



EMPATHY AND CREATIVE THINKING LIFE SKILLS IN PHYSICAL EDUCATION TEACHER-TRAINEES IN RELATION TO SOCIAL MEDIA DYNAMICS

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Abstract

The primary objective of this study was to investigate the impact of Social Media Dynamics on the development of empathy and creative thinking life skills among Physical Education teacher-trainees. To accomplish this goal, a sample of 647 physical education teacher-trainees was specifically chosen for analysis. Data collection methods involved the application of the Social Media Dynamics scale, meticulously designed by Singh and Mann (2022), alongside the incorporation of life skills sub-scales developed by Prawit Erawan (2010). The outcomes derived from the MANOVA analysis provided compelling insights into the relationship between Social Media Dynamics and life skills among teacher-trainees. Notably, teacher-trainees characterized by a low level of Social Media Dynamics demonstrated a higher proficiency in empathy life skills compared to their counterparts with a high level of Social Media Dynamics. Moreover, those with a low level of Social Media Dynamics exhibited superior empathy life skills in comparison to teacher-trainees with an average level of Social Media Dynamics. Furthermore, the study uncovered that teacher-trainees with a high level of Social Media Dynamics showcased a superior aptitude for creative thinking when compared to their peers with an average level of Social Media Dynamics. This contrast also extended to teacher-trainees with low Social Media Dynamics, as those with a high level demonstrated a superior level of creative thinking. These nuanced findings underscore the intricate influence of Social Media Dynamics on the cultivation of essential life skills among Physical Education teacher-trainees.

INTRODUCTION

In the contemporary landscape of education, understanding the interplay between life skills, particularly empathy and creative thinking, and the ever-evolving dynamics of social media is imperative. Empathy is the ability to understand and share the feelings of another person. It involves not only recognizing and comprehending someone else's emotions but also being able to respond with sensitivity and care. Empathy goes beyond sympathy, which is

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merely feeling compassion for someone; it involves stepping into another person's shoes and experiencing their emotions as if they were your own.

Creative thinking refers to the ability to generate, combine, and manipulate ideas, concepts, or information in novel and original ways. It involves approaching problems, situations, or tasks with an open and imaginative mindset, often leading to innovative solutions or outcomes. Creative thinking goes beyond conventional or routine thought processes, encouraging individuals to explore unconventional ideas, make connections between seemingly unrelated concepts, and think "outside the box."

The rationale for this research stems from the pressing need to bridge the existing gap in literature regarding the intricate relationship between life skills, social media dynamics, and the specific domain of physical education teacher training. While previous studies have explored aspects of life skills and social media separately, a focused inquiry into their confluence within the context of teacher training programs in Punjab remains scarce. By undertaking this research, we aim to address this gap and provide a nuanced understanding that can inform educational practices and policy.

The review of related literature on the impact of Social Media Dynamics on empathy uncovers both direct and indirect connections with various facets of smartphone use. To resolve the media-empathy paradox, certain social media researchers have highlighted specific online activities as explanatory factors. For instance, social digital interactions, such as chatting, have been suggested to be correlated with higher levels of empathy.

Some researchers in the field have reported findings that support this idea. For instance, Alloway (2014) and Errasti and Villadangos (2017) have found evidence suggesting a positive link between social digital interactions, particularly chatting, and increased levels of empathy. On the other hand, contrasting perspectives exist. Social Networking Sites, with their affordances that emphasize controllable and malleable self-presentation, may inadvertently contribute to the promotion of self-interest, narcissism, and fame-orientation (Konrath et al., 2011; Valkenburg and Peter, 2011; Uhls and Greenfield, 2011; Uhls et al. 2014). Similarly, a meta-analysis of prosocial media indicates that exposure to such content is associated with higher empathic concern and prosocial behaviors (Coyne et al., 2018). However, conflicting studies on Social Networking Sites use have found positive links between Social Networking Sites activities and narcissism and loneliness (Liu and Baumeister, 2016; Song et al., 2014). Consequently, the relationship between Social Networking Sites use and empathy remains a subject that is not well established or thoroughly understood.

