Associations between Teacher–Student Interpersonal Behaviors and Student Stress in English Language Classes

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ABSTRACT

This study explores the associations between student stress and teacher-student interpersonal behaviors in the foreign language classroom. A sample of 114 students studying English at a private university in Istanbul, Turkey, participated in this study. Data were collected by the Student Stress Inventory (SSI) and the Questionnaire on Teacher-Student Interaction (QTI), which is designed to assess the interpersonal behaviors of the teachers and the interaction with the students in the classroom. The results reveal that student stress is significantly associated with the dimensions of QTI. In particular, there are negative associations with oppositional teacher behaviors such as being uncertain, admonishing and dissatisfied, and positive associations with cooperative behaviors such as understanding, helpful/friendly attitude and showing leadership. Additionally, the only variable that can predict student stress is identified as students' perceptions on the dissatisfaction of their teachers.

Keywords: teacher-student interpersonal behaviour patterns, student stress, student perception

INTRODUCTION

Teachers all around the world have variant levels of control over their students. Some insist that their students must behave learning in a disciplined educational environment; others consider that a greater degree of freedom is needed by the students. In the light of these attitudes, teachers display different interpersonal behaviors in their classes. The point that deserves to be taken into consideration is that the interpersonal behaviors teachers display may be associated with the students' level of stress

With the increased attention to exploring educational settings in terms of the inhabitants' perceptions, it is becoming quiet common to utilize students' perceptions of several issues related to teaching and learning (Frick, Chadha, Watson, Wang, & Green, 2009; Milliken & Barnes, 2002; Wang, 2009; Williams, Burden, & Lanvers, 2002). The purpose of this study is to determine associations between students' perceptions of teacher-student interactions and students' level of stress. Discussions and studies concentrating on these issues are reported below sequentially.

The investigation of teacher-student interactions has been one particular focus of classroom environment research. Teacher behaviors in classrooms have been investigated from a theory by

Wubbels, Créton and Holvast (1988) with an adaptation of Watzlawick, Beavin and Jackson's (1967) theory of communication processes. Within this perspective, it is argued that the behaviors of participants influence each other mutually. Thus, the mutual relationship between teachers and students can be defined as circular communication. Such communication processes influence behavior and determine it, too (Koul & Fisher, 2006).

Based on the theory, Créton, Wubbels, and Hooymayers (1993) developed the Model for Interpersonal Teacher Behavior by adapting the Leary Model (1957). They designed the Questionnaire on Teacher Interaction (QTI) in the early 1980s. The model allows for a graphic representation of teacher-student interaction in which the behavior of both parties can be recorded on the chart according to some measures. These measures are mapped on a proximity dimension (cooperation or opposition) and on an influence dimension (dominance or submission). They form four quadrants divided into eight sectors and each of these sectors describes different behavior characteristics that teachers may exhibit.

A review of literature has shown that a great number of studies have investigated teacher-student interaction in relation to different issues such as student outcomes, attitude, cultural background (Fisher & Rickards, 1996; Rawnsley & Fisher, 1997; Rickards & Fisher, 1999; Wubbels & Levy, 1993). These past lines of research have revealed that higher cognitive outcome scores and attitudinal outcomes are positively associated with leadership, helping/friendly and understanding teacher behaviors. On the contrary, dissatisfied, admonishing and uncertain teacher behaviors are negatively associated with students' cognitive and attitudinal outcomes. However, to our best knowledge, there has been no study investigating teacher-student interaction in relation to student stress, a factor that is highly significant in educational settings.

Emotional and behavioral problems that are manifestations of stress in educational environments have been a concern among teachers, parents and students themselves. As described by Lazarus and Folkman (1984) stress is perceived as a product of a dynamic relationship between the person and the environment. How one perceives the event explains the difference in people's reactions to the same stressor. Hobfoll (1988) described that stress involves all systems of the body and all systems of the psyche, cognitive, emotional and unconscious. Hobfoll (1988) asserts that stress occurs in all social systems, interpersonal, intrapersonal, small or large group, evoked by varied stimuli.

