Effect of Social Media on Academic Performance and Self-Esteem in Female College Students

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Abstract: *The present study was undertaken to assess the effect of social media on academic performance and self esteem which making any variation in college female students during their premenstrual period and menstrual period. The evolution of internet technology has led to its use as the best medium for communication and to explore the wide area of knowledge. At the same time, the stressful life events are significantly associated with the consumption of the internet for mood management and social compensation motives. Total of 100 college females were collected through the questionnaires. Based on their response to the questionnaire they divided into 2 groups. Group A using social media continuously for above 3 hours and group B using below 3 hours. The study shows that there is a positive correlation between social media and academic performance whereas social media and self esteem has negative correlation during premenstrual period and menstrual period. This study also shows significant high use of social media during menstrual period than premenstrual period.*

Keywords: premenstrual period, menstrual period, social media, academic performance, self esteem

1. Introduction

The world has been changed rapidly by the evolution of technology. The evolution of internet technology has led to its use as the best medium for communication and to explore the wide area of knowledge. Social network site include what's app, Twitter, I Phone, Google, I Phone and Android. Social networking sites though has been recognized a very important resource for education however students use social medias for selfie, fun, to kill time to meet existing friends or to make new one.[1]Those who have high positive collective self-esteem were strongly motivated to communicate with peer group via social media. Negative collective self-esteem is the other side, social compensation and social identity gratifications.[2]The stressful life events are significantly associated with the consumption of the internet for mood management and social compensation motives.[3] Many studies report that women's performance and affective patterns fluctuate with their menstrual cycle. Poor mental performance is mostly additional common throughout menstruation and for many days before onset. Research on academically advanced girls, however, has shown that their scholastic performance is a smaller amount possible to exhibit the standard expelling decline. They are motivated enough to form a compensatory effort on "off-days." Thus the current research was designed to test whether, among college women, academic performance fluctuates with the menstrual cycle[4.]Adolescents who engaged day and night more in social media and those were more emotionally invested in social media developed poorer sleep quality, lower self-esteem and higher levels of anxiety and depression.[5] At ovulation, the average woman experiences greatest feelings of self-esteem and self-confidence and at premenstruation, they experiences a significant increase in anxiety level for two consecutive cycles.[6] This study aims to examine the level of female college student's effect to social media and influence on academic performance and self-esteem in premenstrual period and menstrual period.

2. Materials and Methods

The present study was conducted in department of physiotherapy and department of Physiology, Little Flower Hospital and Research Centre, Angamaly, Kerala in between July 2018 – October 2018 .The present study was approved by institutional ethical committee of Little Flower Hospital and Research Centre, Angamaly. No EC/21/2017 Permission also obtained from LIMSAR to conduct the study

Participants
Total of 100 female college students were collected. Data collections were by convenient sampling.

Inclusion Criteria
- Female college students between the age of 18 to 22 yrs
- Willing participants
- Students with Mobile phones usage more than 3hours
- Students with Mobile phones usage less than 3 hours

Exclusion Criteria

- Unwilling participants
- Students not using social media
- Under any medications
- Females with irregular menstruation

3. Methods

By using the questionnaire:-
- "The effect of social media on teenager's survey", the effect of cell phone use college students will be assessed. Based on their response to the questionnaire they will be divided into 2 groups. Group A using social media

continuously for above 3 hours and group B using below 3 hours

- A well-constructed questionnaire titled "Social Media and Academic Performance of Students Questionnaire" (SMAAPOS) and students academic measures from their class test will be used to assess the effect of social media on the tutorial performance of the scholars.[1] The questionnaire was divided in to many part like students addictiveness to social network and academic performance , exposure of students to social media network and their academic performance, use of social media and students academic performance. Last two part of the questionnaire included the questions about use of social media in female students during menstrual period and another for premenstrual period to analyses the changes in academic performance and self esteem.
- Rosenberg self-esteem scale is used to assess self-esteem of each student.[3] Standard self –esteem scale used in both premenstrual and menstruation period to understand the variation among girls.

4. Statistical Analysis

Data was analyzed by SPSS 22.0. Statistical test applied are Pearson's correlation coefficient and followed by paired t test will be used to observe the correlation between the variables. P value <0.05 was considered as significant.