Despite the observed societal declines in empathy correlated with increased media use, individual social media engagement, whether in terms of frequency or time spent per day, appears to be linked to elevated levels of empathy, particularly affective empathy. While these associations are modest, they consistently trend in a positive direction. Nevertheless, certain online behaviors may contribute more to the cultivation of empathy than others. For instance, activities such as sharing emotions and expressing support have been suggested to foster empathy more effectively than behaviors like updating profile photos (Errasti and Villadangos, 2017; Alloway et al., 2014).

Moreover, social media, when employed as educational tools, showcase the potential to not only foster empathy but also to stimulate creativity. Previous studies (Ferguson, 2011; Jang, 2009) have highlighted this potential by emphasizing how social media can open up classroom experiences, making them more learner-centered and expanding the potential content base of the class. As articulated by Dennen (2018), the use of social media in an educational context creates a dynamic platform with the potential to enhance creativity and learner engagement.

STATEMENT OF THE PROBLEM: Empathy and Creative Thinking Life Skills in Physical Education teacher-trainees in relation to Social Media Dynamics

OBJECTIVES

- 1) To compare empathy life skill on the basis of three levels of Social Media Dynamics among Physical Education teacher-trainees.
- 2) To compare creative thinking life skill on the basis of three levels of Social Media Dynamics among Physical Education teacher-trainees.

METHODOLOGY: The current study utilized a descriptive survey research method to thoroughly examine and analyze the key variables.

SAMPLE: The study centres on the population encompassing all Physical Education teacher-trainees currently enrolled in colleges and departments of physical education within the districts of Jalandhar, Hoshiarpur, Kapurthala and Ludhiana in Punjab. During the initial data collection phase, information was gathered from a total of 660 teacher-trainees. However, upon careful tabulation and examination, it became apparent that the data for 13 teacher-trainees were incomplete. Consequently, to ensure the integrity and completeness of the dataset, these individuals were excluded from the analysis. This exclusion resulted in a final sample size of 647 teacher-trainees, forming the basis for the subsequent phases of analysis and interpretation in the study.

TOOLS: The assessment of Social Media Dynamics (SMD) among Physical Education teacher-trainees was conducted using the tool developed by Singh and Mann in 2023. The SMD inventory captures four distinct dimensions of Social Media: Purpose, Ideological Alignment, Compulsive Attachment, and Social Disruption to Experience. Notably, two of these dimensions displayed a negative orientation, while the remaining two were positively framed. Given the inherent negativity in some dimensions, aggregating scores across all dimensions was deemed impractical. The inventory comprises 40 statements, each with five response categories: Disagree strongly, Disagree a little, Neither agree nor disagree, Agree a little, and Agree strongly. Dimension-specific reliability coefficients ie Cronbach Alpha are Purpose. .89, Ideological Alignment .82, Compulsive Attachment .87 and Social Disruption .81.

The Life Skills Scale, developed by Prawit Erawan in 2010, served as the instrumental tool for evaluating both empathy and creative thinking in this study. Comprising 27 statements, each presenting respondents with 5 response categories, this scale has emerged as a widely utilized instrument in the realms of education and psychology. Prawit Erawan, the author and creator of the scale, undertook meticulous measures to ensure the scale's reliability and validity. To guarantee the quality of measurement, Prawit Erawan focused on construct validity and reliability. The efforts in this regard bore fruit, as evidenced by the attainment of a notably high Cronbach's alpha coefficient of .92. This coefficient, often used as a measure of internal consistency, signifies a robust level of reliability in the Life Skills Scale, affirming its suitability for capturing and assessing the nuanced dimensions of empathy and creative thinking among respondents in the domains of education and psychology.