With regard to the students, they confront a complex array of external and internal stressors in everyday life that stem from educational environment, home and the self (Moulds, 2003). To give an example, having difficulties with lessons emerges as a stressor related to educational environments. The issue of stress at schools is of high importance considering its vital role in encouraging or discouraging the learning process. There is evidence that high chronic stress contributes to ineffective cognitive processes to promote performance failures as in school performance of adolescents. Moreover, it influences interpersonal relations of adults and adolescents adversely (Matheny, Aycock, Pugh, Curlette, & Canella, 1986).

A quick overview about related literature has shown that exploring the relationship between student stress and teacher-student interaction patterns could be enlightening considering the educational implications it might offer. The current study is designed to focus on student stress and students' perceptions of teacher-student interactions. The purpose is to explore the role of these interaction patterns as a potential stressor for the students.

RESEARCH QUESTIONS

The questions to be explored in this study are as follows:

1. Is teacher-student interaction related with student distress, emotional manifestations and/or behavioral manifestations?

2. If yes, what is the direction and strength of this relation?

3. Can teacher-student interaction act as a predictor of student stress?

METHOD

Participants

The participants of this study are comprised of 114 preparatory level students, 65 male and 49 female, studying English at a private university in Istanbul, Turkey. Thus, the students who filled out the questionnaires of the study took their English language teachers into consideration while answering the questions. The mean age of the participants was 19.32. The participants were all native speakers of Turkish. At the time of the study, there were 19 intact classes and 7 students were randomly selected from each class. However, as 19 students out of 133 students failed to complete the questionnaires properly, these questionnaires were considered as invalid and only 114 questionnaires filled in properly were included in the analysis.

Data collection procedures

In this study data were collected by means of two questionnaires: Questionnaire on Teacher Interaction (QTI) developed by Wubbels and Levy (1989) and Student Stress Inventory (SSI) developed by Fimian et al. (1989). With the aim of preventing any language blockage, the participants were provided with Turkish translations of the questionnaires.

Teacher interaction was measured by means of the QTI. This scale requires students to indicate how effectively they can interact with their teachers on a 5-point scale. Higher total scores on this scale reflect higher levels of perceived interaction. The 64-item QTI is based on Leary's model (1957) of interpersonal behavior that identifies two dimensions, dominance/submission and cooperation/opposition that correspond to the following eight scales of interpersonal teacher behavior patterns: leadership, helpful/friendly attitude, understanding, student responsibility/freedom, uncertainty, dissatisfaction, admonishment, and strictness.

Student stress was measured by means of the SSI. Originally, SSI has five sub-scales, namely, distress, emotional manifestations, behavioral manifestations, physiological manifestations, and social/academic problems. However, within the frame of the present study's research questions, items investigating social/academic problems and physiological manifestations were eliminated and the sub-scales of distress, emotional and behavioral manifestations were included. In terms of sub-scales, higher total scores on distress sub-scale reflect participants' being stress-free. On the contrary, higher total scores on the other two sub-scales reflect higher emotional and behavioral negative reactions of participants.

Both questionnaires were pilot tested with 20 students. Layouts of the questionnaires were redesigned accordingly before the actual study. Reliability of the QTI was assessed by Cronbach alpha coefficient, which resulted in 0.7685. Reliabilities for the sub-scales were computed as 0.8973 for leadership, 0.9174 for helpful/friendly, 0.8886 for understanding, 0.7508 for student responsibility/freedom, 0.6897 for uncertain, 0.7981 for dissatisfied, 0.7543 for admonishing, and 0.4082 for strict. Reliability of the SSI was computed as 0.6550. Reliabilities of the sub-scales ranged between 0.5181 and 0.8841 (emotional manifestations: 0.8841, distress: 0.8393, behavioral manifestations: 0.5181).

DATA ANALYSIS PROCEDURE

Quantitative data collected from the above-mentioned instruments were analyzed by the Statistical Package of the Social Sciences (SPSS) 15.0.

