Rahman Institute of Higher Education

Journal of Modern Psychology

Research Paper: Effects of Teaching Style on Prosocial and Antisocial Behaviors among Children

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Citation: Salehian, H., Hosseinzadeh Peyghan, R. (2023). Effects of Teaching Style on Prosocial and Antisocial Behaviors among Children. *Journal of Modern Psychology*, *3*(1), 28-37. https://doi.org/10.22034/jmp.2023.406019.1062

https://doi.org/10.22034/JMP.2023.406019.1062

Article info:

Received date:
08 Oct. 2022
Accepted date:
28 Dec. 2022

Keywords:
Antisocial behavior, Children, Needs support, Needs thwarting, Prosocial behavior

Abstract

The aim of this study was to investigate the effects of teaching style in physical education on prosocial and antisocial behaviors of children. We used a descriptive-correlational method for this study. The participates of the present study included 384 primary school students (mean age of 9.17 years old), including 192 boys and 192 girls which were selected by using a convenience sampling method. For collecting data, teacher as social context (TASC) Questionnaire, sport climate questionnaire (SCQ) and prosocial and antisocial behavior in sport scale (PABSS) were used. Correlation test and structural equation method were used for da analysis. The results showed that perceived need support directly affected prosocial behaviors. In addition, perceived need thwarting indirectly affected prosocial behaviors. Moreover, perceived need support indirectly affected antisocial behaviors. Finally, perceived need thwarting directly affected antisocial behaviors. These findings demonstrate that needs supportive teaching style would lead to increase the prosocial behaviors and decrease antisocial behaviors in the physical education class among children.

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1. Introduction

Children form a major part of the world's population, so that in developing countries, the share of this part of the total population reaches almost 50% (Waterman, 1993; Kraut, 1979). Their mental health helps them to be mentally and physically healthy and to play their social role better. In this regard, proper knowledge of the different physical and mental aspects of this age group and efforts to provide suitable material and spiritual conditions for physical, emotional and their thinking is of great importance (Steptoe, 2019). Considering that children spend most of their time in the school, it can play a very important role in shaping students' behaviors (Baniasadi et al., 2022a).

A school is a social institution where a student interacts with other students and people at multiple social, economic, intellectual and age levels and while coordinating, the child equips himself with the weapon of science and along with that, he gradually learns the necessary evolutionary traits (Baniasadi et al., 2022b; Fararouei et al., 2013). The moments a child spends at school are among the most important and sensitive moments of his life. The atmosphere of the school is influenced by various elements such as teachers, principals, supervisors, employees, educational officers and classmates, all of whom can be role models for students and play a role in the formation of their mental dimensions. The physical, psychological and educational atmosphere of the school is one of the issues that can have an important and significant reflection on the structure of mental and intellectual growth and development as well as the creativity and mental health of the students and is considered as the foundation of the future social behaviors of the students (Floody et al., 2018; Chen et al., 2017). The role of the teacher in building or destroying the behaviors of children is very important. A teacher that may play a very important role in forming behaviors of students is physical education teacher.

The physical education is one of the most favorite subjects for students in school, which provides a golden opportunity to provide any kind of education, whether in the teaching process - learning physical education skills and sports activities, or teaching health and safety tips to students (Baniasadi et al., 2022c). The role of a good and efficient sports teacher in creating interest in sports among students, proper productivity and ensuring their mental and physical health is undeniable. One of the ways that a physical education teacher can adopt to have an appropriate effect on students' skills in physical education is the teaching style (Chaharbaghi et al., 2022a; Dana et al., 2021). Among the teaching styles that have received a lot of attention in recent years are the need-supporting and need-thwarting teaching styles. These teaching styles are theoretically based on the theory of self-determination (Deci & Ryan, 1985; Deci & Ryan, 2000).