DATA COLLECTION: The data collection process for this study involved in-person visits conducted by the investigator to institutions within the selected sample pool. During these visits, tests were administered, and both booklets and response sheets were systematically collected from the participants.

Following the collection phase, the subsequent scoring process adhered rigorously to the guidelines outlined in the respective manual of the assessment tools used. This ensured consistency and accuracy in scoring across all responses.

The gathered data underwent a comprehensive tabulation and analysis phase, conducted with meticulous attention to detail. This analysis was performed in strict alignment with the predefined objectives of the study, allowing for a thorough exploration of the relationship between social media dynamics, empathy, and creative thinking among the physical education teacher-trainees in the specified sample pool.

RESULTS AND INTERPRETATION

Table 1 Mean and Standard Deviation of Empathy and Creative Thinking Life Skills of Physical Education teacher-trainees at Different Levels of Social Media Dynamics

Dependent variable	Social Media Dynamics	Mean	Std. Deviation	N
Empathy	High	37.03	4.220	194
	Average	36.50	4.419	260
	Low	37.74	3.424	193
Creative Thinking	High	29.86	3.655	194
	Average	29.03	2.981	260
	Low	28.93	3.251	193

Table 2 Summary of MANOVA for Empathy and Creative Thinking Life Skills of Physical Education teacher-trainees on the Basis of Social Media Dynamics

Source	Dependent Variable	Sum of Squares	df	Mean Square	F
Social Media Dynamics	Empathy	169.159	2	84.579	5.069**
	Creative Thinking	104.171	2	52.086	4.856**
Error	Empathy	10745.394	644	16.685	
	Creative Thinking	6907.755	644	10.726	
Total	Empathy	897916.000	647		
	Creative Thinking	560400.000	647		

** $p \leq 0.01$,

The F -value (Table 2) for mean difference in Empathy Life Skill of Physical Education teacher-trainees with high, average and low level of Social Media Dynamics is 5.069 which is significant at 0.01 level. It means that there is significant difference in the mean scores of Empathy Life Skill of Physical Education teacher-trainees on the basis of their Social Media Dynamics. Further, post-hoc tests for each pair of Social Media Dynamics were computed (applied to compare the pair-wise mean difference) which are given in table 3.

The F -value (Table 2) for mean difference in Creative Thinking of Physical Education teacher-trainees with high, average and low level of Social Media Dynamics is 4.856 which is significant at 0.01 level. It means that there is significant difference in the mean scores of

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Creative Thinking of Physical Education teacher-trainees on the basis of their Social Media Dynamics. Further, post-hoc tests for each pair of Social Media Dynamics were computed (applied to compare the pair-wise mean difference) which are given in table 3.

Table 3 Post-hoc Tests for Comparison of Empathy and Creative Thinking Life Skills of Physical Education teacher-trainees on the Basis of Three Levels of Social Media Dynamics

Dependent Variable	(I) Social Media Dynamics	(J) Social Media Dynamics	Mean Difference (I-J)	Std. Error	Sig.
Empathy	High	Average	.53	.388	.399
	High	Low	-.71	.315	.044
	Low	Average	1.24*	.388	.007
Creative Thinking	High	Average	.83*	.311	.029
	High	Low	.93*	.333	.021
	Low	Average	-.10	.311	.950

** $p \leq 0.01$, * $p \leq 0.05$

Table 3 indicates that the comparison of Empathy Life Skill among Teacher-trainees, categorized by high and average levels of Social Media Dynamics, is not statistically significant at the 0.05 level. This implies that the mean scores of Teacher-trainees with average-level Social Media Dynamics and high-level Social Media Dynamics do not exhibit a significant difference. Based on this observation, the null hypothesis, stating that there is no significant difference in Empathy Life Skill among Physical Education teacher-trainees based on high and average levels of Social Media Dynamics, is accepted. In conclusion, it can be inferred that there is no substantial difference in the Empathy Life Skill of Teacher-trainees with high and average levels of Social Media Dynamics. This finding contributes to our understanding of the relationship between Social Media Dynamics and Empathy Life Skill among teacher-trainees in the context of physical education.

