



Development and validation of students' attitudes towards teacher's pet phenomenon scale in the higher education setting: Differences by levels of study and Grade-Point-Average

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ABSTRACT

An in-depth review of the related literature shows that no scales or questionnaires have yet been designed on students' attitudes towards Teacher's Pet Phenomenon (TPP). To address this gap, this research aims to devise an instrument of students' attitudes towards TPP and examines the role of students' levels of study and Grade-Point-Average in their scores on the newly-designed scale. To this end, first, 30 graduate- and undergraduate students along with 15 university instructors were interviewed. Then, based on the identified themes, a scale was designed and 476 English language students participated in the quantitative phase. The findings demonstrated that the scale was reliable and valid, and the higher a student's level of study and GPA, the more pet-prone s/he became, the more negative attitude s/he held, and the less probable it would be for him/her to be influenced by the unpleasant effects of TPP.

1. Introduction

One of the potent factors contributing to the teacher-student relationship is a teacher's behavior toward students since it is crucial to satisfying students' emotional needs (Babad, 2009). Babad (2009) maintains that a teacher's conduct affects students' morale and satisfaction, and the students would undermine his/her authority in the classroom if they perceive injustice in the teacher's behavior. A broad constellation of studies (e.g., Babad, 2009; Chesebro, Matin, & Bulson, 2004; Chory-Assad, 2002, 2007; Chory-Assad & Paulsel, 2004a, 2004b; Frymier & Houser, 2000) attests the significance of maintaining impartiality in teachers' behavior because teachers' injustice causes students' distraction, irritation, unhappiness, and loss of motivation. A teacher's violation of the principles of fairness also results in being evaluated less favorably, being involved in implicit interpersonal aggression (Chory-Assad, 2002; Chory-Assad & Paulsel, 2004a, 2004b), facing rejection of their requests, and being treated in a hostile way (Chory-Assad & Paulsel, 2004a, 2004b). Thus, it is worthwhile to examine the examples of unfairness in teachers' behaviors toward students. The Teacher's Pet Phenomenon (TPP) is a notable instance of extreme favoritism within educational settings (Babad, 2009), and is, therefore, a topic worth exploring.

TPP "is a phenomenon of a special emotional relationship (often a love relationship) between the teacher and a particular student (or two) in the classroom" (Babad, 2009, p. 106). It involves those teachers who exhibit their intense emotions and feelings towards one or more special students without regard for others' feelings and observing fairness in their manner (Babad, 2009).

The importance of TPP stems from the fact that it affects the social psychology of the classroom, and touches the teacher, pet, and nonpets in the classroom. It also influences students' morale and gratification, their emotional feedback to their teachers, and the classroom climate (Babad, 1990, 1998, 2009; Tal & Babad, 1989, 1990). It is also a kind of negative teacher-student relationship which is a barrier to students' social and cognitive learning (Babad, 1990, 1995, 1998; Chiu, Lee, & Liang, 2011; Trusz, 2017). Its special edge lies in the fact that teachers' behavior is carefully observed by students in a way that they can perceive the slightest signs of injustice in teachers' behavior (Babad, 2009). Thus, looking at TPP is of utmost importance as it leads to teachers' awareness of the psychological mechanisms operating in the classroom. Moreover, investigating TPP helps teachers to be conscious of the hidden and implicit aspects of their behavior in the teacher-student interactions. This would mean that teachers need to be sensitive to expressing their personal feelings toward some particular students.

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Although TPP is generally acknowledged among teachers and students, limited research has been carried out on TPP (Babad, 1990, 1995, 1998; Chiu et al., 2011; Tal & Babad, 1989, 1990; Vahidnia, Ghonsooly, & Shahriari, 2019a, Vahidnia, Ghonsooly, & Shahriari, 2019b) and it leaves four gaps in our knowledge. First, the foregoing works were limited to school students, and although their findings would be helpful to all students and teachers in any educational context, no investigations, except Vahidnia et al.'s (2019a, 2019b), were conducted in settings other than schools (e.g., universities). In view of evidence, TPP is gradually plaguing the higher education context (Vahidnia et al., 2019a, 2019b); however, it can be redefined by instructors and their pets (Vahidnia et al., 2019a). To be exact, due to the different nature of interpersonal relations at university than at primary or secondary school (e.g., inclusion of the selected students in the work of research teams or labs and close and strongly individualized cooperation during MA or PhD thesis preparation, i.e., personal meetings of a supervisor with PhD or MA students), special treatment of pets may be perceived differently or go unnoticed (Vahidnia et al., 2019a). Furthermore, being more complicated and multi-faceted in older age groups, the issue of interest and a special relationship between instructors and students, and the reactions of adolescent students towards this phenomenon might be more intense compared to those of school students (Babad, 2009; Chiu et al., 2011). Thus, considering the above-cited points, this phenomenon may be more complicated within the higher education setting, and this context may add extra complexities to this phenomenon. Second, one main reason for the paucity of research on TPP would possibly be the challenges in the practical measurement of it. Despite all the studies done on TPP, it seems as if no related scales have yet been devised concerning students' perceptions about TPP in the higher education context. Hence, this study aims to contribute to this line of research by designing and validating Students' Attitudes towards Teacher's Pet Phenomenon Scale (SATPPS). The development of such a scale can be regarded as a reliable measure that can be applied to proceed and enrich a teacher-pet vein of research and respond to the demand of the teacher-pet researchers by providing a well-designed means of enrichment in this literature. Furthermore, it may also help researchers to empirically investigate this phenomenon and to gain more knowledge about the consequences of TPP. In addition, it could be beneficial for collecting data on the concept of TPP in the higher education context. The third gap in our knowledge is related to the role of students' levels of study. Babad (1995) and Babad, Avni-Babad, and Rosenthal (2003) noted some differences between elementary and high school students regarding their reactions towards teacher's differential behavior. It was found that high school students showed more adverse reactions to their teacher's differential behavior as compared with the elementary school students. Moreover, research has shown that as people grow, they can manage their emotions better, especially the negative ones (e.g., Blanchard-Fields, 2007; Blanchard-Fields, Stein, & Watson, 2004; Scheibe & Blanchard-Fields, 2009; Scheibe & Carstenson, 2010). Furthermore, given that students view TPP negatively and have negative feelings about it (Babad, 1995, 2009; Babad et al., 2003; Tal & Babad, 1989, 1990), it does not sound illogical to hypothesize that university students of higher levels might be more capable of managing their negative emotions caused by TPP. Therefore, whether the educational level differences found among school students (Babad, 1995) and age-related differences regarding regulating negative emotions (e.g., Blanchard-Fields, 2007; Blanchard-Fields et al., 2004) exist in the higher education setting has been left somehow untouched and needs to be investigated. The last gap is related to the role of students' GPA in their pet-proneness, attitude towards TPP, and how much they are influenced by the adverse effects of TPP. The Iranian educational system is GPA-based and having a high GPA is equated with enjoying special privileges such as being granted the talented student's scholarship. This scholarship can help BA students enter the MA and PhD programs without taking the entrance exam (Vahidnia et al., 2019a). Moreover, there is evidence that students attempt to become pets in pursuit of gaining some advantages, one of

which is getting higher grades which count toward their average grade (Vahidnia et al., 2019a). Considering these points, it is still unknown whether TPP can pave the way for students to achieve a better GPA leading to reaping other gains. Furthermore, in light of evidence, low-achievers need the teacher's support and attention more than high-achievers (Babad, 2009). Hence, building on the idea that TPP addresses those teachers favoring one or more particular students at the expense of disregarding others' feelings (Babad, 2009), it does not seem illogical to speculate that a student with a lower GPA might be more negatively affected by TPP as a result of receiving insufficient attention and limited support by the teacher which may, in turn, influence his/her attitude toward TPP. Thus, considering the above-cited points, this research attempts to rectify the previously cited problems by answering the following research questions:

Q1. To what extent is the newly designed Students' Attitudes towards Teacher's Pet Phenomenon Scale (SATPPS) reliable (internally consistent) and valid?