Self-Determination Theory is a theory of motivation that has been applied in many life domains such as health, sport, education and work. Health is an intrinsic goal for us all that is strongly influenced by our habits and lifestyle choices (Chaharbaghi et al., 2022b; Hashemi Motlagh et al., 2022; Hazrati et al., 2022). Motivation-energy directed at a goal-plays a big role in our lifestyle choices and in our ability to make sustained changes as needed to maintain our health. Self-determination theory suggests that all humans have three basic psychological needs-autonomy, competence, and relatedness-that underlie growth and development (Mohammadi et al., 2022; Vansteenkiste et al., 2020; Saeedpour-Parizi et al., 2021). It has been shown that supporting psychological needs may increase motivation and engagement of students in many school tasks (Schwartz et al., 2019;

Saeedpour-Parizi et al., 2020; Ghorbani et al., 2021; Abdoshahi & Ghorbani, 2022). On the other side, thwarting basic psychological needs has negative impacts on motivation and engagement of students in school tasks (Ghorbani et al., 2021; Evenson et al., 2008; Choi et al., 2011). However, the impacts of teaching styles in physical education on prosocial and antisocial behaviors among children are not well documented (Wijndaele et al., 2015; Abdi et al., 2022; Hodge & Gucciardi, 2015). Therefore, the aim of this study was to investigate the effects of teaching style in physical education on prosocial and antisocial behaviors of children.

2. Method

We used a descriptive-correlational method for this study. The participates of the present study included 384 primary school students (mean age of 9.17 years old), including 192 boys and 192 girls which were selected by using a convenience sampling method.

2.1. Instruments

Teacher as Social Context (TASC) Questionnaire: Farhangnia et al. (2020) developed this questionnaire consisting of 29 items. Their items relate to teacher's need for (autonomy, competence, and relatedness), and thwarting (autonomy, competence, and relatedness). Items were presented on a five-point Likert scale ranging from 1 = "strongly disagree" to 5 = "stron. ly agree." Total score of this questionnaire was obtained by averaging all items. In this study, the reliability of this questionnaire was measured and its Cronbach's alpha coefficient was 0.84.

Sport Climate Questionnaire (SCQ): This questionnaire was designed by Hagger et al. (2003) measuring psychological needs (including autonomy, competence, and relatedness) satisfaction. It has with 11 questions and each question was scored on a Likert scale from strongly disagree (1) to strongly agree (7). Total score of this questionnaire was obtained by averaging all items. In this study, the reliability of this questionnaire was measured and its Cronbach's alpha coefficient was 0.88.

Prosocial and Antisocial Behavior in Sport Scale (PABSS): This scale was developed by Kavussanu and Boardley (2002) which measures the prosocial and antisocial behaviors of children in P.E. class. The scale is made up of 20 items that are divided between four sub-factors that in turn are divided between two factors: pro-social behavior (towards teammates, towards opponents) and antisocial behavior (towards teammates, towards opponents). Items are answered on a Likert scale of 1 (Strongly disagree) to 7 (Strongly agree). In this study, the reliability of this questionnaire was measured and its Cronbach's alpha coefficient was 0.79.

2.2. Data analysis

For analyzing data, we used descriptive statistics including mean and standard deviation as well as Pearson correlation test and structural equation method using Lisrel. The Kolmogorov-Smirnov test was used to check the normality of data. Significance level was considered at the level of 0.05.

3. Results

Table 1 shows the mean and standard deviation of the research variables as well as bidirectional associations between them. Initially, the results of Kolmogorov-Smirnov test showed that the research data had normal distribution (all P>0.05). To investigate the two-way relationships between the research variables, Pearson correlation coefficient was used, the results of which are as follows: 1) There are

significant direct relationships between perceived need support and needs satisfaction (all P<0.001), 2) There are significant and inverse relationships between perceived need thwarting and needs satisfaction (all P<0.001), 3) There are significant direct relationships between perceived need support and prosocial behaviors (all P<0.001), 4) There are significant inverse relationship between perceived need thwarting and prosocial behaviors (all P<0.001), 5) There are significant inverse relationships between perceived need support and antisocial behaviors (all P<0.001), and 6) There are significant direct relationships between perceived need thwarting and antisocial behaviors (all P<0.001).

