

The Effects of Justice and Burnout on Achievement: An Empirical Investigation of University Students

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Abstract

The study examined the relationships among justice, burnout, and academic achievement using a sample (N=1,505) of undergraduate university students. The study was conducted at a university in northern part of Cyprus. Hierarchical regression analysis was conducted to test the hypotheses. The results revealed that distributive justice, procedural justice, and interactional justice were associated with burnout. In addition, distributive and interactional justice had a significant positive relationship with academic achievement. Procedural justice had no significant relationship with academic achievement while burnout had a negative association with students' academic achievement. Additionally, burnout was treated as a mediator between justice dimensions and academic achievement. The results of the Sobel test illustrated that burnout partially mediated the effect of distributive and interactional justice on academic achievement. The study provides discussion, limitations and directions for future research.

Key words: *academic achievement; burnout; conservation of resources; equity; higher education.*

Introduction

As academic programs become more challenging and competitive, students develop higher stress and strain (i.e. burnout) while enrolled in their programs. In addition, unfairness (injustice) which students perceive in their lecturers/professors also elevates the level of burnout in the academic environment. Consequently, the academic performance of students is deleteriously affected. Derived from the aforementioned

interactions of justice, burnout and academic achievement in the educational context, this study tests the effects of justice and burnout on academic achievement. As a field of academic research, perceived justice (fairness) and burnout have received attention from researchers in diverse disciplines. These disciplines can be listed as marketing, organizational behavior and political science. Specifically, justice has been extensively studied in various contexts, yet it has found little attention in instructional contexts (Tyler, 1987; Chory-Assad, 2002; Chory-Assad, & Paulsel, 2004a; Chory-Assad, & Paulsel, 2004b; Chory, 2007). Therefore, student outcomes (e.g. aggression) in relation to the perception of justice need further attention (Chory-Assad, 2002). In addition, measuring burnout of individuals in a non-occupational setting (i.e. instructional setting/among students) enhances the original theory of burnout (cf. Gan, Yang, Zhou, & Zhang, 2007). Hence, there is a need to conduct measurements of burnout as a predictor of academic success (Uludag, & Yaratan, 2010).

The concept of *justice* has been developed and operationalized in organizational settings. Cropanzano and Greenberg (1997) define organizational justice as the “perceptions of fairness and the evaluations regarding the appropriateness of workplace outcomes or process” (as cited in Chory-Assad, & Paulsel, 2004b, p. 254). The definition of classroom justice is similar to that of organizational justice and refers to the “perceptions of fairness and the evaluations regarding outcomes or processes that take place in an instructional context” (Chory-Assad, & Paulsel, 2004b, p. 254). Perception of justice has been broken down into three distinct constructs: distributive, procedural and interactional justice. According to Deutsch (1985) distributive justice may be defined as “the perceptions that the outcomes of a given transaction are fair” (as cited in Chory-Assad, & Paulsel, 2004a, p. 101). For example, students assess and evaluate fairness by comparing the actual grade to the deserved grade and/or the grades received by their peers. Procedural justice refers to the “perceptions of the fairness of the processes used to arrive at outcomes” (Byrne, & Cropanzano, 2001 as cited in Chory-Assad, & Paulsel, 2004a, p. 101). These procedures could be classified as delivering a lecture, manners of marking a quiz or an exam paper and other assessment criteria. According to Bies and Moag (1986), interactional justice occurs when students and instructors interact with each other in the execution of policies and procedures. The coverage of the interactional justice takes place in the classroom settings where interpersonal communication occurs between the student and the instructor (Chory-Assad, & Paulsel, 2004a).

The extant literature reveals that the sub-constructs of burnout are depicted as emotional exhaustion, depersonalization and lack of personal accomplishment. Specifically, Maslach and Jackson (1981, p. 99) postulate that emotional exhaustion refers to the “depletion of emotional resources owing to demands of interpersonal contacts”. Depersonalization is described as “cynical attitudes toward one’s job” while lack of personal accomplishment is described as the “tendency to evaluate one’s work negatively” (ibid.).

More specifically, burnout in instructional context and/or of students refers to “feelings of exhaustion due to study demands, cynical attitudes toward one’s studies, and feelings of ineptness as a student” (Schaufeli, Salanova, Gonzales-Roma, & Bakker, 2002, p. 73). Hence, the dimensions of burnout can be listed as: emotional exhaustion, cynicism, and reduced professional efficacy (Uludag, & Yaratana, 2010).