Q2. Are there any significant differences among the BA, MA, and PhD students' scores on the three subscales of the SATPP?

Q3. Are there any significant differences among the university students having different GPAs in terms of their scores on the three subscales of SATPP?

2. Literature review

Many educators and students view TPP negatively and react negatively towards teachers having pets (Babad, 2009). Babad and his colleagues examined TPP in different studies during the mid-1990s (Babad, 1995, 1998; Babad & Ezer, 1993; Tal & Babad, 1989, 1990). Teacher's pet is "a student who is involved in a special and purpose-built relationship with the teacher usually through doing whatever it takes to gain approval for undue advantages and privileges that seem to defy the principles of equality and justice and arouse other's jealousy and irritation" (Vahidnia et al., 2019a, p. 124). The teacher-pet relationship is parallel to the 'attached' teacher-student relationship because, in both relationships, the teacher loves the student (Babad, 1995, 1998).

The first scholar who examined this phenomenon was Silberman (1971, as cited in Babad, 2009) who talked over four emotional stances (i.e., attachment, concern, indifference, and rejection) that teachers take up regarding special students. According to Silberman, 'attachment' alludes to having a strong liking for a particular student due to his/her knack of pleasing the teacher. Hence, 'attachment' students could be assumed to be teachers' pets because of their emotional relationship with teachers; though, Silberman refrained from using this term due to its negative implication (as cited in Babad, 2009).

Several researchers (e.g., Brophy & Everston, 1981; Good & Brophy, 1972) applied Silberman's notions in their research and found out that teachers referred to 'attachment students' as obedient, participative, and having many positive characteristics. The early empirical studies on TPP showed that Silberman's (1971, as cited in Babad, 2009) 'attachment students' category included two quite distinct types of students (teacher's pets and the best students) who can please the teacher. It was also found that students exhibited a negative attitude towards pets because of perceived injustice in teachers' behavior while admitting the abilities and attempts of the best students. Alternatively, teachers responded more mildly toward pets and asserted that they could conceal their liking for a particular student (Tal & Babad, 1989, 1990).

In 1990, Tal and Babad explored TPP and assigned the classrooms into three categories including, 'exclusive pet classrooms' (where only one pet can be found), 'nonexclusive-pet classrooms' (where one or more pets can be found) or 'no-pet classrooms'. The findings indicated that the most negative classroom climate, adverse reactions, and students' dissatisfaction were found for exclusive-pet classrooms. Furthermore, the pets were identified as socially-skilled, compliant students, but not the academically best ones. Later on, Babad (1995) showed that

the three variables 'classroom climate, students' morale and satisfaction, and reactions to the teachers' were positive in both no pet and the popular pet classrooms as compared with unpopular pet classrooms. Moreover, Babad (1995) concluded that the occurrence of this phenomenon is very significant in elementary schools. In light of evidence, students also reacted angrily and had negative attitudes toward teachers having pets (Babad, 1998, 2009). Additionally, the nonpets favored fair teachers to take further courses with them while the pets preferred the unfair teachers helping them (Tal & Babad, 1990). Years later, Babad et al. (2003) also revealed that high school students could not accept teacher's differential behavior (TDB) of any form (i.e., learning and emotional support) and harshly criticized it as opposed to elementary school students who merely had criticism over the affective differential behavior of teachers.

Likewise, Somersalo, Solantaus, and Almqvist (2002) claimed that teachers' unfair treatment and display of preference for their pets can bring about classroom conflict. And classroom conflict can, in turn, result in students' behavioral and emotional problems and a feeling of depression. Similarly, Chiu et al. (2011) indicated that teacher's authority can result in classroom conflict and aggravation of TPP. Trusz (2017) also revealed that students responded to TPP more negatively than teachers. Regarding three roles (i.e., the pet, the leader, and the best student), all the students and teachers unanimously evaluated the best students positively; however, in contrast to the students who held negative attitudes toward the pet, teachers judged the pet and leader positively.

In a recent study, Vahidnia et al. (2019a) proposed a conceptual definition for the concept of a teacher's pet in the higher education context. Considering the students' and instructors' perceptions, they introduced three main dimensions for this concept including, 'pet's goals', 'advantages gained', and 'what a teacher's pet does'. In another study (2019b), they indicated that the university instructors and students had negative feelings towards the instructor and his/her pet. The results also showed that the students tended to use offensive terms to call pets. Moreover, both the students and instructors believed that pets are incompetent students who become pets to compensate for their insufficient knowledge of the field of study.

3. Methods

3.1. Participants and sample selection

This study had two phases and there were 521 participants. In the qualitative phase, 30 graduate and undergraduate English language students (13 BAs, 8 MAs, and 9 PhDs) and 15 English language university instructors (2 professors, 5 associate professors, 7 assistants, and 1 instructor) were interviewed. The students (18 females and 12 males) and instructors (9 males and 6 females) were selected from some universities and institutes of higher education in Iran. The students' age ranged between 19 and 32, and that of the instructors was between 32 and 62. Among the interviewed students, four PhDs (3 females and 1 male), three MAs, (1 female and 2 males), and two BAs, (1 female and 1 male) were found to be pets. As for the quantitative phase, a community sample of 476 students (356 females and 120 males) studying at different universities and institutes of higher education in Iran took part in this project. The students (219 BAs, 194 MAs, and 63 PhDs) were majoring in English Literature, English Language Teaching, and English Translation and ranged in age from 20 to 36. Among 476 students, 186 were found to be pets and 290 were nonpets.

Convenience and snowball sampling techniques were employed in the qualitative phase. Snowball sampling procedure can help the researchers communicate with hard-to-reach suitable informants (Sadler, Lee, Lim, & Fullerton, 2010). The interviewed students, using the snowball sampling procedure, were asked to introduce others to participate. Regarding the instructors, convenience sampling technique was adopted in which the informants were chosen according to their

accessibility.

As for the quantitative phase, the students voluntarily participated. The students were selected based on their availability (i.e., convenience sampling procedure) and recommendations of others (i.e., snowball sampling procedure). One exclusion criterion was set for the students eager to participate, which was their acquaintance with TPP.