Table 1

Mean and SD as well as bidirectional associations between research variables

Variable	Mean ± SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Autonomy Support	2.17 ± 0.97	r=0.428 P<0.001	r=0.448 P<0.001	r=0.476 P<0.001	r=0.511 P<0.001	r=0.614 P<0.001	r=0.723 P<0.001	r=0.268 P<0.001	r=0.552 P<0.001	r=0.898 P<0.001	r=0.840 P<0.001	r=0.749 P<0.001	r=0.694 P<0.001	r=0.551 P<0.001
2. Competence Support	2.58 ± 0.51	r=0.469 P<0.001	r=0.694 P<0.001	r=0.815 P<0.001	r=0.612 P<0.001	r=0.617 P<0.001	r=0.236 P<0.001	r=0.234 P<0.001	r=0.664 P<0.001	r=0.982 P<0.001	r=0.718 P<0.001	r=0.690 P<0.001	r=0.558 P<0.001	r=0.641 P<0.001
3. Relatedness Support	2.54 ± 1.08	r=0.562 P<0.001	r=0.607 P<0.001	r=0.789 P<0.001	r=0.611 P<0.001	r=0.325 P<0.001	r=0.724 P<0.001	r=0.458 P<0.001	r=0.814 P<0.001	r=0.509 P<0.001	r=0.891 P<0.001	r=0.583 P<0.001	r=0.739 P<0.001	r=0.518 P<0.001
4. Autonomy Thwarting	1.67 ± 1.61	r=0.394 P<0.001	r=0.503 P<0.001	r=0.604 P<0.001	r=0.612 P<0.001	r=0.356 P<0.001	r=0.462 P<0.001	r=0.544 P<0.001	r=0.918 P<0.001	r=0.608 P<0.001	r=0.745 P<0.001	r=0.693 P<0.001	r=0.631 P<0.001	r=0.484 P<0.001
5. Competence Thwarting	1.17 ± 0.97	r=0.694 P<0.001	r=0.504 P<0.001	r=0.259 P<0.001	r=0.661 P<0.001	r=0.322 P<0.001	r=0.747 P<0.001	r=0.511 P<0.001	r=0.188 P<0.001	r=0.505 P<0.001	r=0.628 P<0.001	r=0.771 P<0.001	r=0.523 P<0.001	r=0.284 P<0.001
6. Relatedness Thwarting	1.51 ± 0.61	r=0.524 P<0.001	r=0.293 P<0.001	r=0.562 P<0.001	r=0.237 P<0.001	r=0.734 P<0.001	r=0.261 P<0.001	r=0.463 P<0.001	r=0.264 P<0.001	r=0.481 P<0.001	r=0.661 P<0.001	r=0.813 P<0.001	r=0.503 P<0.001	r=0.684 P<0.001
7. Autonomy Satisfaction	1.12 ± 0.29	r=0.508 P<0.001	r=0.399 P<0.001	r=0.251 P<0.001	r=0.723 P<0.001	r=0.462 P<0.001	r=0.625 P<0.001	r=0.673 P<0.001	r=0.495 P<0.001	r=0.190 P<0.001	r=0.481 P<0.001	r=0.482 P<0.001	r=0.669 P<0.001	r=0.544 P<0.001
8. Competence Satisfaction	1.17 ± 1.03	r=0.308 P<0.001	r=0.299 P<0.001	r=0.516 P<0.001	r=0.672 P<0.001	r=0.547 P<0.001	r=0.452 P<0.001	r=0.634 P<0.001	r=0.499 P<0.001	r=0.480 P<0.001	r=0.198 P<0.001	r=0.934 P<0.001	r=0.528 P<0.001	r=0.687 P<0.001
9. Relatedness Satisfaction	1.20 ± 0.69	r=0.401 P<0.001	r=0.308 P<0.001	r=0.914 P<0.001	r=0.623 P<0.001	r=0.235 P<0.001	r=0.642 P<0.001	r=0.527 P<0.001	r=0.949 P<0.001	r=0.448 P<0.001	r=0.284 P<0.001	r=0.584 P<0.001	r=0.839 P<0.001	r=0.285 P<0.001
10. Prosocial Teammate	3.33 ± 1.01	r=0.691 P<0.001	r=0.610 P<0.001	r=0.419 P<0.001	r=0.620 P<0.001	r=0.236 P<0.001	r=0.511 P<0.001	r=0.637 P<0.001	r=0.191 P<0.001	r=0.318 P<0.001	r=0.941 P<0.001	r=0.934 P<0.001	r=0.485 P<0.001	r=0.688 P<0.001
11. Prosocial Opponent	3.18 ± 1.11	r=0.527 P<0.001	r=0.449 P<0.001	r=0.984 P<0.001	r=0.734 P<0.001	r=0.733 P<0.001	r=0.462 P<0.001	r=0.464 P<0.001	r=0.818 P<0.001	r=0.351 P<0.001	r=0.364 P<0.001	r=0.658 P<0.001	r=0.364 P<0.001	r=0.494 P<0.001
12. Antisocial Teammate	2.17 ± 1.25	r=0.617 P<0.001	r=0.394 P<0.001	r=0.212 P<0.001	r=0.463 P<0.001	r=0.262 P<0.001	r=0.522 P<0.001	r=0.511 P<0.001	r=0.944 P<0.001	r=0.394 P<0.001	r=0.518 P<0.001	r=0.584 P<0.001	r=0.854 P<0.001	r=0.647 P<0.001
13. Antisocial Opponent	2.55 ± 1.71	r=0.628 P<0.001	r=0.452 P<0.001	r=0.951 P<0.001	r=0.426 P<0.001	r=0.732 P<0.001	r=0.562 P<0.001	r=0.463 P<0.001	r=0.818 P<0.001	r=0.384 P<0.001	r=0.818 P<0.001	r=0.664 P<0.001	r=0.481 P<0.001	r=0.494 P<0.001

