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Perceptions of teachers' positive feedback and perceived threat to sense of self in physical education: a longitudinal study

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Abstract

This study examined the direction of causal flow between perceived positive general teacher feedback and perceived threat to sense of self in physical education (PE). The stability effect and stationarity of the relationship between these variables over the two-year period was tested. Students (N = 302) were administered questionnaire during class time in Grades 6 and 8 and two years later in Grades 8 and 10. The perceived threat to sense of self subscale from the Physical Education Learning Environment Scale (PELES), and perceived positive general feedback subscale from the Perceived Teacher's Feedback (PTF) questionnaire were used. Results using structural equation modelling showed the high stability of perceived threat and low stability of perceived teacher feedback in PE over the two-year period, and suggest that low level of perceived threat is a significant determinant of high level of perceived positive teacher feedback. In addition, the model showed that relationship between perceived threat and perceived positive feedback within time points differed significantly over time.

Key-words: covariance structure analysis • perceived teaching behaviour • students' sense of self

Introduction

The development of children's positive feelings about themselves has been a primary goal in most elementary and achievement settings, because it is considered to be an underlying factor determining their motivation, persistence and academic success (Yawkley, 1980). Most children wish to be seen as physically competent (Tremblay et al., 2000), especially to their friends and classmates (Shoemaker and Kalverboer, 1994). Deci and Ryan's (1985, 2000) self-determination theory highlights the importance of the need for competence that is essential for high level of self-esteem (Ryan and Deci, 2001). The crucial role of high level of perceived competence in physical education (PE) setting has been emphasized by several authors (Biddle, 1997; Cury et al., 1996; Ferrer-Caja and Weiss, 2000, 2002; Ntoumanis, 2001). The way

in which an adult supervisor responds to a child's performance may be a salient source of information to evaluate one's ability and competence. The relationships between students' perceptions of competence and coach's/teacher feedback perception has been shown to be positive (Allen and Howe, 1998; Amorose and Horn, 2000; Koka and Hein, 2003). The more competent a student perceives him or herself to be in a PE setting, the less threatened they feel.

The present study focused upon the longitudinal time-lagged relationships between perceived positive general teacher feedback and perception of threat to sense of self in PE classes. Perceived positive general feedback may be defined as students' perception of PE teachers' positive statement about their performance that does not tell the students exactly what was good about the performance but is used to encourage their effort (e.g. 'Well done!' or 'You are doing a really great job'). Perceived threat to sense of self may be defined as a degree to which students' self-esteem is threatened when taking part in PE – in other words, how the learning environment created in PE classes influences students' self-esteem. One may say: 'I feel really good about myself in PE', indicating low perception of threat to his or her self-esteem. On the contrary, one might say that he or she feels bad about him or herself in PE, indicating high perception of threat to his or her self-esteem.

People feel positively about themselves and worthwhile if they can satisfy some standard of physical attractiveness or competence (Crocker and Wolfe, 2001); for example, if an individual is best at something or outdoes others in some competition. Crocker (2002) indicated that there are different needs for different people to feel themselves worthwhile and thereby assure high level of self-esteem. However, one of the crucial psychological needs for which there is wide agreement across theories is the need for competence (Deci and Ryan, 2000). Several authors have emphasized that the need to be seen as physically competent (Cantell et al., 1994; Shoemaker and Kalverboer, 1994; Whitehead and Corbin, 1997) and doing well in PE classes is likely to be an important cause of competence for most children.

Perceived learning environment and students' feelings about themselves in PE

In a PE setting, the perceived learning environment may affect the individuals' feeling about themselves. If an individual has successful experiences in PE, he or she will be more likely to feel good about themselves. On the contrary, perceived failure or incompetence in PE classes would cause bad feelings and might have a negative effect on one's self-esteem. Mitchell (1996) developed the Physical Education Learning Environment Scale (PELES) for measuring students' perceptions of the learning environment in PE on dimensions of perceived threat to sense of self (i.e. perceived threat to self-esteem), perceived challenge, perceived competitiveness and perceived internal control. Mitchell (1996) indicated that middle school students' intrinsic motivation is likely to be high when they perceive the learning environment to be non-threatening to their self-esteem and physically challenging. The question then

arises, under what conditions do children perceive optimal challenge, but not experience a threat to their feelings? One possibility, suggested by Mitchell (1996), is to continually provide experiences enabling students to be successful by setting tasks appropriate to students' ability. This should lead to a positive feeling of self-worth and lower perception of threat to self-esteem.

