

Motivational style and behavior assertive teacher of Physical Education lifelong career

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Abstract

The aim of this study was to investigate the motivational style and behavior (assertive, nonassertive and aggressive) in Physical Education teachers from a northwestern Paraná city over their teaching career ($n = 49$). The Problems in Schools questionnaire, the Assertiveness Inventory and demographic data were employed as research instruments. Data were analyzed through the following inferential statistics: Shapiro-Wilk, Cronbach's Alpha, repeated measures Anova and Spearman Correlation ($p \leq 0.05$). The motivational style with the higher median was the highly autonomy promoting style (5.88) and the lower was the highly controller style (2.88), with statistically significant differences. Results showed positive correlations between the variables: nonassertiveness and the highly controller style ($p = 0.63$); aggressiveness and the highly controller style ($p = 0.69$); and nonassertiveness and aggressiveness ($p = 0.82$) for teachers with workload under 20 hours a week. We conclude Physical Education teachers showed autonomy promoting motivational styles and motivational style and assertive, nonassertive and aggressive behavior were related for less experienced and lower workload teachers.

KEY WORDS: Teachers; Assertive behavior; Motivation; Educational psychology.

Introduction

Studies in the field of educational psychology, over the years, have investigated the pedagogical practices of Physical Education teachers with specific focus on identifying the motivational aspects, in goal setting, in the perception of competence as well as in the behavior of students and teachers¹⁻⁶. However, when reviewing the literature, there is a gap in knowledge about research aimed at identifying the constructs that define the behavior and motivational style adopted by the Physical Education teacher throughout his career, seeking to promote the autonomy of students.

Is worth emphasizing that research into the pedagogical area focus on verifying the effectiveness of teaching and are relevant in appreciating the role of the teacher and point out the contribution of their work to the quality of the educational process and its effects on the engagement of students⁷⁻⁸. Considering

this information and in order to fill the gap previously presented, this study aimed to investigate the motivational style of physical education teachers and their behavior throughout their careers.

This research aims to contribute to the advancement of scientific studies on the theme using as theoretical basis the Self-Determination Theory (SDT)⁹, interpreting the teachers' behavior in real work situations and throughout their career, as well as to verify the motivational styles adopted by them, which is reflected in the quality of the autonomous education provided to students. From this perspective, the identification of motivational style of teachers normally has as a parameter the use of methodological teaching strategies to motivate students¹⁰, through the adoption of different types of motivational styles, among which we can highlight the autonomy promoting or

controlling styles, which have distinct characteristics and effects on motivation and engagement of students.

Regarding the teachers' behavior, it is necessary to understand the frequency that these are adopted along the situations experienced in the teaching profession, and these behaviors are classified as Assertive (the individual takes control of actions), Nonassertive (the individual is passive in decision) or Aggressive (the individual does not control the

actions)¹¹, which may vary or adapt themselves according to the demands of the profession.

Given the relevance of the explained variables and their contribution to quality educational activities in the educational process when analyzed together, the aim of this study was to investigate the motivational style and behavior (assertive, nonassertive and aggressive) of Maringá Physical Education teachers, in northwest Paraná, throughout the teaching career.

Method

Sample

This study was characterized by a correlational descriptive study with cross-sectional design. The study target population were 79 physical education teachers of the early grades of elementary school in the municipal school system of Maringá, in northwestern Paraná, with the final sample consisting of 49 teachers. Thirty subjects were lost during data collection, for leaves of absence of teaching functions in schools (n = 20); failure to complete the research protocols (n = 5); non-attendance in the days of carrying out evaluations (n = 3) and incorrectly reporting protocols (n = 2). Thus, the study had the participation of 49 teachers, 20 male and 29 female. The average age of teachers was 33.3 ± 7.88 years.

According to Maringá's Municipal Law 11725/2010, in municipal schools physical education classes should be taught exclusively by graduates in the specific field, belonging to the staff of the Municipal Administration. The Maringá city school system has approximately 12,000 students enrolled.