3.2. Instrumentations

3.2.1. Interviews

To elicit data in the qualitative phase, in-depth, semi-structured, one-to-one interviews were used (See Appendix A for the interview questions). The participants were interviewed in Persian, their native language. Of note, this project adopted an Interpretative Phenomenological Analysis (IPA) methodology to examine students' and instructors' perceptions of TPP in this phase. Thus, following IPA method, the interviewees were asked open-ended and nondirective questions (Smith, Flowers, & Larkin, 2009). So, the participants were interviewed in a conversational style by making them answer more exploratory questions to get further comprehensive data (Smith et al., 2009).

3.2.2. Students' Attitudes towards Teacher's Pet Phenomenon Scale (SATPPS)

To investigate the students' perceptions of TPP, this scale (in Persian) was developed by the researchers, drawing on the themes identified during the interview process. This scale was designed in the following steps. Initially, the researchers carried out a detailed and inclusive review of the related literature and specified one feature of TPP which is favoring a student at the expense of others. However, as the current researchers aimed to implement a new research on TPP which has not been conducted before, they could not find relevant studies on TPP which would benefit them, and facilitate the process of the current investigation and writing scale items. Hence, the researchers had no choice except relying on the themes that emerged out of the interviews. Following that, a scale of 33 items was written, rating on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The items were written based on the identified themes and the different dimensions of TPP found in the interviews, including facts about a pet, an instructor having a pet, and TPP in general. Subsequently, four pilot studies were done on SATPPS with 26 students to evaluate and confirm its content validity. These pilots were done to recognize the potential difficulties the students would get into while completing the scale, monitor their comprehension of the items, recognize the possible misunderstandings and the ambiguous and loaded words included in the items, and resolve them. Finally, based on the feedback and recommendations received from these students, some revisions were made to the items. Moreover, the researchers also asked four expert university instructors to go through the items in order to spot any potential problems, check the appropriateness of the content, and assure its content validity. Afterward, the scale was distributed among a different group of students ($n = 50$) to verify the internal consistency of it which was found to be .87. This last stage reassured the current researchers that they can keep on data collection to explore the students' perceptions of TPP. The reliability and validity of SATPPS for the main study can be seen in the next section.

3.3. Procedure

The process of data collection in the qualitative phase took six months. Before the interview, the researchers considered all ethical considerations (consent, anonymity, and confidentiality). The interviewees voluntarily took part in this study and with their explicit consent to being interviewed and audio recorded. The researchers also offered the participants a short, straightforward, and relevant explanation about the purpose and method of the study, the amount of time needed for the interview, and how their obtained data would be used. As

for confidentiality and anonymity, the interviewees were ensured that their identities would be kept secret and their information would be held confidential. Thus, pseudonyms were used for the participants to guarantee confidentiality. The instructors' interviews ranged from 50 to 195 min and those of the students were from 80 to 245 min. The interviews reached a point of saturation after the interviews of 28 students and 13 instructors. However, to assure the saturation of data, four further interviews, two with students and two with instructors, were conducted. Subsequently, the interviews were written out and the results were summed up using IPA.

The process of data gathering in the quantitative phase took five months. Data gathering started after the students agreed to take part; that is, after obtaining ethical approval. Upon the permission of the instructors, the scale was administered in the classrooms. The researchers were present while the students were filling out the scale. It took approximately 15 min to fill out the scale. Since the first language of the participants was Persian, SATPPS was designed in Persian. One of the reasons for preparing a Persian scale was gaining assurance of the participants' complete and correct understanding of the content and increasing their response rates. Furthermore, completing a 33 items-scale seemed a demanding and time-consuming task. Thus, to avoid shouldering a heavy load for the students, SATPPS was in Persian to facilitate students' participation in this project. Of note, as the researchers aimed to recruit the participants from other universities in different cities of Iran, an online scale was also prepared to be administered. The online scale was publicized on Telegram and WhatsApp by sending it to whoever was a volunteer.

3.3.1. Data analysis

The interviews were transcribed and analyzed using IPA. IPA has four stages: getting acquainted with the text; identifying the themes; grouping the themes and analyzing the potential association among them; summing up the identified themes accompanied by the instances representing each theme (Smith et al., 2009). In keeping with these stages, first, the researchers carefully read and looked back over, and examined all the transcripts to understand the participants' feelings regarding their reports. Subsequently, the researchers sought the themes running through the transcripts; meanwhile, the texts were coded to offer instances indicating each theme. It is worth noting that the researchers coded the data, left the analysis for a while, and then began to recode the data and compared two pieces of the coded data with each other. Following that, the emerged master- and sub-themes were analyzed to examine the potential associations among them. Finally, by incorporating the themes through the transcripts, recurring themes addressing the participants' experience of the phenomenon in question were put forward (Smith et al., 2009). As for the quantitative data, to identify the number of factors of SATPPS, exploratory factor analysis was calculated using SPSS 25. Then, confirmatory factor analysis was run to assure its construct validity using Amos software. Moreover, Cronbach's alpha coefficient was used to compute the internal consistency reliability. Finally, two MANOVAs were performed to determine the possible difference across students' levels of study and GPAs in terms of their scores on the scale of SATPP.

4. Results

Initially, to ensure the construct validity of SATPPS, exploratory factor analysis (EFA) was employed to explore the underlying structure of SATPPS.

4.1. Exploratory factor analysis

To begin, the Kaiser-Meyer-Olkin (KMO) measure of Sampling Adequacy and Bartlett's Test of Sphericity used for the factorability of the inter-correlation matrix, were applied. The results (Table 1) demonstrated that the sample selected in this research and the factor model

Table 1

Results of KMO and Bartlett's Test for SATPPS.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.91
Bartlett's Test of Sphericity	Approx. Chi-Square
Df	378
Sig.	.000

were appropriate.