Nevertheless, researchers have not addressed changes that may occur in perception of threat to sense of self in PE as students grow older. Knowing better the changes or stability of students' perception of threat in PE over time, teachers might be able to modify their behaviour to guarantee the learning environment that facilitates students' good feelings about themselves. Lately, studies in the self-concept research area have verified that global self-esteem and physical self-worth and subdomain levels of physical self-concept are stable constructs (Kowalski et al., 2003; Marsh and Yeung, 1998). More precisely, according to Kowalski and colleagues (2003), physical self-worth and subdomain levels of physical self-concept were even more stable than general self-esteem over a one-year period. However, no study has established the stability of students' perceptions of threat to sense of self in PE.

Perceived teacher feedback and students' feelings about themselves in PE

Teacher feedback has been the focus of much research (Behets, 1997). It has been argued that teacher's behaviour and interaction with students and feedback providing can affect students' motivation, perceptions and willingness to continue their efforts to improve (Amorose and Weiss, 1998; Brophy, 1987; Goudas et al., 2000). Nevertheless, the effect of teachers' feedback on students' achievement is not as clear as often assumed and may be even less than previously thought (Lee et al., 1993; Silverman, 1994). However, Fredenburg et al. (2001) found that informational feedback provided by the PE teacher is an essential factor in facilitating student engagement, fostering positive perceptions of ability and competence. Goudas et al. (2000) studied the effect of positive and negative feedback on undergraduate students and they found that positive feedback enhanced perceptions of competence while negative feedback lowered them. One might therefore assume that teacher feedback that is positive by nature would have an effect on children's perceptions of threat to sense of self in PE, which means high frequency of positive feedback will result in low perceptions of threat. However, these studies were concerned with the effect of actual feedback from the teacher, and not with perceived feedback.

According to Wittrock (1986), cognitive processes are defined as students' thoughts or cognitions that influence their perceptions. Using questionnaires as indicators of students' thoughts, several researchers have noted that self-reported thoughts are more accurate predictors of students' achievement than the observers' estimations (Peterson and Swing, 1982; Peterson et al., 1984). During the last two decades, students' perceptions of different domain in PE have been widely investigated. The effect of perceived coach/teacher's feedback on different psychological outcomes

(e.g. intrinsic motivation and perceived competence) has received attention in the sport and PE literature only recently (Allen and Howe, 1998; Amorose and Horn, 2000; Koka and Hein, 2003).

Koka and Hein (2003) developed the Perceptions of Teacher's Feedback (PTF) questionnaire to investigate the relationships between perceived teacher's feedback and intrinsic motivation and its components in middle school PE. Results revealed that perceived positive general feedback was a valid predictor of intrinsic motivation and its components such as perceived competence and perceived enjoyment. The results also indicated that perceived positive general feedback had a significant relationship with students' perceptions of threat to sense of self in middle school PE. However, the causal nature of the relationship between perceptions of teachers' feedback and students' feelings about themselves in PE has not been established. Does high perception of teacher positive feedback result in low perception of threat in PE or does low perception of threat result in high perception of teacher positive feedback or both?

To answer this question, longitudinal study designs are needed. Longitudinal, cross-lagged panel design allows us to estimate the following parameters. First, the stability of the variables over time that is tested by examining the regression coefficient of a variable on itself across two time points. It is important to study these 'stability' coefficients because they provide 'summary statements about the relative change in a population of individuals' (Hertzog and Nesselroade, 1987: 94). Second, reciprocal relationships and direction of causality. Such cross-lagged relationships examine how one variable, like perceived threat in PE at one point in time, can account for another variable, like perceived teacher positive feedback, at a second, later point in time. Third, stationarity in relationships between variables across two time points.