Table 3 reveals a significant difference in the comparison of Empathy Life Skill among Physical Education teacher-trainees based on high and low levels of Social Media Dynamics at the 0.05 significance level. This indicates that the mean scores of Empathy Life Skill for teacher-trainees with low-level Social Media Dynamics and high-level Social Media Dynamics show a notable distinction. Consequently, the null hypothesis asserting no significant difference in Empathy Life Skill among Physical Education teacher-trainees with high and low levels of

Social Media Dynamics is rejected. Further examination of the Mean Difference in the table, as illustrated in Figure 1, suggests that the scores of Teacher-trainees utilizing Social Media Dynamics at a low level surpass those of Teacher-trainees using it at a high level. In conclusion, it may be deduced that Physical Education teacher-trainees with low-level Social Media Dynamics exhibit a higher level of Empathy Life Skill compared to their counterparts with high-level Social Media Dynamics.

Table 3 shows that the comparison of Empathy Life Skill of Teacher-trainees on the basis of average and low levels of Social Media Dynamics is significant at 0.05 level. It means that the mean scores of Teacher-trainees with low level Social Media Dynamics and average level Social Media Dynamics differ significantly. On basis of this, the null hypothesis that there is no significant difference in Empathy Life Skill of Physical Education teacher-trainees on the basis of average and low level Social Media Dynamics is rejected. Further, the Mean Difference in the table indicates (See Figure 1) that the score of Teacher-trainees who use Social Media Dynamics at low level is higher than the Teacher-trainees who use Social Media Dynamics at average level. It may be concluded that the Teacher-trainees with low level Social Media Dynamics had better level of Empathy Life Skill than Teacher-trainees with average level Social Media Dynamics.

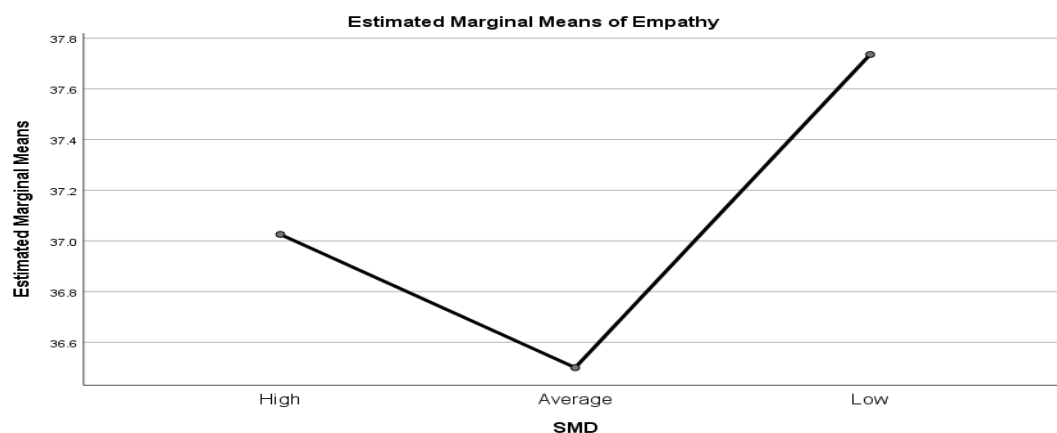


Figure 1: Comparison of Mean Scores of Empathy Life Skill of Physical Education teacher-trainees on the Basis of Social Media Dynamics

In Table 3, a noteworthy significance emerges in the comparison of Creative Thinking among Physical Education teacher-trainees based on high and average levels of Social Media Dynamics at the 0.05 level. This indicates that the mean scores of Creative Thinking for Physical Education teacher-trainees with average-level Social Media Dynamics and high-level Social Media Dynamics exhibit a substantial difference. Consequently, the null hypothesis suggesting no significant difference in Creative Thinking among Physical Education teacher-

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trainees with high and average levels of Social Media Dynamics is rejected. Additionally, the Mean Difference in the table, as depicted in Figure 1, underscores that the scores of Teacher-trainees utilizing Social Media Dynamics at a high level surpass those of Teacher-trainees using it at an average level. In conclusion, it can be inferred that Physical Education teacher-trainees with high-level Social Media Dynamics demonstrate a superior level of Creative Thinking compared to their counterparts with average-level Social Media Dynamics.