Two sets of statistical analysis were conducted to examine the relationship between teacher-student interaction and student stress. In the first set of analyses, Pearson correlation coefficients were calculated between the sub-scales of QTI and SSI to find out if any aspect of teacher-student interaction related to students' distress, emotional and/or behavioral manifestations.

 The second set of analyses entailed stepwise multiple regression analyses for students' distress, emotional manifestations, and behavioral manifestations using QTI scores as predictor variables. This set of analyses were carried out on the data obtained in the correlation analysis to see if any aspect of teacher-student interaction not only related, but also could act as a predictor of students' distress, emotional manifestations and/or behavioral manifestations.

RESULTS

Pearson correlations between teacher-student interaction (QTI) and student stress (SSI) are presented in Table 1.

Table 1: *Pearson correlations of Teacher-Student Interaction (QTI) and Student Stress (SSI).*

	Distress	Emotional Manifestations	Behavioral Manifestations
Leadership	0.323(**)	-0.244(**)	-0.137
Helpful / Friendly	0.321(**)	-0.197(*)	-0.124
Understanding	0.306(**)	-0.212(*)	-0.154
Responsibility/ Freedom	0.083	-0.054	-0.100
Uncertain	-0.292(**)	0.257(**)	0.237(*)
Dissatisfied	-0.352(**)	0.283(**)	0.307(**)
Admonishing	-0.242(**)	0.220(*)	0.150
Strict	0.035	0.114	0.143
** Correlation is significant at the 0.01 level (2-tailed).			
* Correlation is significant at the 0.05 level (2-tailed).			

As it is shown in Table 1, correlation analysis showed that six aspects of teacher-student interaction correlated significantly with students' distress. It was found out that students' perceptions on the leadership (r=0. 323, p<0. 01), friendliness (r=0. 321, p<0. 01), and understanding behaviors (r=0. 306, p<0. 01) of their teachers related to their distress positively. Values obtained also displayed that students' perceptions on the dissatisfaction (r=-0.352, p<0. 01), uncertainty (r=-0.292, p<0. 01), and admonishing behaviors (r= -0.242, p<0. 01) of their teachers related to their distress negatively.

Correlation coefficients which were calculated between teacher-student interaction and students' emotional manifestations showed similar results. Six aspects of teacher-student interaction correlated significantly with students' emotional manifestations. The results obtained showed that three aspects of

teacher-student interaction, namely, students' perceptions on the dissatisfaction (r=0. 283, p<0. 01), uncertainty (r=0. 257, p<0. 01), and admonishing behaviors (r=0. 220, p<0. 05) of their teachers, correlated positively with their emotional manifestations. The values obtained also demonstrated that students' perceptions on the leadership (r=-0.244, p<0. 01), understanding behaviors (r=-0.212, p<0. 05), and friendliness (r=-0.197, p<0. 05) of their teachers negatively correlated with their emotional manifestations.

Correlation analysis, finally, showed that only two aspects of teacher-student interaction, students' perceptions on the dissatisfaction (r=0. 307, p<0. 01) and uncertainty (r=0. 237, p<0. 05) of their teachers correlated with their behavioral manifestations.

As mentioned before, stepwise multiple regression analysis was run with the data gathered in the correlation analysis as correlation analysis only display that two variables are, in some way, related but not provide information about causation (Pallant, 2001). Students' distress was assigned as the dependent variable and all the aspects of teacher-student interaction that correlated with it were assigned as the predictors to see any of these could predict variations in students' distress. The ANOVA of the regression analysis confirmed that it was statistically significant (F= 15.801, p<0. 001). Results showed that only students' perceptions on the dissatisfaction of their teachers could significantly predict their distress (β =-0.352, p<0. 001) and explain 12.4% of variations in their distress (r2= 0.124, p< 0.001). Table 2 summarizes the results of the multiple regression analysis conducted for student distress.