The purpose of the present study was to examine the causal nature of the relationships between perceived positive general feedback and perceived threat to sense of self in PE using a cross-lagged panel design. It was expected that reciprocal cross-lagged effects would exist between perceived threat to sense of self and perceived positive general feedback. It was initially hypothesised that the perceived positive general feedback and perceived threat to sense of self constructs would achieve discriminant validity at both time points. It was also hypothesized that perceived positive general feedback and threat to sense of self would exhibit a high degree of stability, and that the relationship between these two variables would be stationary at two time points.

Method

Participants

The participants were 302 (169 boys and 133 girls) students in five schools located in the same part of town and were similar in terms of their number of pupils from a town of 100,000 inhabitants in Estonia. Students completed questionnaires on two occasions over a two-year period. The first time the questionnaires were administered,

the students were in 6th (n = 220) and 8th (n = 82) grades aged 11–15 yrs (M = 12.7, SD = .97, Time 1). The second time, the students were in 8th (n = 220) and 10th (n = 82) grades aged 13–17 yrs (M = 14.7, SD = .96, Time 2). During the two-year period, students were taking PE as a required course. Beginning from 6th grade there are two compulsory PE lessons per week in Estonian secondary schools. The same PE teacher taught students during the follow-up period.

Instrumentation and procedures

Perceived threat to sense of self from the Physical Education Learning Environment Scale (PELES; Mitchell, 1996)

For this study, the authors only used one subscale of the inventory, perceived threat to sense of self (hereafter referred to as 'perceived threat'). The perceived threat subscale asked students to indicate how positive or negative they felt about themselves in PE lessons. Lower scores represented lower perceptions of threat. The perceived threat subscale from the PELES was chosen because it has been shown to have strong relationships with positive general teacher feedback, perceived competence and intrinsic motivation among middle school students in PE (Koka and Hein, 2003; Mitchell, 1996).

Perceptions of the teacher's feedback (PTF; Koka and Hein, 2003)

A dimension of perceived positive general feedback (hereafter referred to as 'perceived positive feedback') from the PTF questionnaire was used. Items of this subscale asked students to indicate how they perceive the teacher provides them positive feedback after their performance in PE classes. (The items used are presented in Table 1.) Responses for both scales were indicated on five-point Likert scale, ranging from 5 = strongly agree to 1 = strongly disagree. Permission to carry out the study was obtained from the headmaster of each school or from other teachers. Parental consent was obtained for all students. Questionnaires were administered in classrooms. It was emphasized to the participants that the questionnaires were designed to measure students' general feelings about PE classes and not about one particular class. This means that each item in this case was worded to reflect students' general levels of perceived threat and perceived positive feedback in PE without reference to any one particular lesson. Students were assured that their answers would remain confidential. The completed questionnaires were collected by the researcher. The data collection procedures were identical both times. Only those who attended both the time 1 and time 2 data collection sessions were included in the analyses (N = 302). Students were identified by their date of birth.

Data analysis and model specification

At first, the outliers were determined before executing further analyses. The outliers were determined by the range of ± 3 standard deviations away from the means of

computed corresponded latent variables and were considered for case exclusion. Based on these analyses, the eight cases with 3 or more standard deviations away from the means were excluded from the total of original 302 cases, retaining final sample size of 294. Also, multiple imputation was used for replacement of a missing observations with a score from another case with a similar profile of scores across other variables (Jöreskog and Sörbom, 1996). After these modifications, the raw data were deemed ready for further analysis.

The data then were analysed using the LISREL 8.51 structural equation modelling (SEM) programme (Jöreskog and Sörbom, 1996). Goodness of fit of the proposed models with the data was assessed by examining the comparative fit index (CFI), the non-normed fit index (NNFI), and the root mean square error of approximation (RMSEA). These indices were selected because previous research has shown that these fit indices displayed restricted random variation under various conditions of model misspecification, sample size and estimation methods (Fan et al., 1999). According to Bentler (1990), cut-off values for CFI and NNFI greater than .90 are typically taken to reflect an acceptable fit, whereas for RMSEA, values of .05 or less indicate a close fit. Hu and Bentler (1999) have, however, noted that values approaching .95 for CFI and NNFI are considered preferable.