The results of the structural equation modeling are given in Table 2 and Figure 1. The results showed that: 1) perceived need support directly affected needs satisfaction (T=5.947), perceived need thwarting indirectly affected needs satisfaction (T=-4.287), 3) needs satisfaction

directly affected prosocial behaviors (T=6.317), 4) needs satisfaction indirectly affected antisocial behaviors (T=-5.297), 5) perceived need support directly affected prosocial behaviors (T=7.195), 6) perceived need thwarting indirectly affected prosocial behaviors (T=-5.314), 7) perceived need support indirectly affected antisocial behaviors (T=-6.364), and 8) perceived need thwarting directly affected antisocial behaviors (P=4.082). Results of model fit revealed that the conceptual model has good fit (RMSEA=0.07; X^2/df=2.85; RMR=0.05; NFI=0.97; CFI=0.95).

Table 2

Results of structural equation modelling

	Path	β	T-value
1	Need support => Needs satisfaction	0.536	5.947
2	Need thwarting => Needs satisfaction	0.427	-4.287
3	Needs satisfaction => Prosocial behaviors	0.694	6.317
4	Needs satisfaction => Antisocial behaviors	0.528	-5.297
5	Need support => Prosocial behaviors	0.714	7.195
6	Need support => Antisocial behaviors	0.539	-5.314
7	Need thwarting => Prosocial satisfaction	0.664	-6.364
8	Need thwarting => Antisocial satisfaction	0.417	4.082