Instruments

The *Problems in Schools*¹² questionnaire was employed to evaluate the motivational style of Physical Education teachers, translated and validated in Portuguese language and known as *Problemas na Escola*¹³. The instrument assesses the degree of autonomy of teachers, designating four motivational styles: highly controller (HC), moderately controller (MC), moderately autonomy promoter (MA) and highly autonomy promoter (HA). Thus, the more autonomous is the teacher's behavior (higher score on the scale), the more stimulating it is for the self-determined behavior of the student.

The instrument consists of eight vignettes that describe scenarios referring to the classroom, where the student has a behavioral problem related to motivation. The vignettes are followed by four answers, which must be recorded by the teacher in a Likert scale of 1 to 7, (a score of 1 corresponds to a "very improper" way to deal with the problem and 7 corresponds to a "very suitable" option to deal with the problem). Each of the four answers (A, B, C and D) represent controlling or autonomy promoting attitudes at high or moderate level, thus contemplating one of four positions on the autonomy "continuum" (HC - highly controller - vignettes: question 1 item C, question 2 item A, question 3 item B, question 4 item D, question 5 item B, question 6 item A, question 7 item C and question 8 item D); (MC - moderately controller - vignettes: question 1 item A, question 2 item D, question 3 item A, question 4 item B, question 5 item C, question 6 item B, question 7 item D and question 8 item C); (MA - Moderately promoter of autonomy - vignettes: question 1 item D, question 2 item C, question 3 item C, question 4 item C, question 5 item A, question 6 item D, question 7 item A and question 8 item B); (HA - highly promoter of autonomy - vignettes: question 1 item B, question 2 item B, question 3 item D, question 4 item A, question 5 item D, question 6 item C, question 7 item B and question 8 item A). The Cronbach's alpha was $\alpha = 0.85$ demonstrating good reliability of the data, considering that values 0.7 to 0.9 indicate good reliability¹⁴.

The Assertiveness Inventory¹¹ was utilized to examine the teacher's behavior. The instrument consists of 35 questions related to the following subscales: assertiveness (honest expression of feelings and goal reaching), nonassertiveness (feelings of anxiety, confusion and guilt), and aggressiveness (feelings of resentment, frustration and rejection).

The questions were answered on a Likert scale with values from 0 to 4 points (0 = no or never; 1 = somewhat or sometimes; 2 = on average, usually; 3 = often; 4 = almost always or entirely), indicating the behavior frequency (assertive, nonassertive, aggressive) as a percentage, where the highest percentage is the most common behavior. This inventory showed good reliability, according to the value of Cronbach's Alpha¹⁴ ($\alpha = 0.72$).

A questionnaire containing demographic questions such as gender, age, teaching years, workplace and weekly working hours was also employed. To diagnose the professional development cycle (PDC) of the teachers we used the teaching experience (in years) in Physical Education, were into categories in cycles according to the classification proposed by NASCIMENTO and GRAÇA⁶: a) entry (0-3 years), b) consolidation (4-6 years), c) diversification (7-19 years), and e) stabilization cycles (20-35 years).

Procedures

This study is part of an institutional project, linked to the Departamento de Educação Física da Universidade Estadual de Maringá (UEM) [Department of Physical

Education at the State University of Maringá], approved by the local ethics committee under report number 0339/2011. Data were collected in the first half of 2011, during educational meetings held in municipal schools. Individual teachers answered the questionnaires privately after signing the informed consent form (ICF).

Statistical analysis

The Cronbach's alpha coefficient was employed to assess the reliability of the instruments' items and the Shapiro-Wilk test to verify the data normality. Since answers didn't follow a normal distribution, distribution-free methods were used, with median (Md) and interquartile range as descriptive statistics and nonparametric tests as inferential statistics. The correlation between variables was calculated with Spearman's correlation coefficient. The comparison between motivational styles was assessed with repeated measures ANOVAs¹⁵ with Bonferroni¹⁶ "post hoc" corrections as variance homogeneity and sphericity assumptions were verified with Mauchly and Greenhouse-Geisser tests respectively. Significance levels were set as $p \leq 0.05$.