First, to support the hypothesis that perceived positive feedback and perceived threat constructs would display discriminant validity at both time points, a series of two-step confirmatory factor analysis (CFA) models were conducted as suggested by Mulaik and Millsap (2000). In the first step, discriminant validity between perceived positive feedback and perceived threat was examined through the specification of a model in which items of the respective latent constructs were set to load on their expected factors. A two-factor measurement model was tested in which the latent constructs of perceived positive feedback and perceived threat were set to correlate. In the second step, a congeneric CFA model was estimated in which a single factor would explain the relationships between the items of perceived positive feedback and perceived threat. Discriminant validity of the measures is supported if the measurement CFA model that assumes discriminant validity meets the proposed values for indices of good fit and are superior in fit to the congeneric CFA model. The two-step process was followed to test the discriminant validity of the perceived positive feedback and perceived threat at both time points, a total of four analyses.

Second, to test the causal nature of the relationships between perceived positive feedback and perceived threat, the hypothesized structural model was specified in which reciprocal cross-lagged effects between perceived positive feedback and perceived threat across time were estimated. In addition, to examine the stability of the perceived positive feedback and perceived threat over the two-year period, the model specified direct effects of both perceived positive feedback and perceived threat measured at time 1 on themselves measured two years later (time 2). Finally, to test the stationarity of the relationship between perceived positive feedback and perceived threat, the two constructs were set to correlate at both time points.

Table 1 Descriptive statistics of the observed variables for both Time 1 and Time 2 data collection (n = 294)

	Time 1		Time 2	
	M (α)	SD	M (α)	SD
Perceived positive feedback	(.68)		(.74)	
1. My work is frequently encouraged by the teacher	3.09	.95	2.91	1.06
2. The teacher often praises me	2.99	.92	2.95	1.04
3. When I do well in phys. ed., the teacher confirms that	3.39	1.07	3.10	1.04
Perceived threat	(.66)		(.68)	
1. I feel useless in phys. ed. classes	1.81	.90	1.74	.94
2. I get worried that I will look stupid in phys. ed.	2.09	1.02	1.85	.94
3. Phys. ed. makes me feel bad about myself	1.71	.89	1.67	.85

α = cronbach alpha; cronbach alphas for each subscale are presented in the parentheses.

Results

Preliminary analyses

At first, distribution properties of the responses to all items were examined. Descriptive statistics for the observed variables are presented in Table 1. Skewness values greater than one indicated that not all observed variables were normal in distribution (for instance, in the distribution of items of perceived threat to sense of self). Therefore, for further analysis the polychoric correlations and its asymptotic covariance matrix were provided by the PRELIS 2.51, a companion program to LISREL 8.51. Maximum likelihood method based on asymptotic covariance matrix was used to examine the data because this method does not require a strict normal distribution of the variables and is more robust with data with slightly skewed distribution.

Prior to testing the main hypotheses, to support the fit of the measures used in this study, measurement CFA models that assumed discriminant validity were conducted and compared with congeneric CFA models that did not assume discriminant

Table 2 Goodness of fit statistics for congeneric and discriminant validity confirmatory factor analytic models and final model

Model	χ^2/df	p-value	CFI	NNFI	RMSEA
Congeneric, Time 1	109.87/9	.000	.70	.51	.196
Discriminant, Time 1	4.42/8	.817	1.00	1.00	.000
Congeneric, Time 2	171.58/9	.000	.55	.25	.248
Discriminant, Time 2	14.21/8	.077	.96	.93	.051
Final Model	54.82/48	.231	.95	.93	.022

CFI = Comparative Fit Index; NNFI = Non-Normed Fit Index; RMSEA = Root Mean Square Error of Approximation.

validity. Goodness of fit indices for the series of congeneric and discriminant validity models at both time points are given in Table 2. Each of the discriminant validity models met the criteria for an adequate fit and were superior in fit to the congeneric models at both time points. These analyses support the discriminant validity of two differentiated measures of perceived positive feedback and perceived threat as hypothesized.