5. Results

Code :- More than 3 hour –group 1; Less than 3 hour- group 2; Premenstrual data- name end with 1

1. Descriptive Analysis

Total Samples
The basic statistical values of the descriptive analysis of the different variables under the study has been given in the table 1.1

Table 1.1: Descriptive Statistics of total sample (Premenstrual)

Variables	N	Mean	Std. Deviation	Skewness	Kurtosis
Academic Performance (Premenstrual)	100	15.8500	2.36691	-0.662	-0.134
Self Esteem (Premenstrual)	100	20.1050	2.27669	0.630	0.704
Social Media Use (Premenstrual)	100	5.4100	1.20107	-2.590	8.524

The table 1.1 shows the mean value of academic performance with social media in premenstrual period is 15.85 with the standared deviation 2.366.The value of skewness and kurtosis is - 0.662 and -0.134 respectively.It shows that the scores are more or less normally distributed.
The mean score of self esteem when using social media in premenstrual period is 20.105 with standard deviation 2.276. The value of skewness and kurtosis is 0.630 and 0.704 respectively. It shows that the scores are normally distributed.

The mean value of social media use in premenstrual period is 5.410 with standard deviation 1.201. The value of skewness and kurtosis is -2.590 and 8.524 respectively. It shows that the scores are not normally distributed.

Table 1.2: Descriptive Statistics of total sample (menstrual)

Variables	N	Mean	Std. Deviation	Skewness	Kurtosis
Academic Performance (menstrual)	100	16.7550	3.13440	.290	-.196
Self Esteem (menstrual)	100	21.1200	2.73388	-.315	-.034
Social Media Use (menstrual)	100	5.5825	1.27874	-2.164	7.073

The table 1.2 shows the mean value of academic performance with social media in menstrual period is 16.755 with the standared deviation 3.134.The value of skewness and kurtosis is 0.290 and 0.196 respectively.It shows that the scores are normally distributed
.
The mean value of self esteem when using social media in menstrual period is 21.120 with standard deviation 2.733. The value of skewness and kurtosis is 0.315 and 0.034 respectively. It shows that the scores are normally distributed.

The mean value of social media use in menstrual period is 5.5825 with standard deviation 1.278. The value of skewness and kurtosis is 21.64and 7.073 respectively. It shows that the scores are not normally distributed.
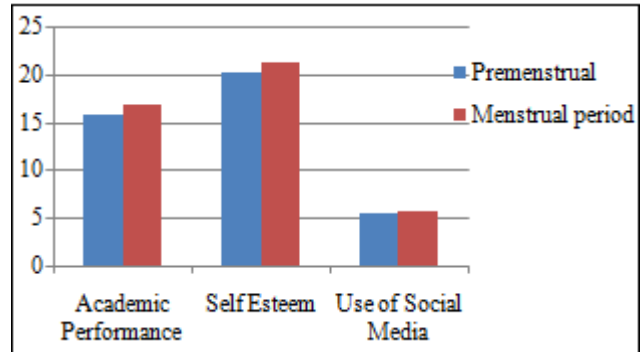

Figure 1: Mean Scores of Variables during premenstrual and menstrual Period

Table 1.3: Descriptive Statistic analysis of college women who use mobile phone more than three hours (Group 1) Premenstrual period

Variables	N	Mean	Std. deviation	skewness	kurtosis
Academic Performance (premenstrual)	50	17.3150	1.37471	-1.180	4.383
Self Esteem (premenstrual)	50	19.3950	1.59407	1.433	3.705
Social Media Use (premenstrual)	50	5.2300	1.09012	-1.821	3.594

The table 1.3 shows the mean score of academic performance in premenstrual period who use social media more than three hours is 17.315 with the standard deviation 1.37471.The value of skewness and kurtosis is -1.374 and

4.383 respectively. It shows that the scores are normally distributed

.The mean score of self esteem of college students when using social media more than three hours in premenstrual period is 19.395 with standard deviation 1.59407. The value of skewness and kurtosis is 1.433 and 3.705 respectively. It shows that the scores are normally distributed.