Table 2*: Regression analysis of teacher dissatisfaction and student distress*

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.352(a)	0.124	0.116	0.56131

Stepwise multiple regression analysis calculated to determine if any of the six aspects of teacher-student interaction that correlated significantly with students' emotional manifestations could also account for variations in these manifestations displayed significance (F= 9.774, p< 0.003). As is shown in table 3 below, values obtained revealed that students' perceptions on the dissatisfaction of their teachers were the only variable that could significantly predict their emotional manifestations (β = 0.283, p< 0.003) and explain 8% of variations in their emotional manifestations (r2= 0.080, p< 0.003) consistent with the results obtained earlier for students' distress.

Table 3: *Regression analysis of teacher dissatisfaction and students' emotional manifestations*

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.283(a)	0.080	0.072	0.79504

Stepwise multiple regression, entitled to pinpoint the aspects of teacher-student interaction that could also predict variations in students' behavioral manifestations produced a statistically significant F value (F= 9.774, p< 0.003). Students' perceptions on the dissatisfaction of their teachers was identified as the only variable that could significantly predict their behavioral manifestations (β= 0.307, p< 0.002) and explain 9.4 % of their behavioral manifestations (r2= 0.094, p< 0.002) in harmony with the previous results. Table 4 demonstrates the results of the regression analysis.
Table 4: Regression analysis of teacher dissatisfaction and students' behavioral manifestations

Table 4: *Regression analysis of teacher dissatisfaction and students' behavioral manifestations*

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.307(a)	0.094	0.086	0.53892

DISCUSSION

The aims of this study were twofold: (1) to explore the relationships between student stress and students' perceptions of teacher-student interactions and (2) to investigate the role of these interaction patterns as a potential stressor for the students. With regard to the context of the current study, it should be highlighted that participating students reported their perceptions in relation to their language teachers they have at their university setting. The findings of the current study have shown that the more students reported their language teachers as showing high leadership, friendliness, and understanding, the more distress they might be expected to experience. On the contrary, it was concluded that the more students considered their language teachers as dissatisfied, uncertain, and admonishing, the more stress they could be expected to experience.

It is clear from the findings of the study that the more students perceive their language teachers to be dissatisfied, uncertain, and/or admonishing, the more they could be expected to experience emotional manifestations, i.e., feeling insecure, scared, pressured, depressed and so forth. Nevertheless, it can be concluded that the more students consider their language teachers as displaying high leadership, understanding, and friendliness, the less they could be expected to experience emotional manifestations. Concerning behavioral manifestations, the more students perceive their language teachers to be dissatisfied and uncertain, the more they could be expected to be experiencing behavioral manifestations such as acting offensively with others, 'bad mouthing' certain classmates, teachers, and school staff, talking back to teachers, and so on.

As the correlation analyses pinpoint whereas patterns such as leadership, understanding and friendliness are of high importance to create a stress-free classroom atmosphere, patterns such as dissatisfaction, admonishment, and uncertainty turn out to be stress-provoking. With regard to the predictors of student stress related to teacher-student interpersonal behaviors, the only predictor found was language teachers' being dissatisfied. How being dissatisfied has been defined in this study based on Leary's model (1957) is teachers' looking unhappy, criticizing students, giving an impression of being not easily satisfied with students' achievements and or behaviors.

Congruent with these findings, it would be a failure not to note here that if English language teachers wish to have less stressful students, they should ensure the presence of interpersonal behaviors such as understanding, being helpful/friendly and showing leadership. Conversely, they should avoid interpersonal behaviors such as dissatisfaction, admonishment and uncertainty that may lead to stress among students.

One final point to highlight is that stress contributes to ineffective cognitive processes to promote performance failures as in school performance and it also influences interpersonal relations of adults and adolescents adversely (Matheny, Aycock, Pugh, Curlette & Canella, 1986). Thus, creating and maintaining favorable classroom learning environment through positive interpersonal behaviors are crucial for language teachers.

 Based on the results, the study has a number of implications for language teachers. Firstly, the findings increased our understanding of teacher-student interpersonal relationship and this is important to create desirable changes in foreign language classroom environment. Studies like the present one contributes to the field of teaching in terms of enabling teachers to benefit from student perspective which may help them to question their teaching philosophies and adapt their managerial skills accordingly.

