influence the variable under study. The findings reveal that prospective teachers, irrespective of the type of institution in which they study, possess almost similar levels in the variable studied. This may be due to equal exposure to academic facilities and learning opportunities provided by the institutions.

Null Hypotheses

There is no significant association between Smartphone usage and parents' occupation and family annual income.

Table 5

Association Between Smartphone Usage And Parents' Occupation And Family Annual Income

Variable	df	Calculated Chi-Square (x^2)	Table Value	Remarks at 5% Level
Father's Occupation	6	1.143**	12.59	Not Significant
Mother's Occupation	6	4.317*	12.59	Significant

Family Annual Income	4	8.832**	12.59	Not significant

** - Not Significant at 0.05 level * - Significant at 0.05 level

From the above table, it is inferred that the calculated Chi-square value for father's occupation (1.143) is less than the table value (12.59) at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant association between father's occupation and the variable under study. Similarly, the calculated Chi-square value for mother's occupation (4.317) is also less than the table value (12.59) at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant association between mother's occupation and the variable under study. Further, the calculated Chi-square value for family annual income (8.832) is less than the table value (12.59) at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant association between family annual income and the variable under study.

Null Hypotheses

There is no significant difference between gender, locality and marital status of prospective teachers in their Self-esteem.

Table 6

Difference Between Gender, Locality And Marital Status Of Prospective Teachers In Their Self-Esteem

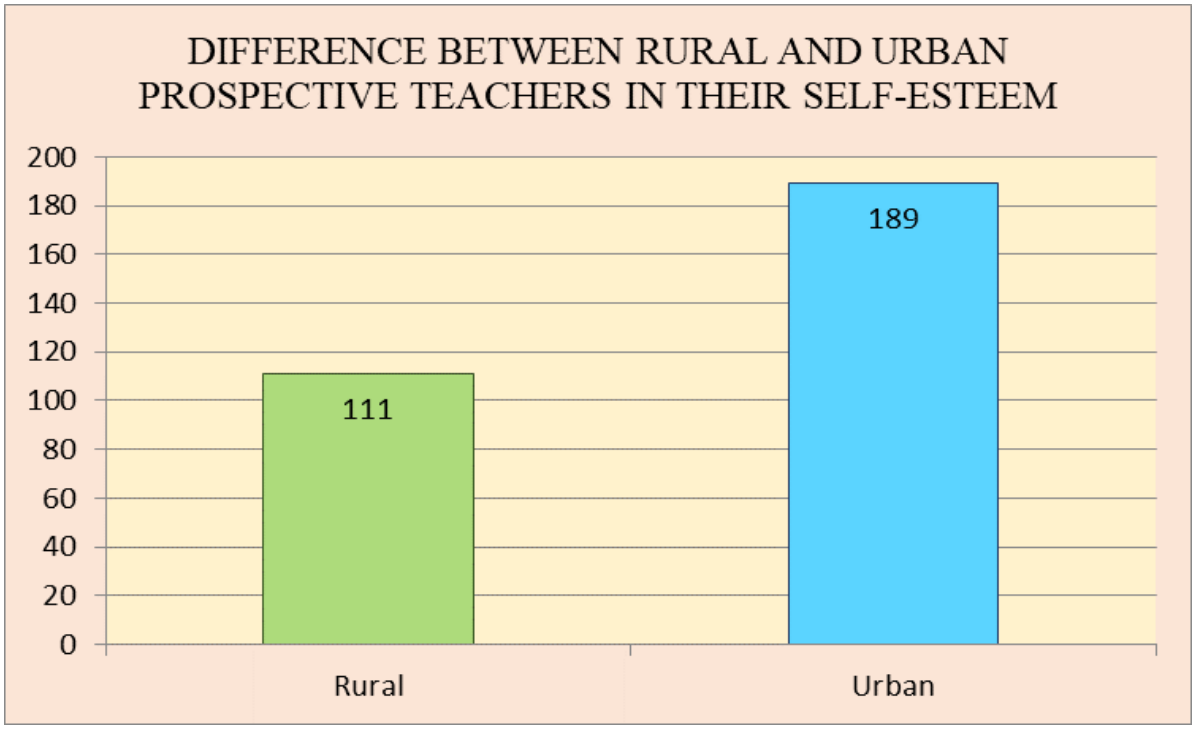
Demographic Variable	Category	N	Mean	SD	't' value	Table value	Remarks at 5% Level
GENDER	Male	24	258.79	28.289	0.014**	1.96	Not Significant
	Female	276	258.71	29.119			
LOCALITY	Rural	111	265.10	23.830	2.960*	1.96	Significant
	Urban	189	254.96	31.108			
MARITAL STATUS	Married	54	262.37	30.801	1.023**	1.96	Not Significant
	Unmarried	246	257.91	28.601			

** - Not Significant at 0.05 level * - Significant at 0.05 level

From the above table, it is inferred that the calculated 't' value for gender (0.014) is less than the table value at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant difference in the mean scores with respect to gender. Similarly, the calculated 't' value for locality (2.960) is greater than the table value at 0.05 level of significance. Hence, the null hypothesis is rejected.