Results

TABLE 1 shows the results of the descriptive analyzes presented in absolute frequency (n) and relative frequency (%), with 20 male subjects (40%) and 29 female (58%). Eleven teachers have been identified in the entry cycle (22%), eighteen teachers in the consolidation cycle (36%); sixteen teachers in the diversification cycle (32%) and four teachers in the stabilization cycle (8%)⁶. In the weekly workload assessment, it was found that ten teachers work up to 20 hours per week (20%); twenty-nine teachers work between 21 and 40 hours per week (58%); and ten teachers work above 41 hours a week (20%). Incompleteness in questionnaire answering amount for 2% of missing data.

TABLE 1 - Physical Education teachers' sample profile by gender, professional development cycle (PDC) and weekly workload.

Variables	(n)	(%)
Gender		
Male	20	40%
Female	29	58%
PDC		
Entry	11	22%
Consolidation	18	36%
Diversification	16	32%
Stabilization	4	8%
Weekly workload		
Up to 20 hours	10	20%
21 to 40 hours	29	58%
Over 41 hours	10	20%

The results for motivational styles of Physical Education teachers are shown in TABLE 2. The comparisons showed that the differences between the motivational styles are unlikely to appear as a result of sampling error ($F(2,99) = 169.35$, p -value = 0.001). An overall effect size of 0.779 showed that

approximately 80% of the variation in the adopted motivational styles may result from situations occurring in class; a highly autonomy promoter style is prevalent, considering these conditions ($Md = 5.88$) and the highly controller style is less adopted by teachers ($Md = 2.88$).

TABLE 2 - Comparison between medians in motivational styles of Physical Education teachers of Maringá - Paraná.

Repeated Measures Anova Test: significant differences between:
a) 1 and 2 ($p = 0.001$);
b) 3 and 1 ($p = 0.001$);
c) 1 and 4 ($p = 0.001$);
d) 2 and 3 ($p = 0.001$);
e) 2 and 4 ($p = 0.001$);
f) 4 and 3 ($p = 0.001$).

Motivational Style	Median	Q1-Q3	p-value
1 Highly controller (HC)	2.88 ^{a/b/c}	2.32-3.57	< 0.001
2 Moderately controller (MC)	4.63 ^{a/d/e}	3.82-5.13	< 0.001
3 Moderately autonomy promoter (MA)	5.25 ^{b/d/f}	4.44-5.75	< 0.001
4 Highly autonomy promoter (HA)	5.88 ^{c/e/f}	5.44-6.38	< 0.001

Comparisons (TABLE 2) showed statistically significant differences between all the motivational styles; we highlight the smaller differences between the moderately controller (MC) and moderately autonomy promoter (MA) styles (mean difference -1.638), whereas higher differences were found between the highly controller and highly autonomy promoter styles (mean difference 2.929, CI (95%) 2.49-3.36). We conclude from these results that in the routine situations of behavioral problems in physical education classes related to motivation teachers adopt highly autonomy promoting styles, encouraging self-determined behaviors in students.

The comparison between the professional development cycles (PDC) considering behaviors (assertive, nonassertive and aggressive) there was no statistically significant difference ($p > 0.05$).

TABLE 3 shows the significant correlations between variables: aggressiveness and highly controller style ($\rho = 0.69$); nonassertiveness and aggression ($\rho = 0.82$), indicating a strong positive relationship between these variables in teachers who work with a workload of up to 20 hours per week.

The correlation was performed between the same variables, for teachers who work with higher weekly working hours (21-40 and above 40 hours per week - TABLE 3). The results showed correlation between the moderately autonomy promoting style and the highly autonomy promoting style ($\rho = 0.76$), indicating that the higher the workload of teachers, the more they adopt autonomy promoting motivational styles.

TABLE 3 - Correlation coefficients between motivational styles and behavior (assertive, nonassertive and aggressive) according to weekly workload of Physical Education teachers of Maringá - Paraná.