It is important to acknowledge that the study had its limitations, too. Due to the limited number of participants, one should be cautious about generalizing the findings of the study. With a greater number of participants, in different contexts with different age groups, it is suggested to replicate the study.

CONCLUSION

In sum, despite its limitations, the study achieved significant results in exploring associations between teacher-student interpersonal behaviors and student stress in English language classes. The study suggests that certain patterns in relation to teachers' behaviors such as being perceived as understanding, friendly and showing leadership may result in stress-free learning environments. On the other hand, teachers' being perceived as dissatisfied emerged as the only variable that predicts student stress. Thus, the findings of the study suggest that language teachers should try their best to avoid looking unhappy, criticizing students or giving the impression of not being easily satisfied in order not to create stress-provoking learning environments.

REFERENCES

Créton, H., Wubbels, T., & Hooymayers, H. (1993). A systems perspective on classroom communication. In T. Wubbels & J. Levy (Eds.). *Do you know what you look like? Interpersonal relationships in education* (pp. 1-12). London: The Palmer Press.

Fimian, M. J., Fastenau, P. A., Tashner, J. H., & Cross, A. H. (1989). The measure of classroom stress and burnout among gifted and talented students. *Psychology in the Schools, 26*, 139-153.

Fisher, D., & Rickards, A. (1996). *Associations between teacher-student interpersonal behavior and student attitudes in mathematics classes.* Proceedings Western Australian Institute for Educational Research Forum 1996.

Frick, T. W., Chadha, R., Watson, C., Wang, Y., & Green, P. (2009). College student perceptions of teaching and learning quality. *Educational Technology Research and Development, 57*(5), 705-720.

Hobfoll, S. E. (1988). *The ecology of stress*. Washington, DC: Hemisphere.

Koul, R. B., & Fisher, D. L. (2006). *Students' perceptions of teachers' interpersonal behavior and identifying exemplary teachers*. Proceedings of the 15th Annual Teaching Forum, 1-2 February 2006. Perth: The University of Western Australia.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Leary, T. (1957). *An interpersonal diagnosis of personality*. New York: Ronald-Press Company.

Matheny, K. B., Aycock, D. W., Pugh, J. L., Curlette, W. L., & Canella, K. (1986). Stress coping: A qualitative and quantitative synthesis with implications for treatment. *The Counseling Psychologist, 14*, 499-549.

Milliken, J., & Barnes, L. P. (2002). Teaching and technology in higher education: Student perceptions and personal reflections. *Computers & Education, 39*(3), 223-235.

Moulds, J. D. (2003). Stress manifestation in high school students: An Australian sample. *Psychology in the Schools, 40*(4), 391-402.

Pallant, J. (2001). *SPSS Survival Manual*. Milton Keynes: Open University Press.

Rawnsley, D., & Fisher, D. L. (1997). *Using personal and class forms of learning environment in mathematics classroom.* Paper presented at the International Conference on Science, Mathematics & Technology Education, Hanoi, Vietnam.

Rickards, T., & Fisher, D. (1999). Teacher-student classroom interactions among science students of different sex and cultural background. *Research in Science Education, 29* (4), 445-455.

Watzlawick, P., Beavin, J., & Jackson, D. (1967). *The pragmatics of human communication.* New York: Norton.

Wang, H-C. (2009). Taiwanese students' perceptions of writing commentaries: Revisiting culture. *The International Journal of Language, Society and Culture, 28*, 82-91.

Williams, M., Burden, R., & Lanvers, U. (2002). 'French is the Language of Love and Stuff': Student perceptions of issues related to motivation in learning a foreign language. *British Educational Research Journal, 28*(4), 503-528.

Wubbels, T. (1993). Teacher-student relationships in science and mathematics class. *What research says to the science and mathematics teacher*, Number 11. Perth: National Key Centre for School Science and Mathematics, Curtin University of Technology.

Wubbels, T., & Levy, J. (Eds.). (1993). Do you know what you look like? *Interpersonal relationships in education. London*. England: Falmer Press.

Wubbels, T., Créton, H., & Holvast, A. (1988). Undesirable classroom situations. *Interchange, 19*(2), 25-40.