Academic achievement refers to students’ academic performance at school. In order to measure achievement, students’ GPA (Grade Point Average) scores are used (Brown, Lent, & Larkins, 1989). The same approach was also utilized by Butler (2007). Hence, this study will use students’ self-report GPA scores to measure academic achievement.

Two theories serve the purpose of this study. According to Adams (1965), Equity Theory is postulated as the comparison of individuals’ inputs in relation to their outputs. Equity Theory is gaining higher importance in non-economic endeavors in comparison to economically adjusted institutions in this day and age (cf. Deutsch, 1985). Adams (1965) specifically claims that the rule and the role of equity subsist in the relationship of the teacher and students. The same work further claims that equity is recognized in the grade distribution. Furthermore, Adams (1965) emphasizes that there is an order or equal balance between the ratio of input/contribution and output/benefits of individuals. Nevertheless, this ratio could be disturbed if equal balance (equity) is deterred among the parties. As a result, individuals may exhibit negative behavior when this balance (equity) is disturbed (Taris, Van Horn, Schaufeli, & Schreurs, 2004). Prior research also supports the idea that inequity has been associated with burnout (Van Horn, Schaufeli, & Taris, 2001). The COR theory proposes that people will be unable to retain resources (e.g., time and knowledge) when they experience stress (Hobfoll, 1989). In addition, the postulation of COR Theory suggests the incremental levels of stress when individuals’ resources are drained. In this case, this might lead to the loss of energy and motivation, hence, poorer academic success.

The purpose of this study is to examine the effects of justice and burnout on students’ achievement (see Figure 1). Student performance or achievement is believed to be one of the most important elements in instruction. Researching the problems in students’ academic achievement may help predict dropouts (Ekstrom, Goertz, Pollack, & Rock, 1986) and antisocial behaviors (Tremblay, Masse, Perron, LeBlanc, Schwartzman, & Ledingham, 1992). From this point forward, it could be speculated that measurement of academic achievement with its’ possible predictors is a necessity. In line with this thought, Uludag and Yaratana (2010) suggest that testing the relationship among burnout and academic achievement would provide new insights important for the understanding of the relationship between the constructs. However, investigation of justice dimensions in instructional settings is in its infant stage (Chory-Assad, 2002, Chory, 2007) and it calls for further research. In addition, a very recent study by Horan, Chory and Goodboy (2010) pinpointed that emotional measures, such as stress (e.g. burnout), and behavioral measures (e.g. achievement) should be investigated in relation to classroom justice.

According to Maslach and Leiter (1997) lack of fairness (injustice) is a crucial element that contributes to the elevated levels of burnout. In line with this thought, an environment that is not fair and is not transparent will result in lower academic achievement (Finn, & Rock, 1997). On the contrary, if students perceive an environment as fair and transparent, their academic performance and emotional stability will increase (Yang, 2004). Furthermore, Moliner, Martinez-Tur, Peiro, Ramos, and Cropanzano (2005) have found that all levels of justice (distributive, procedural, and interactional) were significantly correlated with the dimensions of burnout (exhaustion, cynicism, and lack of efficacy). In a longitudinal study Taris et al. (2001) have found that perceived injustice by students has a significant effect on the dimensions of burnout. Salmela-Aro, Kiuru, Pietikainen, and Jokela (2008) also found a negative relationship between students' GPA (achievement) and school burnout. The conservation of resources theory also supports the notion of negative relations between performance and stress (i.e. burnout). When individuals feel stressed, their performance level tends to decrease (cf. Hobfoll, 1989). To the authors' knowledge no study has yet investigated the mediating effects of burnout among justice and academic achievement in educational context. Hence, this study may provide evidence to support this mediation.