		21 to 40 hours						
		1	2	3	4	5	6	7
Up to 20 hours								
1	Hig. Controller	-	0.31	0.00	0.05	0.14	0.19	-0.14
2	Mod. Controller	0.25	-	0.20	0.01	0.01	0.37	0.14
3	Mod. Autonomy Prom.	0.03	0.56	-	0.76**	-0.11	0.05	0.01
4	Hig. Autonomy Prom.	-0.15	-0.06	0.66*	-	-0.04	-0.06	0.00
5	Assertiveness	0.36	-0.07	0.39	0.60	-	-0.28	0.04
6	Nonassertiveness	0.63*	0.08	-0.01	-0.24	-0.22	-	0.23
7	Aggressiveness	0.69*	-0.04	0.13	-0.01	0.16	0.82**	-

Spearman's Correlation:
* $p < 0.05$;
** $p < 0.01$.

TABLE 4 shows the correlations between motivational styles and behavior (assertive, nonassertive and aggressive) according to professional development cycles. In the consolidation cycle we highlight the significant correlations between: highly and moderately controller styles ($\rho = 0.47$); moderately controller and nonassertive behavior ($\rho = 0.66$); moderately autonomy promoter and highly autonomy promoter ($\rho = 0.75$); and assertive and nonassertive behavior ($\rho = -0.57$).

The correlation between the diversification cycle and motivational styles showed correlations

between: moderately autonomy promoter and highly controller ($\rho = 0.63$); moderately autonomy promoter and moderately controller ($\rho = 0.70$); highly autonomy promoter and moderately autonomy promoter ($\rho = 0.57$); assertive behavior and moderately controller style ($\rho = 0.55$); and between assertive and nonassertive behavior ($\rho = -0.58$).

The correlations between the same variables were performed for teachers in entry and stabilization cycles, but no significant correlations were found.

TABLE 4 - Correlation coefficients between motivational styles and assertive behavior frequency according to professional development cycle (consolidation and diversification) of Physical Education teachers of Maringá - Paraná.

		Consolidation						
		1	2	3	4	5	6	7
Diversification								
1	Hig. Controller	-	0.47*	0.11	-0.24	0.64	0.41	-0.01
2	Mod. Controller	0.44	-	-0.10	-0.39	0.29	0.66**	0.08
3	Mod. Autonomy Prom.	0.63**	0.70**	-	0.75**	-0.10	-0.04	-0.05
4	Hig. Autonomy Prom.	0.15	0.29	0.57*	-	0.10	-0.30	-0.06
5	Assertiveness	0.13	0.55*	0.15	0.06	-	-0.57*	0.23
6	Nonassertiveness	0.11	-0.01	0.22	0.09	-0.58*	-	0.19
7	Aggressiveness	0.13	0.18	0.25	-0.03	0.20	0.18	-

Spearman's Correlation:
* $p < 0.05$;
** $p < 0.01$.

Comparisons between motivational styles, considering the professional development cycles, showed no significant differences. Likewise, in the

comparison of assertive, nonassertive and aggressive behavior and motivational styles by gender, the results showed no statistically significant differences ($p > 0.05$).

Discussion

The present study is unprecedented in the national context in the Educational Psychology area, aiming to investigate the behavior (assertive, nonassertive and aggressive) of the Physical Education teacher and its motivational style along the teaching career. The results showed that the highly autonomy promoter style was the most widely adopted by teachers (TABLE 2). In addition, it was shown that teachers who work up to 20 hours per week and present the highly controller style tend to be more aggressive and nonassertive in their behavior (TABLE 3). A relationship between assertive behavior and moderately controller style among teachers who are in the diversification cycle was also found; as a relationship between nonassertive behavior and the moderately controller style among teachers who are in the consolidation cycle.

Teachers who adopt a highly autonomy promoter style were also found in other studies¹⁷⁻¹⁸. A survey conducted in the North American educational context³ revealed that an autonomy promoter environment increases the chances of student engagement in physical activities, thus ensuring that students, when intrinsically motivated, participate in physical education classes in a pleasurable way. Similar evidence was found in a study¹⁹ with public school teachers which identified that a transmission of knowledge about bodily representations context ideas, rules of coexistence, social space and body gestures, led to an increase in their students' autonomy.