The mean score of social media use of college students whouse more han 3 hours in premenstrual period is 5.2300 with standard deviation 1.090. The value of skewness and kurtosis is -1.821and 3.594 respectively. It shows that the scores are not normally distributed.

Table 1.4: Descriptive Statistic analysis of college women who use mobile phone more than three hours (Group 1) Menstrual period

	N	Mean	Std. Deviation	Skewness	Kurtosis
Academic Performance	50	18.9400	2.27652	.756	.128
SelfEsteem	50	21.3850	2.09969	-.051	.005
SocialMediaUSe	50	5.5350	1.10427	-1.641	3.836

The table 1.4 shows the mean value of academic performance in menstrual period who use social media more than three hours is 18.940 with the standered deviation 2.27652.The value of skewness and kurtosis is 0.756 and 0.128 respectively. It shows that the scores are normally distributed

The mean value of self esteem of college students when using social media more than three hours in menstrual period is 21.385 with standard deviation 2.099. The value of skewness and kurtosis is -.051 and .005 respectively. It shows that the scores are normally distributed.

The mean value of social media use of college students whouse more han 3 hours in menstrual period is 5.5350 with standard deviation 1.104. The value of skewness and kurtosis is -1.641and 3.836 respectively. It shows that the scores are not normally distributed.
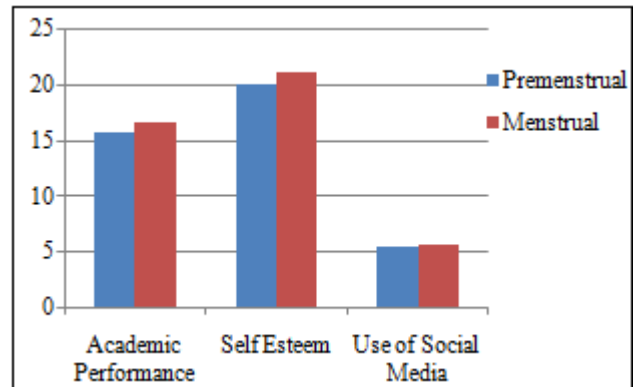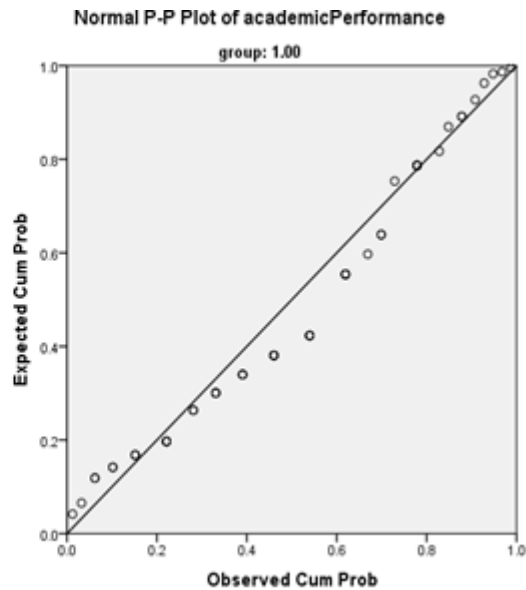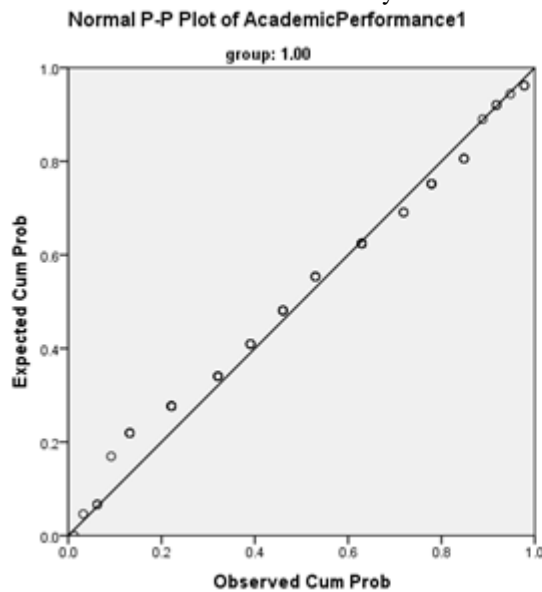