Table 3 shows that the comparison of Creative Thinking of Physical Education teacher-trainees on the basis of high and Low level Social Media Dynamics is significant at 0.05 level. It means that the mean scores of Creative Thinking of Physical Education teacher-trainees with Low level Social Media Dynamics and high level Social Media Dynamics differ significantly. On the basis of this, the null hypothesis that there is no significant difference in Creative Thinking of Physical Education teacher-trainees on the basis of high and Low level Social Media Dynamics is rejected. Further, the Mean Difference in the table indicates (See Figure 1) that the score of Teacher-trainees who use Social Media Dynamics at high level is higher than the Teacher-trainees who use Social Media Dynamics at Low level. It may be concluded that the Teacher-trainees with high level Social Media Dynamics had better level of Creative Thinking than Teacher-trainees with Low level Social Media Dynamics.

Table 3 indicates that the comparison of Creative Thinking among Teacher-trainees based on average and low levels of Social Media Dynamics is not statistically significant at the 0.05 level. This implies that the mean scores of Creative Thinking for Teacher-trainees with low-level Social Media Dynamics and average-level Social Media Dynamics do not exhibit a significant difference. Based on this observation, the null hypothesis, stating that there is no significant difference in Creative Thinking among Physical Education teacher-trainees based on average and low levels of Social Media Dynamics, is accepted. In conclusion, it can be inferred that there is no substantial difference in the Creative Thinking of Teacher-trainees with low and average levels of Social Media Dynamics. This finding contributes to our understanding of the nuanced relationship between Social Media Dynamics and Creative Thinking among teacher-trainees in the context of physical education.

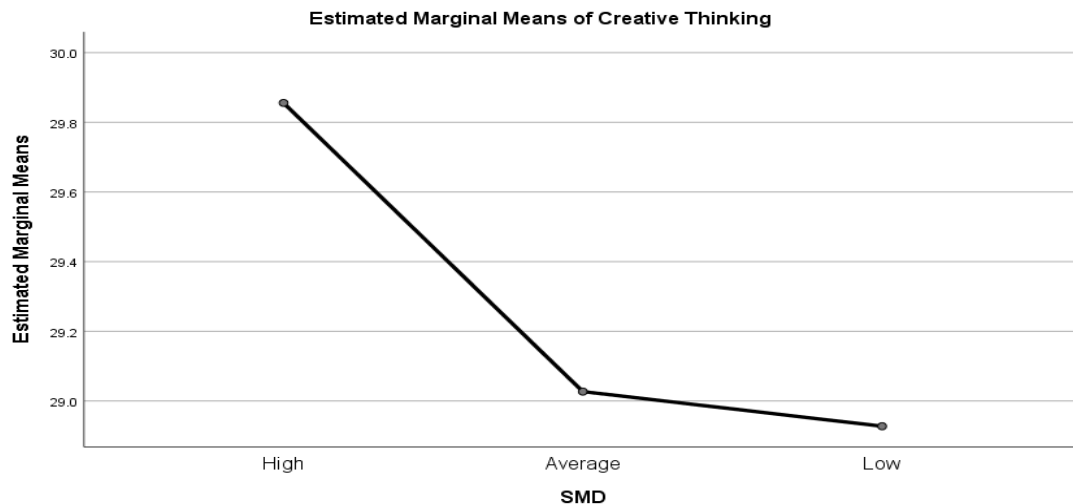


Figure 2: Comparison of Mean Scores of Creative Thinking of Physical Education teacher-trainees on the Basis of Social Media Dynamics