According to the Self-Determination Theory^{9,20}, in order to students to achieve the self-determined motivation three basic and universal psychological

needs should be met: to feel competent, to establish social and autonomy relations. Thus, it is believed that the teachers of this study, by adopting the autonomy promoting style, are meeting the need of autonomy of their students, contributing to their motivation.

The challenge for Physical Education teachers who work in the educational context seems to be to make students feel motivated⁵, as when this occurs, they present positive attitudes towards the activity which they set themselves to engage. In the Self-Determination Theory “continuum”, the individual may be in a lack of motivation state and change their behavior to the state of intrinsic/self-determined motivation; the reverse is also possible: intrinsically motivated students may move to the state of demotivation¹⁰. Thus, it is up to the teacher to devise activities and develop teaching strategies, seeking to raise the sense of competence, improving social relations and promoting autonomy, in order to students to feel intrinsically motivated. One of the ways to prepare these professionals seems to be to direct efforts in initial and continuing teacher training, providing a learning experience that encourages the adoption of a motivational style more autonomy promoting.

Taking into consideration the Professional Development Cycles (PDC), no significant differences were found, demonstrating that work experience does not influence the occurrence of assertive, nonassertive or aggressive behavior for these subjects. Similar results were found by COSTA et al.²¹, who analyzed the perception of competence between the professional development cycles, finding no significant differences between cycles. HALL et al.²² stated that individuals perform adjustment efforts of their behavior which characterize their personality. Hence, the personality does not change over time, but the behavior of each subject can be adjusted according to the environment and situations experienced throughout life and the teaching career, with assertive behavior prevailing.

However, during their professional life cycle, according to a study by FOLLE and NASCIMENTO²³, teachers' goals change during his teaching career. The authors showed that early career teachers are more concerned with the task of teaching, and that this concern intensifies over the years of teaching. However, when experienced, concern turns to its didactic action and government proposals governing the work in public schools. At the final phase of their career, teachers concern about the social problems their students are exposed to. Therefore, during his career the teacher must come to terms with the

demands of his profession, and during the different stages of his career he tends to adapt his behavior, which often leads to having assertive, nonassertive or aggressive behaviors on occasion to meet his role.

The concept of assertiveness has been studied for nearly 50 years²⁴ and the highest amount of research was conducted in the 70s and 80s; the concepts of this period have become classics and orient, to this day, research and the practice of behavioral therapy. However, studies about assertive, nonassertive and aggressive behavior of teachers have not yet been found. Thus, studies that investigated these variables with other populations are going to be discussed, to make it possible to establish non-linear associations with the context of this study²⁵⁻²⁶.

The assertiveness has also been evaluated according to gender. The present study analyzed the relation of the assertive, nonassertive and aggressive behavior and the motivational style relative to sex, did not find significant differences. In contrast to these results we mention the study of REEVE²⁷ which observed, regarding the relation between motivational styles and gender, that women have more autonomy promoter style than men. In accordance with the present findings concerning the assertive, nonassertive and aggressive behavior according to sex, previous studies²⁵⁻²⁶ showed no significant differences between sexes when analyzing assertiveness; however they used other measuring instruments and the samples comprised undergraduate students.

When considering the workload of teachers (TABLE 3), it was observed that working up to 20 hours per week is correlated to the adoption of a controller style and displaying more aggressive and nonassertive behaviors, while workloads exceeding 20 hours were correlated with moderately and highly autonomy promoting behaviors.

We remark that it is not possible to engage in a linear discussion of those findings to other studies because there are no investigations focusing the relationship between these behaviors and the workload of teachers. Nevertheless, we attempted to understand the results found on the assumption that in working less hours per week, the teacher with controller style manifests nonassertive and aggressive behavior, under the influence of factors such as the pressures from the education system (evaluation of intervention approaches, mandatory use of specific methods in class), which force them to use more controlling strategies². Often, the teacher can control these pressures, displaying a nonassertive behavior not to show aggressive behavior, since the

purpose of this behavior may be to avoid prejudice to the profession practice, considering that the nonassertive behavior is more accepted by the group when compared to aggressive behavior.