Figure 2: Mean Scores of Variables of group 1 during premenstrual and menstrual Period

Normal P-P Plot of SelfEsteem1 — group: 1.00

Normal P-P Plot of SelfEsteem — group: 1.00

Normal P-P Plot of SocialMediaUse1 — group: 1.00
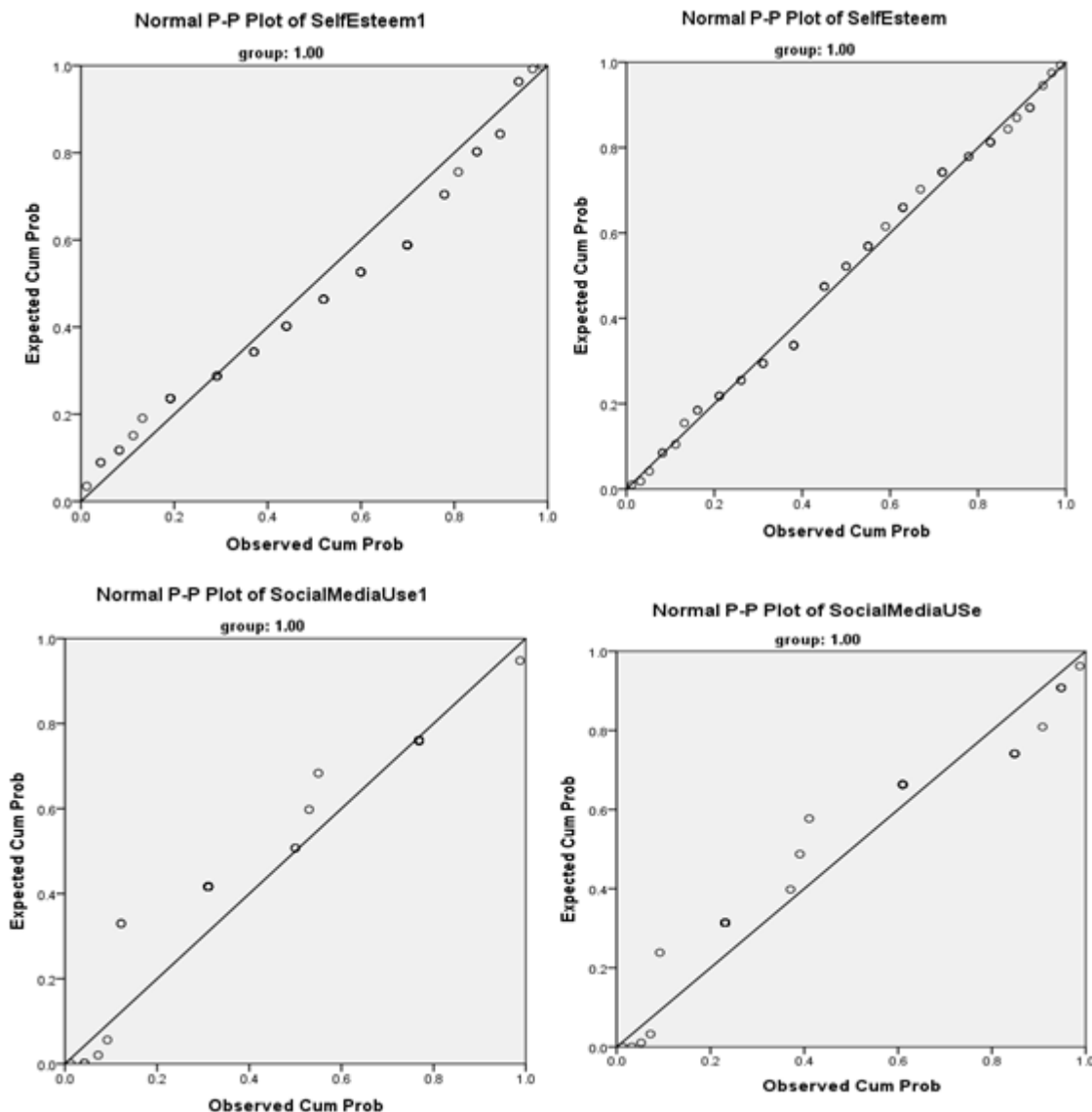