Subsequently, to determine the number of factors, the extraction method was utilized by employing the following criteria: eigenvalues greater than 1.0, factor loadings greater than .40, and the scree plot test. Principal axis factoring with direct oblimin rotation was also run for SATPPS. Then, five items were removed due to their low loadings. A three-factor solution was identified for SATPPS explaining 49.10 % of the total variance for the scale. According to the findings, 11 items (1, 2, 15, 16, 17, 18, 20, 21, 22, 25, and 27) were loaded on Factor 1 which was related to the negative attitudes of the students towards TPP and therefore, was named 'Negative Attitude toward TPP' (NAT). Items 1, 2, and 15 are related to the psychological analysis of the pet and instructor having a pet, and also reflect the common origins of this phenomenon. Items 16, 17, 18, 20, 21, and 22 refer to the harmful consequences of TPP in educational contexts. Item 25 shows one's negative feeling towards a pet and Item 27 is concerned with TPP's violation of ethical principles. The next factor, Factor 2 contained eight items (3, 4, 12, 13, 14, 23, 26, and 28) which reflected the students' positive attitudes towards TPP. This factor was named 'Pet-Proneness' (PP) as it signifies a student's willingness to become a pet. Items 3 and 4 explicitly address one's interest in becoming a pet. As mentioned in these items, two conditions stimulate such a desire in a student so as to set out to become a pet; either when a student realizes that an instructor already has a pet or when s/he likes an instructor, s/he approaches the intended instructor. Item 12 pertains to being in a pet's position as a result of being keen on receiving the same amount of attention as s/he does. Item 13 deals with the positive effect of a pet's presence on one's performance. Item 14 refers to an increase in a student's motivation to attend a pet-classroom. Item 23 suggests a student's attempt to become a pet; it encompasses arousing a feeling of competition in a student to show him/herself. Items 26 and 28 involve having a positive attitude toward TPP and regard it as a fair phenomenon, respectively. The third and last factor, Factor 3, was composed of nine items (5, 6, 7, 8, 9, 10, 11, 19, and 24) indicating the negative and unpleasant psychological effects of TPP on the students in- or out of the classroom. Hence, this factor was labeled as 'Negative Psychological/classroom-related effects of TPP' (NP). Items 5 and 6 reflect a feeling of being ignored by an instructor having a pet. Item 7 has relevance to experiencing a feeling of anxiety in a pet-classroom. Item 8 belongs to a decrease in a student's motivation for studying the course. Item 9 addresses the negative effect of TPP on a student's willingness to participate in classroom activities. Item 10 focuses on getting distracted in a pet-classroom. Item 11 is about the adverse effect of TPP on a student's self-confidence, and Item 19 alludes to the negative effect of TPP on a student's mental health. Finally, Item 24 shows a student's anger towards a pet (see Appendix B for factor loadings). Following these procedures, confirmatory factor analysis (CFA) was performed to find out if the three-factor solutions found in EFA can be substantiated.

4.2. Confirmatory factor analysis

According to the CFA analysis, the relationship between each sub-factor of the suggested model was examined and the findings can be viewed in Fig. 1. According to the figure, the scale has three sub-constructs, and there is a positive significant correlation between NAT and NP ($B = .75, p < .05$). Furthermore, significant and negative relationships were found between NAT and PP ($B = -.63, p < .05$) and NP and PP ($B = -.37, p < .05$).

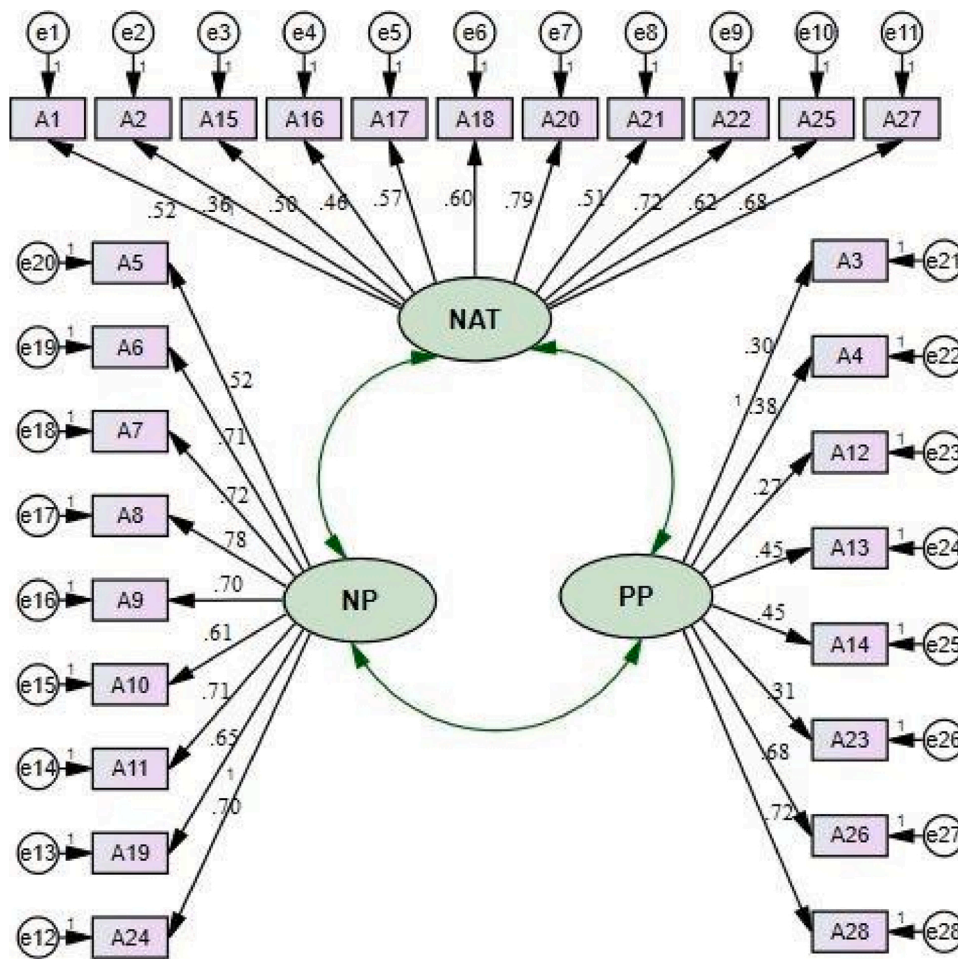


Fig. 1. CFA model of Students' Attitude toward Teacher's Pet Phenomenon Scale.

Goodness of fit indices in Amos were utilized to verify the model fit. To this end, χ^2/df , Goodness of Fit Index (GFI), the Comparative Fit Index (CFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA) were employed. To have a fit model, χ^2/df should be less than 3, GFI, IFI, TLI, and CFI should be above .90, and RMSEA should be less than .08 (MacCallum, Browne, & Sugawara, 1996). Findings of the CFA (Table 2) showed that all the goodness of fit indices are within the acceptable range. Thus, the CFA confirmed the fit of the model produced by EFA and indicated that SATPP scale enjoyed perfect validity.

Of note, the total reliability of the scale was .85 and the reliabilities of NAT, NP, and PP subscales were .85, .85, and .77, respectively (Table 3).

4.3. The role of students' levels of study in their scores on the three subscales of SATPP

To address this question, a MANOVA was applied. Table 4 shows the descriptive statistics for the dependent variables regarding levels of study. The results showed that the mean score for the BA group in the NP subscale ($X' = 27.84$) was more than the other two groups. The MA group ranked second ($X' = 26.62$) and the PhD group ranked third ($X' =$

Table 2 Goodness of fit indices for SATPPS.

	χ^2	Df	χ^2/df	GFI	IFI	TLI	CFI	RMSEA
Acceptable fit			<3	>.90			>.90	<.08
Model	809.12	347	2.33	.91	.90	.91	.90	.07

Table 3 Results of Cronbach's Alpha Indexes after Validation for SATPPS.

SATPP Scale	Subscales	Number of items	Cronbach's alpha
	NAT	11	.85
	NP	9	.85
	PP	8	.77
	Total Reliability	.85	

26.55). In the NAT subscale, the PhD group showed the highest mean score ($X' = 37.31$). The MA group was placed in the second rank ($X' = 35.99$) with an extremely slight difference from the BA group ($X' = 35.99$). Furthermore, the PhD group was also placed in the first rank ($X' = 19.93$) in the PP subscale with an extremely slight difference from the MA group ($X' = 19.76$); the BA group had the lowest ranking in this subscale ($X' = 17.84$).