Discussion

Male and female Teacher-trainees exhibited an equal level of most Factors of Personality under the Big Five Factors of Personality, with the exception of Agreeableness and Conscientiousness. Specifically, female Teacher-trainees demonstrated a higher level of the Agreeableness Factor of Personality within the framework of the Big Five Factors compared to their male counterparts. This indicates a noteworthy gender-based influence on the development of the Agreeableness Factor of Personality among Teacher-trainees, highlighting the significant role that gender plays in shaping this particular aspect of personality. In the previous researches Female scored higher on the factors of neuroticism and agreeableness in many studies (Costa, Terracciano, & McCrae, 2001; Goodwin, & Gotlib, 2004; Chapman, Duberstein, & Lyness, 2007; Shokri, Kadivar, & Daneshvarpoor, 2007; Schmitt, Realo, Voracek, & Allik, 2008) while men scored higher on openness to experience (Goodwin, & Gotlib, 2004; Shokri, Kadivar, & Daneshvarpoor, 2007).

Male Teacher-trainees had higher level of Conscientiousness Factor of Personality under Big Five Factors of Personality than female Teacher-trainees. It signifies males' higher inclination toward responsibility, organization, diligence, goal orientation, and adherence to established norms and rules than females. Contrarily Gender differences were discerned in relation to neuroticism, agreeableness, conscientiousness, and openness, with females consistently exhibiting higher scores than males for each trait (Rammstedt, & John, 2007).

The preceding literature findings underscore the alignment of a substantial number of studies with the present research, particularly concerning the Agreeableness factor of

personality. However, it is noteworthy that a minority of studies present contradictory evidence. Consequently, the current study's alignment with a majority of previous research suggests a basis for researchers and educators to extrapolate gender bias tendencies in relation to the Agreeableness personality factor.

Agreeableness, characterized by traits such as cooperation, politeness, kindness, and friendliness, reflects a personality dimension where individuals with high scores tend to exhibit greater trust, affection, altruism, and prosocial behaviors. The findings of the present study indicate that girls in Physical Education possess these subtraits to a greater extent than boys in the same domain. This disparity holds implications for teachers and counsellors, suggesting the need to consider such information when guiding and providing opportunities for activities that demand these specific traits.

In juxtaposition to agreeableness, the examination of related literature reveals a relative scarcity of research on Conscientiousness. This paucity emphasizes the need for further investigation to enhance our understanding and move towards generalizations about Conscientiousness. While acknowledging the limitation of focusing on a specific population, the present findings emphasize the necessity of additional research to generalize the implications for Conscientiousness, specifically within the current demographic.

Given the underexplored nature of literature on Conscientiousness, it becomes imperative to conduct additional research. The current study's conclusion suggests a need for targeted interventions, such as training or education programs for girls in physical education, to foster the development of Conscientiousness -related abilities. This nuanced approach recognizes the specific traits associated with Conscientiousness and underscores the importance of tailored educational strategies to address these traits within the identified population.

Conclusions

1. There was no significant difference in the Empathy Life Skill of Teacher-trainees with high and average level Social Media Dynamics.
2. Teacher-trainees with low level Social Media Dynamics had better level of Empathy Life Skill than Teacher-trainees with high level Social Media Dynamics.
3. Teacher-trainees with low level Social Media Dynamics had better level of Empathy Life Skill than Teacher-trainees with average level Social Media Dynamics.
4. Teacher-trainees with high level Social Media Dynamics had better level of Creative Thinking than Teacher-trainees with average level Social Media Dynamics.

5. Teacher-trainees with high level Social Media Dynamics had better level of Creative Thinking than Teacher-trainees with Low level Social Media Dynamics.
6. There was no significant difference in the Creative Thinking of Teacher-trainees with low and average level Social Media Dynamics.

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