Main analyses

The main idea of the structural equation models was to test the causal nature of the relationships between perceived positive teacher feedback and perceived threat in PE. The longitudinal model and structural coefficients are shown in Figure 1. The goodness of fit statistics are reported in Table 2 (see final model). Focusing on time 1, it can be seen that students' perceptions of threat and perceived positive feedback have strong negative relationship. However, the relationship between these two variables at time 2 is also negative but not significant, indicating that relationship between perceived threat and perceived positive feedback is not stationary over time. While focusing on the overall time-lagged model, perceived positive feedback and perceived threat demonstrate autoregression over time. This tests the extent to which the distribution of the variable at time 1, for example perceived threat, overlaps with the distribution of that variable measured at time 2. The extent to which they do not overlap provides confirmation that change has occurred in the variable over time and the standardized coefficient reflects the extent of this change. Students demonstrated high degree of stability in perceptions of threat in PE from time 1 to time 2 (path coefficient = .62, with 95 percent confidence intervals [CI_{95}] = .40 to .84, $p < .01$). As regards perceived positive feedback, students did not demonstrate as high degree of stability over time (path coefficient = .24, CI_{95} = .04 to .36, $p < .01$). Focusing on the cross-lagged relationships, only the perceived threat → perceived positive feedback path exhibited a modest but significant cross-lagged standardized coefficient

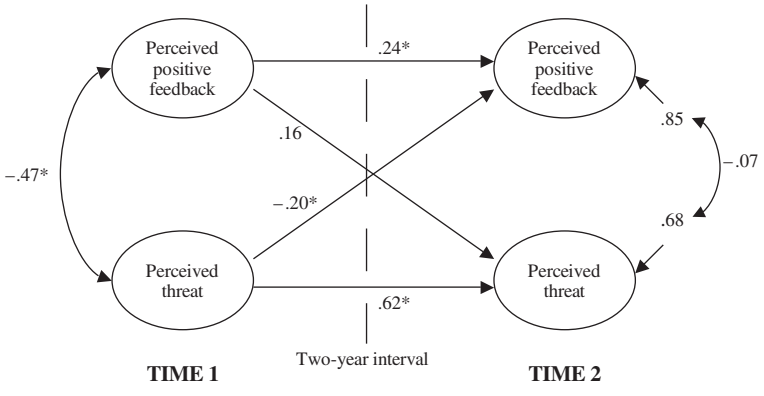

Figure 1 Path analysis showing relations between perceived positive feedback and perceived threat in physical education across time. *Paths are significant at $p < .01$

(path coefficient = –.20, CI_{95} = –.39 to –.01, $p < .01$) between time 1 and time 2. It seems to suggest that low perception of threat in PE results in high perception of teacher positive feedback.

Discussion

The main purpose of the present study was to test the causal nature of the relationships between perceived positive general feedback and perceived threat to sense of self in PE. We expected there to be reciprocal cross-lagged effects between perceived threat and perceived positive feedback and that both constructs would demonstrate a high degree of stability and a stationary relationship over the two-year period. The results partly supported the hypothesis because a unidirectional cross-lagged effect was apparent between perceived threat and perceived teacher positive feedback in PE. Specifically, low perceived threat in PE resulted in higher perception of positive teacher feedback. The results showed that perceived threat exhibited a higher degree of stability than perceived positive feedback in PE over time, partly confirming our hypothesis. The correlation between perceived threat and perceived positive feedback changed over the course of time and did not exhibit stationarity.

The strong relationship between perceived positive feedback provided by the teacher or coach and children's different psychological outcomes (e.g. intrinsic motivation, perceived competence, perceived threat) has been suggested by several researchers (Allen and Howe, 1998; Amorose and Horn, 2000; Koka and Hein, 2003). In this study, perceived positive feedback was found to have strong negative correlation with younger students' perceptions of threat to sense of self in PE, but did not have as strong relationship in later grades. This finding did not support our hypothesis that the relationship between teacher positive feedback and students' perception of threat in PE is stationary over time. The longitudinal model in the present study seems to demonstrate that relationship between those two constructs changed over time. Younger students' perception of the positive feedback from the teacher may reduce the feeling of threat to self-esteem in PE. This is consistent with Graham's (1992) and Mawer's (1995)'s notion that the use of expressions by the PE teachers such as 'good job', 'great', 'terrific' and 'all right', which all can be characterized as general positive feedback, is helpful for developing a positive, motivating and non-threatening learning environment, and keeping students 'on-task', especially with young students who desire the teacher's approval. On the contrary, as students grow older they obviously do not care about teachers' general approval as much as younger ones. Schunk (1995) has also emphasized that simply saying to advanced students 'good work' is not likely to have much effect unless students understand which aspects of performance are good.