Afterwards, to measure the homogeneity of covariances and examine whether the dependent variables are correlated or not, Box's Test of Equality of Covariance Matrices and Bartlett's Test of Sphericity were run, respectively. Their findings showed that the hypothesis of equal covariance matrices cannot be rejected, and there is a good correlation between the dependent variables. According to Table 5, a statistically

Table 4
Descriptive Statistics for Levels of Study in NP, NAT, and PP.

Levels of Study		Mean	Std. Deviation	N
NP	BA	27.84	8.29	219
	MA	26.62	7.26	194
	PhD	26.55	7.00	63
	Total	27.17	7.73	476
NAT	BA	35.99	7.86	219
	MA	35.99	6.99	194
	PhD	37.31	6.81	63
	Total	36.16	7.38	476
PP	BA	17.84	5.45	219
	MA	19.76	5.12	194
	PhD	19.93	5.00	63
	Total	18.90	5.34	476

Table 5
Multivariate Tests Results for Levels of Study in the Subscales of SATPP.

Effect	Value	F	Sig.	Partial Eta ²	
Level	Pillai's Trace	.06	5.53	.00	.03
	Wilks' Lambda	.93	5.60	.00	.03
	Hotelling's Trace	.07	5.67	.00	.03
	Roy's Largest Root	.06	10.86	.00	.06

significant difference was found among the BA, MA, and PhD students in terms of their scores on NP, NAT, and PP ($F = 5.60, P < .05; \text{Wilk's } \lambda = .93$).

4.4. The role of students' Grade-Point Average in their scores on the three subscales of SATPP

A MANOVA was also run to address the third research question. Of note, to facilitate the process of doing statistical analysis, the students' GPA was divided into three categories ranging from 18–20, 16–18, and 14–16. Before performing the MANOVA, a cross-tabulation was used to determine the relationship between students' GPA and their state of being a pet or nonpet. As Table 6 indicates, among those with a GPA of 18–20, 95 were found to be pets. Among 196 students with a GPA of 16–18, 74 were pets. Moreover, of those with a GPA of 14–16, 17 were pets. As can be seen, the greatest number of pets is placed in the group with a GPA of 18–20.

The descriptive statistics for the dependent variables concerning GPA is provided in Table 7. The results indicated that in NP, the group '14–16' had the highest level of NP ($X' = 27.74$). The group '18–20' was in the middle ($X' = 27.21$). The group '16–18' showed the lowest level of NP ($X' = 26.91$). This would mean that the lower a student's GPA, the more probable it would be for him/her to be negatively influenced by TPP. In comparison, the group '18–20' exhibited the highest level of NAT ($X' = 36.27$). The group '16–18' was in between ($X' = 36.18$), and the group '14–16' had the lowest ranking ($X' = 35.86$). More specifically, the higher a student's GPA, the more negative attitude s/he had towards TPP. Likewise, the group '18–20' ranked first in the PP subscale ($X' = 19.79$). The group '16–18' ranked second ($X' = 18.65$) and the group '14–16' ranked third ($X' = 17.30$). This means that the higher a students' GPA was, the more apt s/he was to become a pet.

Subsequently, to measure the homogeneity of covariances and check whether the dependent variables are correlated or not, Box's Test of

Table 6
Cross-tabulation by Pet and GPA.

		GPA			Total
		18–20	16–18	14–16	
Pet	Nonpet	104	122	64	290
	Pet	95	74	17	186
	Total	199	196	81	476

Table 7
Descriptive Statistics for GPA in NP, NAT, and PP.

		GPA	Mean	Std. Deviation	N
NP	18–20	27.21	7.14	199	
	16–18	26.91	8.23	196	
	14–16	27.74	7.93	81	
	Total	27.17	7.73	476	
NAT	18–20	36.27	7.18	199	
	16–18	36.18	7.74	196	
	14–16	35.86	7.05	81	
	Total	36.16	7.38	476	
PP	18–20	19.79	5.14	199	
	16–18	18.65	5.30	196	
	14–16	17.30	5.51	81	
	Total	18.90	5.34	476	

Equality of Covariance Matrices and Bartlett's Test of Sphericity were performed, respectively. Their results indicated that the hypothesis of equal covariance matrices cannot be rejected, and there is a good correlation between the dependent variables. Table 8 presents the result of Multivariate Tests which suggests that the subscales of SATPP were significantly dependent on GPA ($F = 3.01, P < .05; \text{Wilk's } \lambda = 0.96$).

5. Discussion

Since the 1990s, 12 studies (Babad, 1990, 1995, 1998; Chiu et al., 2011; Lu, Fung, Farver, Chen, & Chang, 2015; Somersalo et al., 2002; Tal, 1987; Tal & Babad, 1989, 1990; Trusz, 2017; Vahidnia et al., 2019a, 2019b) have been conducted to explore TPP in the area of education. Although TPP is considered as an important phenomenon affecting students' morale (Babad, 2009), no scale has been devised for the measurement of students' attitudes toward TPP in educational settings. Hence, it was attempted to design and validate a scale of students' attitudes towards TPP for educational purposes, and then to investigate the role of students' GPA and levels of study in their scores on the newly devised scale. The scale was validated in two steps: (1) performing EFA to determine the number of factors, and (2) conducting CFA to examine the underlying factors of the scale.

The findings of the EFA revealed the multidimensionality of the scale and showed that it can be best explained by three factors. The three-factor model explained 49.10 % of the variance. The results of the EFA were then verified by CFA and therefore, it can be concluded that this scale is valid. The three factors were labeled as 'Negative attitude towards TPP' (NAT), 'Pet-Proneness' (PP), and 'Negative psychological/classroom-related effects of TPP' (NP). 'Negative attitude towards TPP' (NAT), consisting of 11 items, is consistent with the contention that students view TPP negatively and hold negative attitudes towards it, including the pet and teacher (Babad, 1995, 1998, 2009; Chiu et al., 2011; Tal & Babad, 1990; Trusz, 2017; Vahidnia et al., 2019b). Of note, a feeling of distrust in an instructor having a pet, reported in Item 22, was somehow referred to in a study by Tal and Babad (1990) in which students had skepticism towards unfair teachers having pets. Furthermore, such a negative feeling reported in this item is congruous with the assertion that teachers favoring particular students (i.e., their pets) are treated with utter contempt (Babad, 1990, 1995, 2009). Another item (25) in this factor which reflects a student's negative feeling towards a pet also confirms previous research demonstrating that nonpets have negative feelings towards their pet classmates and treat them in a hostile

Table 8
Multivariate Tests Results for GPA in the Subscales of SATPP.