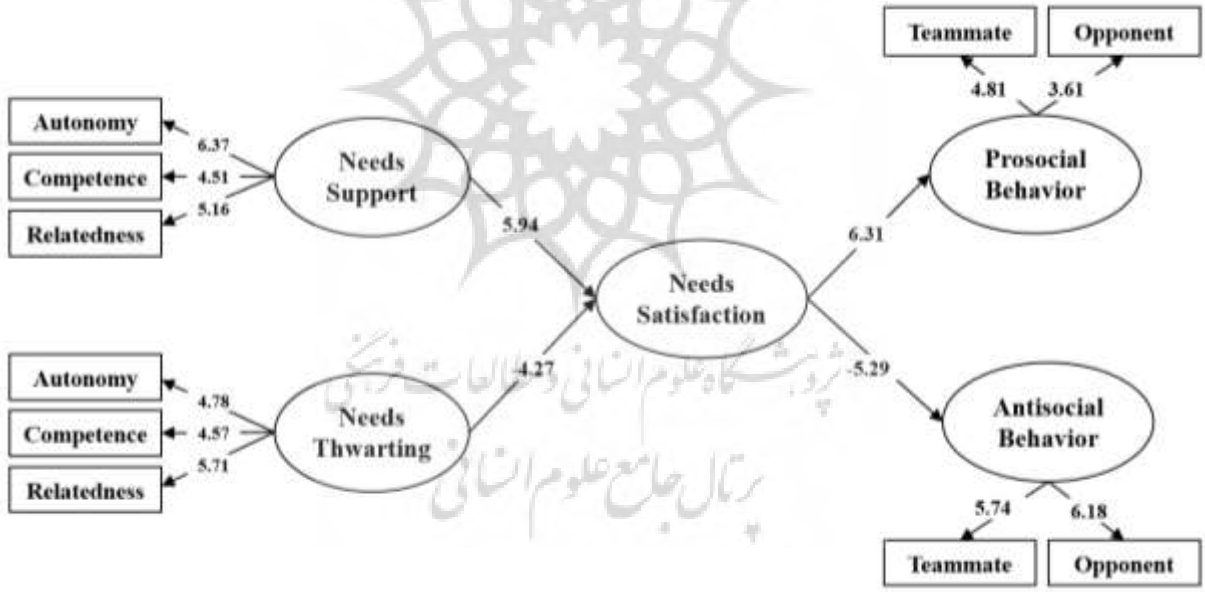

Figure 1. Structural equation modelling

4. Discussion

It has been shown that supporting psychological needs may increase motivation and engagement of students in many school tasks (Schwartz et al., 2019; Saeedpour-Parizi., 2020; Ghorbani et al., 2021; Abdoshahi & Ghorbani, 2022). On the other side, thwarting basic psychological needs has negative impacts on motivation and engagement of students in school tasks (25-27). However, the impacts of teaching styles in physical education on prosocial and antisocial behaviors among children are not well

documented. Therefore, the aim of this study was to investigate the effects of teaching style in physical education on prosocial and antisocial behaviors of children.

Our results showed that perceived need support directly affected needs satisfaction, while perceived need thwarting indirectly affected needs satisfaction. These findings are in accordance with the assumptions of the self-determination theory (Deci & Ryan, 1985; Deci & Ryan, 2000; Chaharbaghi et al., 2022; Hashemi Motlagh et al., 2022; Hazrati et al., 2022; Mohammadi et al., 2022; Vansteenkiste et al., 2020; Saeedpour-parizi., 2021). According to the self-determination theory (14-16), the source of needs supportive behaviors and the satisfaction of basic psychological needs can result in performing the behaviors through the process of internalization. Internalization is the process by which behaviors that previously existed for reasons that had an external source are now emerging from an internal causal source (Hazrati et al., 2022). Internalization shows that behavioral settings are not inflexible and fixed, but flexible and changeable, and can be mediated by supportive elements in an environment that has the potential to support autonomous behaviors (such as physical education class in school). The results of the present study are consistent with the results of previous research and showing that supporting the students' sense of autonomy, competence, and relatedness can results in satisfaction of basic psychological needs in physical education class (Mohammadi et al., 2022; Vansteenkiste et al., 2020). These findings indicate that students who understand the supportive behaviors of physical education teacher regarding to the autonomy, competence, and relatedness, begin to internalize motivations and subsequently can increase their intention to participate in physical education class activities (Saeedpour-parizi., 2021).

Regarding prosocial and antisocial behaviors, the results of the present study showed that needs supportive teaching style was directly associated with prosocial behaviors, while needs thwarting teaching style was inversely associated with prosocial behaviors. On the other hand, needs supportive teaching style was inversely associated with antisocial behaviors, while needs thwarting teaching style was directly associated with antisocial behaviors. These findings show that need supportive teaching style would increase prosocial behaviors and needs thwarting teaching style would increase antisocial behaviors of children in physical education class. To interpret these findings, it can be said that school education affects directly personality formation of the students (Wijndaele et al., 2015). Most students who enter schools are inexperienced. But it does not take long before their characters start to shape undesirably, because of associating with peers having abnormal behaviors in relation to the school (Abdi et al., 2022). However, it is feasible to put the pupils on the right path before they start to act unsociably. In this research, our result showed that providing children with needs supportive teaching approaches can suitably shape the social personality of pupils (Hodge & Gucciardi, 2015).). For instance, programs which focus on autonomy, competence, ad relatedness support in the class try to prevent antisocial behaviors. Generally, it is possible that lack of profound attention to abnormal behaviors in schools may lead the society to chaos and unrest over time, because these students, when grown up, will have antisocial tendencies and constitute the future work force of a country (Kavussanu & Boardley, 2009; Cheon & Lim, 2020; Moljord et al., 2011; Maher et al., 2016; Seyedi Asl et al., 2016; Taghva et al., 2020; Khosravi et al., 2023; Seyedi Asl., 2021).

5. Conclusion

In summary, an important point in the results of the present study was that the needs supportive teaching style would lead to increase the prosocial behaviors and decrease antisocial behaviors in the physical education class among children. This can be an important result and shows the importance of physical education in the school. According to the results of the present study, it is suggested that physical education teachers should provide support for students' sense of autonomy, competence, and relatedness through giving students more choices and opportunities to choose the type of exercise during the physical education class, increase their self-confidence, and increase relationships between peers in the class.

Acknowledgment

The researchers appreciate all the people who contributed to this research.

Conflict of interest

The Authors declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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