Normal P-P Plot of SocialMediaUSe — group: 1.00

Table 1.5: Descriptive Statistic analysis of college women who use mobile phone less than three hours (Group 2) Premenstrual period

	N	mean	Std.	Skewness	Kurtosis
AcademicPerformance1	50	14.3850	2.24700	-.050	-.179
SelfEsteem1	50	20.8150	2.62728	-.008	.170
SocialMediaUse1	50	5.5900	1.28845	-3.348	13.318

The table 1.5 shows the mean value of academic performance in premenstrual period who use social media less than three hours is 14.385 with the standered deviation 2.247.The value of skewness and kurtosis is -0.050 and -0.179 respectively.It shows that the scores are normally distributed
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The mean value of self esteem of college students when using social media less than three hours in premenstrual period is 20.815 with standard deviation 2.627. The value of skewness and kurtosis is -0.008 and 0.170 respectively. It shows that the scores are normally distributed.

The mean value of social media use of college students who use less than 3 hours in premenstrual period is 5.590 with standard deviation 1.288. The value of skewness and

kurtosis is -3.348 and 13.318respectively. It shows that the scores are not normally distributed.

Table 1.6: Descriptive Statistic analysis of college women who use mobile phone less than three hours (Group 2) Menstrual period

	N	Mean	Std. Deviation	Skewness	Kurtosis
academicPerformance	50	14.5700	2.21891	.706	1.782
SelfEsteem	50	20.8550	3.24788	-.226	-.590
SocialMediaUSe	50	5.6300	1.44211	-2.418	8.127

The table 1.6 shows the mean value of academic performance in menstrual period who use social media less than three hours is 14.570 with the standered deviation 2.218.The value of skewness and kurtosis is 0.706 and 1.782 respectively.It shows that the scores are normally distributed

The mean value of self esteem of college students when using social media less than three hours in menstrual period is 20.855 with standard deviation 3.247. The value of skewness and kurtosis is -0.226 and .-0.590 respectively. It shows that the scores are normally distributed.

The mean value of social media use of college students whouse less han 3 hours in menstrual period is 5.630 with

standard deviation 1.442. The value of skewness and kurtosis is -2.418 and 8.127 respectively. It shows that the scores are not normally distributed.
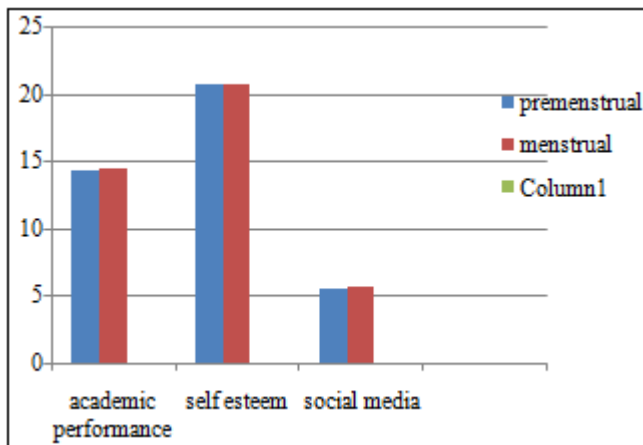

Figure 3: Mean Scores of Variables of group 2 during premenstrual and menstrual Period

Objective 1
Effect of social media Use on academic performance
To identify the effect of social media use on academic performance of college women, correlation analysis has been performed and the results are presented in table 2.1

Correlation

Table 2.1: Correlation between Social Media Use and Academic Performance

	Correlation	P Value
Premenstrual	0.078	0.440
Menstrual	0. 022	0.828

It indicate that during premenstrual period correlation between social media use and academic performance is 0.078 with p value 0.440. It indicate that even though there is positive correlation between social media use and academic performance ,it is not statistically significant. During menstrual period correlation between social media use and academic performance is 0.022 with p value 0.828.It shows positive correlation, but not statistically significant.