Effect	Value	F	Sig.	Partial Eta ²	
Level	Pillai's Trace	.03	2.99	.007	.019
	Wilks' Lambda	.96	3.01	.006	.019
	Hotelling's Trace	.03	3.03	.006	.019
	Roy's Largest Root	.03	5.75	.001	.035

way (Babad, 1990, 1995; Tal & Babad, 1989, 1990; Trusz, 2017; Vahidnia et al., 2019b). Moreover, TPP's violation of ethical principles which was referred to in Item 27 corroborates Babad's (2009) view that TPP violates the basic principles of fairness and equality. Altogether, as shown in the literature, since students' negative attitude toward TPP stems from favoritism, it can be inferred that the features of this factor (i.e., NAT) are in agreement with the general concept of TPP. The second factor, containing eight items, is labeled as 'Pet-Proneness' (PP), which implies a student's tendency to become a pet and implicitly entails having a positive attitude towards TPP. This factor supports Vahidnia et al.'s (2019b) result that pets and pet-prones have a positive attitude toward TPP. One of its items (14) which appertains to one's willingness to attend a class in which the teacher has a pet is to some extent consistent with Tal and Babad's (1990) finding that pets desire to enroll in a class where the unfair teachers favor them. Additionally, considering TPP as a fair phenomenon and having a positive attitude toward TPP, mentioned in Items 26 and 28, lend support to Tal and Babad's (1990) and Vahidnia et al.'s (2019b) research that a pet has a positive attitude toward the instructor having a pet. Overall, this factor covers an aspect of TPP presented in the related literature. The last factor is called 'Negative psychological/classroom-related effects of TPP' (NP) comprising nine items. This factor supports a set of research which has revealed that TPP has a negative influence on the classroom climate, students' motivation, morale, and satisfaction, and results in negative and hostile reactions to the teacher and his/her pet (Babad, 1990, 1998; Tal & Babad, 1989, 1990). It also corroborates Somersalo et al.'s (2002) finding that a teacher's unfairness might cause classroom conflict. Items 5 and 6, showing a sense of not being seen and acknowledged by an instructor in a pet-classroom, coincide with the concept of stroke (Berne, 1988) and imply students' need for receiving stroke. Items 8 and 9, reflecting one's demotivation to study the course in a pet-classroom and his/her unwillingness to participate in classroom activities, seem to confirm Tal and Babad's (1990) result that nonpets prefer to take further courses with the fair teachers. These two items which are the outcome of one's dissatisfaction in a pet-classroom, also corroborate the earlier studies (Chiu et al., 2011; Tal, 1987; Tal & Babad, 1990) attesting to the role of TPP in students' dissatisfaction and reactions to their teachers. Of note, getting distracted in a pet-classroom, mentioned in Item 10, supports the notion that teacher's unfairness in the classroom leads to students' distraction (Babad, 2009; Chesebro et al., 2004; Chory-Assad, 2002, 2004a, 2004b, 2007; Frymier & Houser, 2000). Moreover, the negative effect of TPP on a student's mental health, referred to in Item 19, also confirms the findings that TPP negatively affects students' morale (Babad, 1990, 1998, 2009; Tal & Babad, 1989, 1990) and provides further evidence for Somersalo et al.'s (2002) finding that a teacher's preferential treatment towards his/her pet endangers other students' mental health. It also supports the contention that teacher's differential behavior results in students' lower morale (Weinstein, 2002). Moreover, a feeling of anger towards a pet, reported in Item 24, substantiates the claim that teacher's unfairness brings about students' anger (Babad, 2009; Chesebro et al., 2004; Chory-Assad, 2002, 2007; Frymier & Houser, 2000). Finally, this factor addresses an aspect of TPP (i.e., psychological effects of TPP) revealed in the literature.

As cited earlier, TPP "is a phenomenon of a special emotional relationship (often a love relationship) between the teacher and a particular student (or two) in the classroom" (Babad, 2009, p. 106). It is also an extreme example of unfairness in educational contexts (Babad, 2009) affecting the classroom climate and students' feelings, morale, and satisfaction and leading to students' negative attitude towards it (Babad, 1990, 1995, 1998, 2009; Babad et al., 2003; Chiu et al., 2011; Tal & Babad, 1989, 1990; Trusz, 2017), while it is positively viewed by teachers having pets and pets themselves (Tal & Babad, 1990; Vahidnia et al., 2019b). According to these points, it can be concluded that the three factors of this instrument reflecting the multidimensionality of TPP offer statistical support to the general concept of TPP and can be regarded as its components. Moreover, based on the results of this work,

we revised the previous definition of TPP which could be applied in future research. The proposed definition is as follows: Characterized by favoritism, TPP is a phenomenon involving a type of exchange relationship (emotional and/or professional) between the teacher and one or more particular student(s) in- or out of the classroom which, while possibly perceived positively by pets and pet-prones, could have negative psychological effects on nonpets.

Overall, this scale provides a useful tool to measure students' attitudes towards TPP, including their pet-proneness and the extent to which they are affected by the negative psychological/classroom effects of TPP. This study provides beginning evidence of its reliability and validity and fulfills a need for a reliable and valid instrument particularly constructed to assess students' attitudes towards TPP in the higher education setting. The main value of this scale lies in the fact that it is not one-sided; that is, not only does it include some items related to identifying pet-prone students, but also it addresses the psychological effects of TPP on nonpets. This scale also contributes further insights into the nature and dimensionality of TPP within the broader area of teacher-student relationships. In addition, since this instrument contains a subscale of pet-proneness, the items related to this subscale can be utilized as a diagnostic tool to identify pet-prone students. Furthermore, this instrument can be regarded as a reliable measure that can be applied to proceed and enrich a teacher-pet vein of research and respond to the demand of the teacher-pet researchers by providing a well-designed means of enrichment in this literature. This scale may also help researchers to empirically investigate this phenomenon and to gain more knowledge about the consequences of TPP. Finally, SATPPS includes the desirable features of being easy to be administered, scored, and interpreted.

Apropos of the role of students' levels of study in their scores on the three subscales of SATPP (i.e., NP, NAT, and PP), it was revealed that as opposed to the BA students, the MA and PhD students took a more negative attitude towards TPP; though, they became more inclined to become favorites. The higher level of graduates' pet-proneness could depend on the number of pets identified in the data; 52.38 % of the PhD, ~ 48 % of the MA, and 27.39 % of the BA students participating in the quantitative part were found to be pets. As such, since the number of the PhD pets was more than nonpets, and MA pets comprised almost half of the total, it can be interpreted that the mean scores of the PhD and MA pets might have influenced the overall mean differences. To account for this finding, we can also resort to the notions of structure (Zimbardo, 1971, as cited in Zimbardo, 2007) and the agency of an individual (Giddens, 1984). Zimbardo (1971, as cited in Zimbardo, 2007) argues that individuals should not be only held accountable for wrongdoing because the structure can also pave the way toward changing people. Based on Zimbardo's assertion, we can pass on to this assumption that perhaps the structure (i.e., higher education system) causes students to be involved in a teacher-pet relationship. More specifically, in comparison with BA students, it appears as if graduate students might have changed as a consequence of witnessing many instances of TPP during their studies, the result of which would be considering this phenomenon normal and acceptable insofar as they set out to become pets. Moreover, a student's agency is also responsible for his/her pet-proneness as well as the educational system itself. This regard for the agency of an individual takes us to the 'duality of structure' raised by Giddens (1984). He underscores that one's behavior is the outcome of the interaction of both structure and agency. Taking Giddens's (1984) perspective into account, it seems illogical to overlook the importance of graduate students' agency in their tendency to become pets and solely blames the educational system for their pet-proneness. Thus, we can presume that perhaps students of higher educational levels might be more instrumental and have a utilitarian view. More specifically, they would learn by experience that they can do whatever necessary for their future success and furthering their own aims. As such, they might regard being a pet as an acceptable shortcut to attain their goals and fulfill their needs. Another possible line of explanation for this finding is probably