Kowalski et al. (2003) and Marsh and Yeung (1998) provided evidence that both more situation-specific self-concept components like physical self-worth and general self-esteem are relatively stable over the one-year period. However, the least stable component self-concept was general self-esteem. Physical self-worth and subdomain

levels of physical self-concept showed higher stability. In the present study students' perception of threat to their self-esteem in PE was found to exhibit a high degree of stability. Low mean scores of perceived threat at both time points presented in Table 1 also indicate that students feel good about themselves in PE and do not feel much threat to their self-esteem. Students' perception of positive teacher feedback was less stable than perceived threat. An explanation for this finding might be that the nature of feedback given by teachers at higher grades was different. One possibility is that at higher grades the nature of feedback provided by the teacher is more informative/instructive rather than general.

According to the model presented in Figure 1, the cross-lagged effects that determine the causal flow among the constructs seem to show that the way students feel about themselves in PE predicts their perception of positive teacher feedback. The lower the perception of threat to self-esteem the higher the perception of positive feedback. The lack of cross-lagged effect between perceived positive feedback → perceived threat is a point of interest. Vallerand's (1997) hierarchical model of intrinsic and extrinsic motivation suggests that coach/teacher feedback is one of the social factors that has an effect on children's motivation, mediating by the psychological mediators (e.g. perceived competence, autonomy and relatedness). Therefore, it would have been anticipated that perceived positive teacher feedback may also have an effect on students' perceived threat in PE. Also, recent studies in the perceived coach/teacher feedback research area have suggested that positive feedback as one of the social factors has an effect on different psychological constructs like intrinsic motivation and perceived competence (Allen and Howe, 1998; Amorose and Horn, 2000; Amorose and Weiss, 1998; Black and Weiss, 1992; Koka and Hein, 2003). Although the major determinant of subsequent measures of perceived threat in PE was the earlier measure of the same variable, it may also be reasonable to take into account the effect of perceived positive feedback.

Although the present results provide some evidence for the stability effects of perceived threat and perceived positive teacher feedback in PE and the causal effect of perceived threat on teacher positive feedback over time, there are some limitations. First, the effects of gender and age were not addressed in this study. Differences between genders and age groups might exist and therefore further investigation of these issues is needed. Second, including other variables like perceived negative teacher feedback and global self-esteem and physical self-worth in the model would give more useful information for researchers and practising PE teachers. One may hypothesize that global self-esteem and physical self-worth would have a strong effect on perceived threat to sense of self in PE, so that a high level of global and physical self-esteem will result in low perceptions of threat. Further, one may assume that a high level of perceived threat will result in a high frequency of perception of negative teacher feedback in PE.

Conclusion and practical implications

In sum, studies examining stability and causal effects between different psychological construct over time have progressed over the last decade. Specifically, several studies have investigated the stability of self-concept, including general and physical domain level. However, there are no studies investigating the stability of perceived threat to students' self-esteem and perceived positive teacher feedback in PE and nature of relationship between them. The present research offers reasonable support for stability of perceived threat, but not for perceived teacher feedback in PE over a two-year period, and suggests that low level of perceived threat in PE determines high frequency of perception of positive teacher feedback.

In terms of practical recommendations arising from this study, PE teachers aiming to foster students' good feelings about themselves in their lessons should increasingly provide positive feedback. A simple positive and enthusiastic statement may be a valuable tool in enhancing students' good feelings in PE and ultimately positive self-esteem. The results of this study demonstrated that when students feel good about themselves in PE then they also perceive that their teacher responds more positively to their performances. On the contrary, when students do not feel good about themselves in PE, we might expect them to perceive their teacher to be more negative in their responses to students' performances. It may lead to the lower self-esteem and amotivation towards PE. Thus, PE teachers should create the learning environment that leads students to feel it as non-threatening to their self-esteem.