Objective 2: Effect of social media on self-esteem
To identify the effect of social media use on self-esteem of college women, correlation analysis has been performed and the results are presented in table 2.2

Table 2.2: Correlation between Social Media Use and Self Esteem

	Correlation	P Value
Premenstrual	-0.024	0. 813
Menstrual	-0.069	0.497

It indicate that during premenstrual period correlation between social media use and self esteem is -0.024 with p value 0.813.It indicate that eve though there is negative correlation between social media use and self -esteem ,it is not statistically significant. During menstrual period correlation between social media use and self esteem is -0.069 with p value 0.497.It shows negative correlation and not statistically significant.

Objective 3: Comparison of social media Use During premenstrual period and menstrual period
To compare the social media use during premenstrual and menstrual period among the college students paired sample t test has been employed .The result result of the analysis has been presented in table 2.3.

Table 2.3: Result of Comparison of social media Use During premenstrual period and menstrual period

Group	N	Mean	SD	t value	P value
Premenstrul	100	5.41	1.201	3.260	0.002
Menstrual	100	5.58	1.278		

The table 2.3 shows the result of comparison of social media use among college female students during premenstrual period and menstrual period. It shows that the mean social media use during menstrual period is5.58 while it is 5.41 during premenstrual period .The table shows the difference is statistically significant. That is the social media use is high during menstrual period.(t = 3.26,p = 0.002)
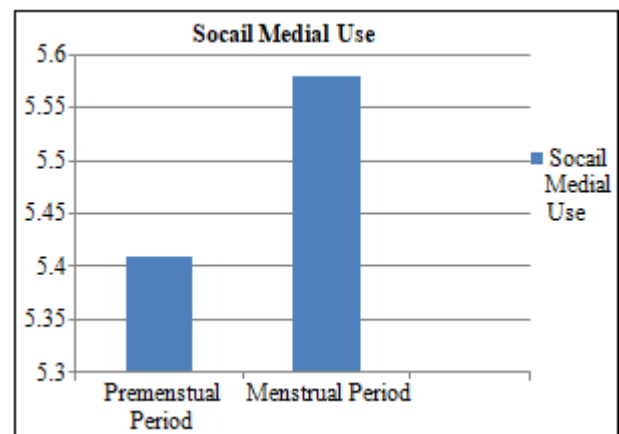

Figure 4: Mean Scores of social media use during premenstrual and menstrual Period

6. Discussion

Social media is a good source to earn knowledge from the world. The current generation is utilizing the maximum benefit from social media for their day to day life .A study conducted by Peter Osharive (2014) showed the big range of scholars in the university was keen about to social media.[1]The findings of the present study depicted a positive correlation between social media and academic performance (M=0.078, p = 0.44) is obtained although it is not significant. The previous study of Willy and Sisson (2006) found that more than 90% tirtiory students use social network for their academic performance.[16] Another study conducted by Kirschner(2010) concluded the over involvement with social media by students can have negative impact on their academic performance.[15]

In the present study a negative correlation was observed between social media and self esteem although it is not significant. Contrasting results were obtained by Marry Ann Liebert (2006) in their study "Stressful life events, motives for web use, and social support among digital youngsters". The findings showed that disagreable life events are considerably related to the consumption of the Internet for

mood variation and social compensation motives which has positive correlation with high significant[3]

.A study conducted by Boyle GJ (1997) indicated that menstrual cycle variables have each positive and negative influence on tutorial learning outcome.[13]Present study observed positive correlation on social media use and academic performance but it is not significant.This study also showed high use of social media during their menstrual period than 5-7 days prior to their menstruation.

In accordance with my present study which also showed high usage of social media in menstrual cycle than premenstrual period among female college students. One of the previous study conducted by Alonso et al (2001) indicated that lack of social support is a important contributer to menstrual symptoms. Lack of social support manifested a lot of symptoms like distress and abdominal pain.[12]

7. Conclusion

Changes in normal body during menstrual cycle as a result of physiological alterations controling our day today life. Our study concluded that there is a positive correlation in social media use for academic performance and negative correlation in self-esteem during premenstrual period and menstrual period. And this study shows significant variation in social media use in menstrual cycle. The use of social media is high in menstrual period. This work certainly merits further studies with more parameters and higher sample size.

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