related to the change in relationship dynamics during the undergraduate and graduate studies. At the BA level, the instructors teach in a, for example, 40-student classroom where they are supposed to build a relationship with a large number of students. Whereas, at the MA and PhD levels, the instructors are expected to get in touch with a limited number of the students in- and out of the classroom. As a result, the students stand in a different relationship with their instructors at higher educational levels. That is, they are intended to work under the mentorship of their instructors who would take the role of the supervisors of their thesis/dissertation projects. Whereas such a mentorship does not exist at the BA level because BA students are not meant to write articles, build a good resume, and select their preferred instructors for their theses or dissertations. Therefore, the graduate students might find themselves in a high-pressure and stressful situation in which they would consider being a pet as a gateway to take control of such a tough situation and avail themselves of the opportunity to get the instructors' help more than ever. The last possible justification for this result might be attributed to the salient role of instructors. A BA student may not be a good choice to be taken advantage of by potential instructors since such a student does not bring real academic benefits to them. These academic benefits could be co-authoring articles and books, supervising thesis/dissertation projects, among others. Alternatively, an MA student could be of a big advantage to such instructors and a PhD student would be a suitable and attractive target to be aimed for by them as they can reap considerable gains due to working with him/her. Hence, as instructors' benefits are at play, perhaps the potential instructors are driven to take steps and exert influence on the PhD and MA students in order to get them drawn to themselves since their stakes might be raised as a result of working with them.

Regarding the graduates' higher negative attitudes toward TPP than undergraduates, this result to some extent substantiates Babad's (1995) and Babad et al.'s (2003) findings that students of higher educational levels do not accept TDB of any kinds as opposed to students of lower levels who just voice criticism when the teacher gives more emotional support to specific students. Regarding this obtained result, it seems as if graduate students might have an inner conflict; that is, they are hostile to TPP but simultaneously are willing to become pets. This finding could be due to the fact that they might be against this phenomenon as long as they are excluded, but the moment they become pets, it is acceptable. The possible rationale behind such perspective could bear relevance to the existence of a serious competition among MA and PhD students in which they intend to surpass their rivals. This competition is for, for example, taking up their thesis or dissertation projects with an intended instructor, building a better resume, passing the PhD exam, and the like. To win this competition, graduate students know that a way to achieve their goals and excel other students might be becoming a pet. Hence, due to being in such a competitive environment, it seems that they hold a negative attitude toward TPP since they are reluctant to share the resources (i.e., the gains of being a pet) with others; though, they jostle for the closest position to the instructor.

Respecting the subscale of NP, the results revealed that the lower a student's level of study was, the more probable it would be for him/her to be negatively influenced by the harmful effects of TPP. This result can be interpreted in light of relative deprivation theory and the consequence of unrealized expectations (Walker & Pettigrew, 1984). Relative deprivation theory postulates that individuals experience mental distresses as they find their expectations of desirable things which they believe they deserve have not been met. Furthermore, according to this theory, facing injustice causes people to feel a sense of powerlessness and resentment toward those who commit injustice (Meltzer & Musolf, 2002). Unrealized expectations also damage one's mental health and lead to adjustment problems (Nelson & Scutton, 1999, as cited in Xi & Hwang, 2011). Moreover, mental health can be negatively affected when there is a mismatch between the actual and expected results (Walker & Pettigrew, 1984). Considering the mentioned points, it can be assumed that it looks as if BA students enter the university with high

ideals and expectations from the university instructors. Perhaps they envision the instructors as those who are supposed to observe justice in their behaviors toward students and thus, expect not to witness TPP in this context. Hence, it appears when BA students realize that some university instructors favor special students and deny their rights of being equally paid attention to, their illusions will be shattered about the university instructors whom they expected to be fair. Therefore, the moment they are brought back to reality and perceive the reality as worse than expected (Walker & Pettigrew, 1984), they might feel a sense of disappointment and experience negative feelings as a result of their unfulfilled expectations (Meltzer & Musolf, 2002; Nelson & Scutton, 1999, as cited in Xi & Hwang, 2011; Walker & Mann, 1987; Walker & Pettigrew, 1984). So, it can be concluded that BA students might be affected by the adverse effects of TPP more than graduate students because of the expectations they have of the instructors which may be remained unrealized. Another salient issue to be discussed regarding this finding is the idea of age-related differences in emotion regulation. A common thread running through some studies is that as people age, they get better at regulating their emotions, especially the negative ones, (e.g., Blanchard-Fields, 2007; Blanchard-Fields et al., 2004; Scheibe & Blanchard-Fields, 2009; Scheibe & Carstenson, 2010) and at acceptance of negative emotional experiences (Ryff, 1989). Moreover, acceptance positively correlates with reduced anxiety, depressive symptoms (Kashdan, Morina, & Priebe, 2009; Orcutt, Pickett, & Pope, 2005), less psychological harm after stressful situations and negative emotional experiences (Shallcross, Troy, Boland, & Mauss, 2010), and longer-term mental health (Plumb, Orsillo, & Luterek, 2004). Furthermore, lifelong experiences and practice make people more competent at managing their emotions (Blanchard-Fields, 2007; Blanchard-Fields et al., 2004). In line with these points, it can be assumed that BA students' higher levels of being affected by the negative psychological effects of TPP might be due to their less competence in regulating their emotions and fewer acceptances of negative emotional experiences. In this sense, given the fact that an individual's psychological well-being can be influenced by the way s/he emotionally reacts to events (Gross & John, 2003) on the one hand, and older adults are more able at managing their emotions (Scheibe & Blanchard-Fields, 2009) on the other hand, this finding seems to be justifiable. That is, as students reach higher levels of study, they might become more capable of regulating their negative emotions and accepting the negative emotional experiences caused by TPP. Therefore, since accepting negative emotional experiences get stronger with age and cushion individuals from negative psychological consequences of events (Shallcross et al., 2010), it can be inferred that graduate students' lower levels of NP might be attributable to this fact. The next concept which might cast light on this result is the notion of normalization proposed by Foucault (1990, as cited in Motion & Leitch, 2007). Normalization is a social process that occurs over time and through which actions, beliefs, and thoughts turn to be considered as normal and natural in daily life (Foucault, 1990, as cited in Motion & Leitch, 2007). In keeping with the concept of normalization, it seems BA students initially guard against this phenomenon and refrain from accepting and tolerating it. As such, it is more likely for them to be greatly affected by the negative psychological effects of TPP. While as graduate students might be increasingly exposed to this phenomenon during their studies, their sensitivity toward TPP may be reduced and they learn to accept it as something normal pervasive everywhere. Thus, it sounds plausible to speculate that since graduate students come to normalize TPP even if they once (at the BA level) regarded it to be unacceptable and wrong, they are less vulnerable to being psychologically affected by TPP. This hypothesis is also consistent with the previously-cited point that the more individuals accept a negative emotional experience, the less likely they would be psychologically affected by their outcomes (Shallcross et al., 2010).