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Résumé

Etude longitudinale sur la sensibilité aux réactions positives de l'enseignant et les atteintes perçues à l'estime de soi en Education Physique

Cette étude a examiné le sens de la causalité entre la sensibilité aux réactions positives de l'enseignant et les atteintes perçues à l'estime de soi en Education Physique. La stabilité du résultat et la permanence des relations entre ces variables a été contrôlé sur une durée de deux ans. Un questionnaire a été passé par des élèves (N = 302) de classes 6 et 8 puis deux ans plus tard dans les classes 8 et 10. Les atteintes perçues à l'estime de soi en Education Physique sont construites avec l'échelle (PELES) et la sensibilité aux réactions positives de

l'enseignant avec le test (PTF) en utilisant un questionnaire. A partir d'une analyse à équation structurelle les résultats montrent que la grande stabilité des atteintes à l'estime de soi et une faible stabilité de la sensibilité aux réactions positives de l'enseignant en EP sur la période des deux ans, et laissent supposer que le faible niveau des atteintes perçues est un facteur déterminant du niveau élevé de la sensibilité aux réactions positives de l'enseignant. De plus, la modélisation montre que la relation entre atteintes perçues et sensibilité aux réactions positives dans les contrôles évoluait significativement au fil du temps.

Resumen

Percepciones sobre los Profesores de Educación Física, referidas a la retroalimentación positiva y la auto afirmación. Un estudio longitudinal

Este estudio examina las situaciones y las direcciones de causa-efecto entre las percepciones positivas de la retroalimentación y el sentimiento de autoafirmación en Educación Física. El efecto de estabilidad y de estancamiento de las relaciones entre ambas variables en los test realizados durante dos años. Los estudiantes (*N* = 302) fueron encuestados, primero en 6º y 8º y dos años después en 8º y 10º.

La percepción des sentimiento de autoafirmación se llevó a cabo empleando la Escala de Aprendizaje Ambiental de Educación Física (PELES) y la percepción positiva de la retroalimentación general mediante la aplicación del instrumento Percepción de la Retroalimentación del Profesor (PTF). La valoración de los resultados se llevó a cabo mediante el empleo de una ecuación estructural que mostraba los momentos de alta y baja estabilidad en la percepción de los profesores de EF en el periodo de dos años, sugiriendo que los bajos niveles de estabilidad estaban motivados por altos niveles de percepción positiva de la retroalimentación del profesor. Además, el modelo puso de manifiesto que las relaciones causa efecto señaladas tienen diferentes significaciones en cada momento.

Zusammenfassung

Die Wahrnehmung einer positiven Lehrerrückmeldung und die empfundene Bedrohung des Selbstwertgefühls im Sportunterricht – eine Längsschnittstudie

Diese Studie beschäftigt sich mit der Richtung des kausalen Zusammenhangs zwischen dem wahrgenommenen allgemeinen Lehrerfeedback und der wahrgenommenen Bedrohung des Selbstwertgefühls im Sportunterricht. Der Stabilitätseffekt und die Beständigkeit der Beziehung zwischen diesen Variablen wurde innerhalb eines Zweijahreszeitraums untersucht. Den Schülern (*N* = 302) wurden die Fragebögen während des Unterrichts im 6. und 8. Schuljahr und zwei Jahre später im 8. und 10. Schuljahr ausgegeben. Es wurde zum einen die Unterskala der wahrgenommenen Bedrohung des Selbstwertgefühls aus der Sportunterricht-Lernumgebungsskala (PELES) und zum anderen die Unterskala des allgemein

wahrgenommenen positiven Feedbacks aus dem Fragebogen zum empfundenen Lehrerfeedback (PTF) benutzt. Die Ergebnisse eines Modells der strukturellen Gleichung zeigten eine hohe Stabilität der empfundenen Bedrohung und eine geringe Stabilität des wahrgenommen Lehrerfeedbacks im Sportunterricht über den Zweijahreszeitraum hinweg und legen die Annahme nahe, dass ein niedriges Niveau der empfundenen Bedrohung ein signifikant bestimmender Faktor eines hohen Niveaus des wahrgenommenen positiven Lehrerfeedbacks ist. Zusätzlich zeigte das Modell, dass die Beziehung zwischen der wahrgenommenen Bedrohung und dem wahrgenommenen positiven Feedback während des Untersuchungszeitraums signifikant über die Zeit voneinander abwich.

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