As to the more autonomy promoter style of teachers with workload above 20 hours, we believe it may be due to their constant presence in the school environment that can create opportunities for greater involvement and a closer relationship with the other teachers, the school community and students, giving him more autonomous features that are positive for the quality of the educational process as well as a greater encouragement to the autonomy of students.

The results revealed that experience of time of teachers was related to the nonassertive behavior and the controller style (TABLE 4) when considering teachers in the consolidation cycle. The explanation for these results could be in the assertion of AMORIM FILHO and RAMOS²⁸ which suggest that teachers with less experience may come across a number of social relationships that occur in the school context. These social relations can help or hinder the teaching practice, being problematic for the teacher with less experience, because he may not know how to deal with such difficulties. We highlight the importance of investigating the least experienced teachers, because it is essential to understand how much time this professional needs to know the best teaching strategy to be adopted¹.

Moreover, the beginning of the career is distinguished by a clash with the educational reality, a sense of insecurity and the discovery in the profession²⁹. These experienced negative feelings can lead teachers to adopt a more controlling style and present nonassertive and aggressive behaviors, since this professional is in the process of developing his occupational identity, and also has to deal with the professional socialization problems³⁰.

The current study, although one of the few in the national context investigating Physical Education teachers who work in the early grades, had as limitations: the sample, due to the small number of Physical Education teachers who work with the early grades of elementary school, due to the lack of compulsory licensed professional at this level in some municipalities in Brazil supported by the LDB [Law of Directives and Basis] (Lei n. 9.394/96)³¹; not analyzing assertive, nonassertive and aggressive behavior relative to the teachers' age; as well as the fact that the Inventory Assertiveness has not been validated for the Brazilian population.

In conclusion, it was found that Physical Education teachers adopted an autonomy promoter motivational style. It was also observed that workloads above 21 hours per week were not an intervening factor in the assertive, nonassertive and aggressive behavior, nor does it influence the adoption of either motivational style in this population. Finally, it revealed that less experienced teachers (consolidation cycle) that show nonassertive behavior tend to adopt the controller style, resulting in teaching practices that do not favor the development of students' autonomy.

As a practical implication, due to the findings of this study we expect that professionals working in school Physical Education give emphasis on teaching strategies that promote student autonomy, adopting the autonomy promoting motivational style and assertive behavior in different social relations.

In this sense, in future studies, it is suggested that investigations regarding the motivational style and the assertive, nonassertive and aggressive behavior to be carried out in order to generalize these findings to the Brazilian context, attempting to correlate these variables with student motivation.

Resumo

Estilo motivacional e comportamento assertivo de professores de educação física ao longo da carreira

O objetivo deste estudo foi investigar o estilo motivacional e o comportamento (assertivo, inassertivo e agressivo) de professores de Educação Física de uma cidade do noroeste do Paraná, ao longo da carreira docente ($n = 49$). Como instrumentos de pesquisa foram utilizados o questionário Problemas na Escola, o Inventário de Assertividade e os dados demográficos. Os dados foram analisados a partir da estatística inferencial: Shapiro-Wilk, Alpha de Cronbach, Anova de Medidas Repetidas e Correlação de Spearman ($p \leq 0,05$). O estilo motivacional com mediana superior foi o estilo altamente promotor de autonomia ($Md = 5,88$) e o com mediana inferior foi o estilo altamente controlador ($Md = 2,88$), com diferenças estatisticamente significativas. Os resultados demonstraram correlações positivas entre as variáveis: inassertividade e estilo

altamente controlador ($p = 0,63$); agressividade e estilo altamente controlador ($p = 0,69$); e a inassertividade e agressividade ($p = 0,82$) dos professores que atuam com carga horária de até 20 horas semanais. Conclui-se que os professores de Educação Física apresentaram um estilo motivacional mais promotor de autonomia e que ocorreu relação entre o estilo motivacional e o comportamento assertivo, inassertivo e agressivo dos professores, considerando o tempo de experiência e a carga horária semanal inferior.

PALAVRAS-CHAVE: Docente; Comportamento assertivo; Motivação; Psicologia educacional.

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