Regarding the role of students' GPA in their scores on the three subscales of SATPP, the results showed that as the students' GPA raised, they became more inclined to become pets and more resentful of TPP.

These findings might be related to some factors. First, based on the results, 47.73 % of the pets who participated in this study had a GPA of 18–20, 37.75 % of whom earned a GPA of 16–18, and 20.98 % of them enjoyed a GPA of 16–18. As can be seen, the greatest number of pets is in the group of students achieving a GPA of 18–20, and the number of pets decreases as the students' GPA lowers. Hence, it can be hypothesized that the mean score of the pets in the first group (i.e., 18–20) might have affected the overall means score and led to the higher scores of this group in the PP subscale. This supposition does not seem illogical because as the number of pets decreases in each group of GPA, PP score decreases. Second, according to Vahidnia et al. (2019a), a pet-prone student tries to become a favorite in quest of reaping some gains, one of which is getting higher grades which count toward his/her average grade. So, it can be inferred that students with a high GPA may consider being a pet as a catalyst for having a better GPA which acts as a gateway to get other gains such as being granted the talented student's scholarship. Therefore, it seems plausible to assume that perhaps there exists an intense competition among these students to surpass their rivals in achieving a better GPA. As a consequence, having a grave concern for getting higher grades might provide a stressful environment for them and increase their anxiety which would manifest itself in their greater resentment of this phenomenon. Furthermore, we cannot overlook the role of instructors in this result; that is, instructors also take advantage of such a relationship and invest in it to gain some advantages. These advantages could be their higher performance evaluation by the students, gaining academic prestige, co-authoring articles, among many other advantages (Vahidnia et al., 2019a). Thus, it can be hypothesized that since collaborating with high-achievers might bring some benefits to them, they might take initiative to start this relationship and get the high-achievers drawn to themselves.

Concerning the NP subscale, it was revealed that those students who earned a low GPA were more likely to be negatively affected by the unpleasant effects of TPP. A possible justification for this result might be associated with the fact that low-achievers are already uninterested in the lesson and class, do not see themselves competent enough as a student, and feel bad about themselves as a result of their low GPA. Therefore, due to experiencing such unpleasant feelings, these students may need the instructor's support and attention in- and out of the classroom much more than high-achievers to persist. This hypothesis is in line with Babad's (2009) claim that low-achievers need the teacher's support and attention more than high-achievers (Babad, 2009). In addition, low-achievers tend to put much more effort if they feel that their teacher is supportive (Wentzel, 1997; Wentzel, Battle, Russell, & Looney, 2010). This would mean that when they observe the instructor merely supports and pays an inordinate amount of attention to specific students and ignores them, they might think that they lack the appropriate means of being noticed (i.e., their GPA) by the instructor. As a result, a sense of loss of self-value and a negative feeling about themselves will be intensified in them and they would be negatively influenced by the unpleasant effects of TPP. Furthermore, low-achievers' less pet-proneness could be related to their thought of being seen by others in a negative light because of their low GPA, which might lead them to avoid approaching the instructors. Moreover, perhaps low-achievers also do not see themselves as competent as high-achievers because of their low GPA and believe that they cannot match up with them and so, they would avoid trying to prove themselves to the instructor and becoming his/her pet.

Appendix A. Interview questions

As mentioned in the methodology section, the interviews had a semi-structured format, in which the interviewees started answering a series of pre-defined questions and then replied to some follow-up questions based on their responses to preceding questions. The questions used for carrying out

6. Conclusion

Overall, this research attempted to design and validate a scale of SATPP in the higher education context and explore the role of students' GPA and levels of study in their SATPPS scores. Thus far, university instructors should have relied on knowledge gained by works done within the school settings, instead of focusing on TPP research in the higher education settings. Therefore, the findings of this study would be beneficial for collecting data on the concept of TPP in the higher education context. This work also provides empirical evidence on how NAT, PP, and NP are elements of TPP. Moreover, our proposed definition consisting of the three domains of TPP (i.e., NAT, PP, & NP) can be used as a conceptual framework for studying the development of TPP. Findings of this research also offer support for the capability of the SATPPS to gain reliable and valid information regarding TPP in the higher education setting. The qualitative findings show that the content of SATPPS is understandable and meaningful for university students, and quantitative ones suggest that TPP is not a unidimensional phenomenon, the three dimensions of which (i.e., NAT, PP, & NP) are related to the general concept of TPP. Finally, this scale is not merely applicable for the students of English language; that is, this scale can be administered among students majoring in other subjects as well. However, the results might be different from those of this study.

This research had three limitations. First, as the researchers had no access to the students of other majors, the participants of the current research were limited to English language students. Therefore, the findings should be interpreted with caution for research into other majors. Second, regarding the convenience sampling procedure applied for the instructors in the qualitative phase, the researchers had limited access to the instructors teaching at different universities in Iran and to those who could devote at least 50 min to be interviewed. Therefore, we had to interview those with whom we were previously familiar or to whom we were referred by other interviewed instructors. Another hindrance was related to the number of participants in the quantitative phase; a sample size of 476, while a respectable number, cannot yield conclusive results about all students majoring in English language in general.

A line of future research would be designing two scales for instructors, one to assess instructors' attitudes towards TPP, and the other one to assess their susceptibility to adopting a pet. Future investigation can also focus on the predictability power of SATPPS corresponding to some factors like gender and some individual difference variables like personality traits. Moreover, as this research was undertaken in the context of higher education, future investigations on TPP could expand the context being studied by getting learners from language institutes to participate. Finally, this study reported results on TPP based on interviews and questionnaires. Therefore, future investigations can focus on employing other data-eliciting techniques to gather data.

Declaration of Competing Interest

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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the interviews are as follows:

- 1) What is your attitude towards Teacher's Pet Phenomenon? Explain.
- 2) What is your attitude towards the ethicality of Teacher's Pet Phenomenon? Do you think it is ethical or not? Why?
- 3) In your view, what are the effects of Teacher's Pet Phenomenon on other students?
- 4) How do you feel about a teacher's pet and an instructor having a pet? Why?

Appendix B

Factor Loadings of SATPPS items

Items	Components		
	1	2	3
1		.78	
2		.59	
3			.61
4			.62
5	.59		
6	.63		
7	.71		
8	.75		
9	.75		
10	.65		
11	.80		
12			.65
13			.61
14			.64
15		.73	
16		.66	
17		.71	
18		.64	
19	.65		
20		.62	
21		.60	
22		.65	
23			.65
24	.69		
25		.67	
26			.68
27		.60	
28			.58

Note: Factor Loadings smaller than .40 were not included.

Appendix C. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.stueduc.2021.101000>.

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