Thus, there is a significant difference in the mean scores with respect to locality. Further, the calculated‘t’ value for marital status (1.023) is less than the table value at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant difference in the mean scores with respect to marital status. The findings indicate that locality has a significant influence on the variable under study, whereas gender and marital status do not show any significant influence.

Figure 4
Difference Between Rural And Urban Prospective Teachers In Their Self-Esteem



Null Hypothesis
There is no significant difference between types of institution of prospective teachers in their Self-esteem.

Table 7
Difference Between Types Of Institution Of Prospective Teachers In Their Self-Esteem

Category	Source of Variation	Sum of squares	df	Mean square	‘F’ value	Table value	Remarks at 5% Level
Types of Institution	Between Groups	3790.813	2	1895.406	2.272**	3.00	Not Significant
	Within Groups	247784.534	297	834.29			

** - Not Significant at 0.05 level * - Significant at 0.05 level

From the above table, it is inferred that the calculated 'F' value for types of institution (2.272) is less than the table value at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant difference in the mean scores with respect to types of institution. The findings indicate that the type of institution does not significantly influence the variable under study and the respondents possess almost similar levels irrespective of the type of institution.

Null Hypotheses

There is no significant association between Self-esteem and parents' occupation and family annual income.

Table 8
Association Between Self-Esteem And Parents' Occupation
And Family Annual Income

Variable	df	Calculated Chi-Square (x^2)	Table Value	Remarks at 5% Level
Father's Occupation	6	0.686**	12.59	Not Significant
Mother's Occupation	6	3.715**	12.59	Not Significant
Family Annual Income	4	5.646**	12.59	Not Significant

** - Not Significant at 0.05 level * - Significant at 0.05 level

From the above table, it is inferred that the calculated Chi-square value for father's occupation is 0.686, which is less than the table value of 12.59 at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant association between father's occupation and the variable under study. Similarly, the calculated Chi-square value for mother's occupation is 3.715, which is less than the table value of 12.59 at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant association between mother's occupation and the variable under study. Further, the calculated Chi-square value for family annual income is 5.646, which is less than the table value of 12.59 at 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant association between family annual income and the variable under study.

Null Hypothesis

There is no significant correlation between Smartphone usage and Self-esteem of prospective teachers.

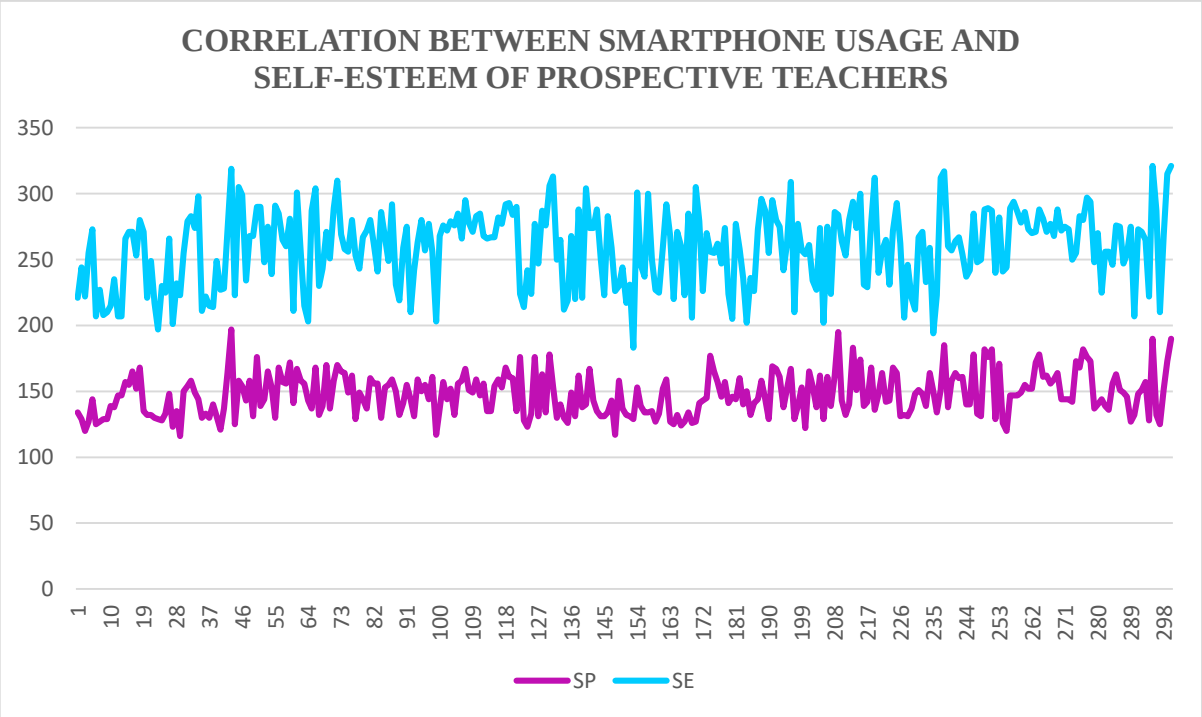
Table 9
Correlation Between Smartphone Usage And Self-Esteem Of Prospective Teachers

Variable	No.	r	Level of Significance	Table value	Remarks at 5% Level
Smartphone Usage	300	0.596	0.05	0.088	SIGNIFICANT
Self-esteem					

** - Not Significant at 0.05 level * - Significant at 0.05 level

From the above table, it is inferred that the calculated 'r' value between Smartphone usage and self-esteem is 0.596, which is greater than the table value of 0.088 at 0.05 level of significance. Hence, the null hypothesis is rejected. Thus, there is a significant positive relationship between Smartphone usage and self-esteem among prospective teachers. The findings indicate that an increase in Smartphone usage is associated with an increase in the level of self-esteem among prospective teachers.

Figure 5
Correlation Between Smartphone Usage And Self-Esteem Of Prospective Teachers



Findings Of The Present Study

The findings show that most of the prospective teachers use Smartphone moderately for academic and personal purposes. The findings reveal that most of the prospective teachers have an average level of confidence and self-worth.

Based on the analysis and interpretation of data regarding Influence of Smartphone usage on self-esteem of prospective teachers, the following findings are drawn:

1. There is no significant difference between male and female prospective teachers in their Smartphone usage.
2. There is a significant difference between rural and urban prospective teachers in their Smartphone usage.
3. There is a significant difference between married and unmarried prospective teachers in their Smartphone usage.
4. There is no significant difference among prospective teachers studying in Government, Government-aided, and Self-financed colleges in their Smartphone usage.
5. There is no significant association between father's occupation and Smartphone usage of prospective teachers.
6. There is no significant association between mother's occupation and Smartphone usage of prospective teachers.
7. There is no significant association between family annual income and Smartphone usage of prospective teachers.
8. There is no significant difference between male and female prospective teachers in their self-esteem.
9. There is a significant difference between rural and urban prospective teachers in their self-esteem, with rural students showing higher self-esteem.
10. There is no significant difference between married and unmarried prospective teachers in their self-esteem.
11. There is no significant difference among prospective teachers studying in Government, Government-aided, and Self-financing colleges in their self-esteem.
12. There is no significant association between father's occupation and self-esteem of prospective teachers.
13. There is no significant association between mother's occupation and self-esteem of prospective teachers.
14. There is no significant association between family annual income and self-esteem of prospective teachers.
15. There is a significant positive relationship between Smartphone usage and self-esteem of prospective teachers.

Recommendations

1. It is recommended that prospective teachers be guided to use Smartphone in a balanced and purposeful manner to support both academic growth and personal development.
2. Teacher education institutions should organize awareness programmes, workshops, and counselling sessions on responsible Smartphone usage and its impact on self-esteem.

3. Curriculum planners may incorporate digital well-being and responsible technology usage topics into B.Ed. programmes to promote healthy usage habits among prospective teachers.
4. Institutions should encourage the use of Smartphone for academic purposes such as accessing educational resources, e-learning platforms, and collaborative learning.
5. Proper guidelines should be framed for the effective and ethical use of Smartphone, especially in relation to screen time management and social media usage.
6. Prospective teachers should be trained to develop self-regulation skills to avoid excessive Smartphone dependency and maintain a positive self-image.
7. Continuous monitoring and support systems should be established to help students manage Smartphone usage management and improve their self-esteem levels.

Limitations Of The Study

The study is limited to a specific sample size and selected variables. Results may not be generalized beyond the study group.

- This research is geographically limited to Coimbatore district of Tamil Nadu, India only.
- This research is limited to 300 prospective teachers.
- This research is limited for prospective teachers studying in college of education in the academic year 2024–2026 and 2025–2027 only.

Conclusion

The present study concludes that Smartphone usage has a significant influence on self-esteem among prospective teachers. While demographic variables such as gender and type of institution do not significantly affect Smartphone usage and self-esteem, locality and marital status show certain differences. The study further reveals that balanced and meaningful Smartphone usage may positively contribute to the self-esteem of prospective teachers. Therefore, prospective teachers should be encouraged to utilize Smartphone responsibly to support both academic achievement and psychological well-being.

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