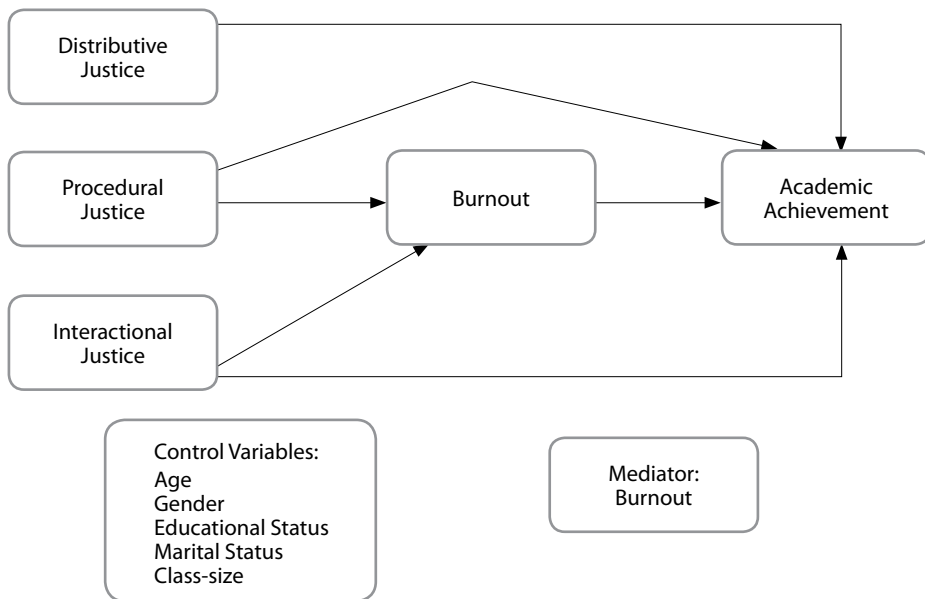


Figure 1. *Research Model*

Hypotheses

Stemming from the above-mentioned literature and empirical findings, this study proposes the following hypotheses:

- H1: Distributive justice is negatively related to burnout.
- H2: Procedural justice is negatively related to burnout.
- H3: Interactional justice is negatively related to burnout.
- H4: Distributive justice is positively related to academic achievement.
- H5: Procedural justice is positively related to academic achievement.
- H6: Interactional justice is positively related to academic achievement.
- H7: Burnout is negatively related to academic achievement.
- H8: Burnout mediates the relationship between justice and academic achievement.

Method

Sample

The sample of this study consisted of undergraduate students who were studying at a university in northern part of Cyprus. Convenience sampling method was used to collect data from students. The data were collected during April – May 2010. By the cut-off date, a total of 1,550 questionnaires were collected. Forty five questionnaires were eliminated due to lack of or missing data. The total number of usable questionnaires after the elimination was 1,505. Age distribution of the 1,505 participants was as follows: 719 of the respondents ranged between the ages of 17-21 (47.8%), 727 of the respondents were between the ages of 22-26 (48.3%), 58 ranged between the ages of 27-31 (3.9%), and only one respondent ranked above the age of 32 (0.1%). Gender distribution was similar: 748 (49.7%) of the respondents were female and 757 (50.3%) were male. The majority, i.e. 1,453 (96.5%) of the respondents were enrolled in four-year programs (a bachelor degree), whereas only 52 were enrolled in two-year programs (an associate degree). The majority of the respondents (1,375) were single, 45 were married and 85 were in the “other” category. In order not to infringe on the privacy of the students and to avoid social desirability response bias, the students who were in the “other” category were not labeled as divorced/widowed or living with a partner.

Measures

All items in the survey instrument were first prepared in English and then back translated into Turkish (Mullen, 1995). The cross-linguistic comparability of the questionnaire was tested by the faculty members of the university who are experts in their fields. A five-point Likert scale was used to measure justice and burnout. Academic achievement was recorded from the students’ self-reported GPA.

Distributive, Procedural and Interactional Justice Items

Fourteen items from Chory-Assad and Paulsel (2004b), were utilized for distributive justice (sample item: Your grade on the last exam compared to other students’ grades on the exam.) and seventeen items were used for procedural justice (sample item: The instructor’s ways of grading exams., etc.). For interactional justice eight items adapted

from Chory (2007) were used (sample item: The instructor's communication with students.). All items of justice were elicited by a Likert scale as follows: 1=Extremely unfair; 2= Unfair; 3=Neutral; 4=Fair; 5=Extremely fair.

Burnout Items

MBI-SS (Maslach Burnout Inventory – Student Survey) from Schaufeli, Martinez, Pinto, Salanova, and Bakker (2002) was employed to measure burnout. Five items were used to measure exhaustion (sample item: I feel emotionally drained by my studies.), four items were utilized to measure cynicism (sample item: I have become more cynical about the potential usefulness of my studies.), and six items were used to measure professional efficacy (sample item: I have learned many interesting things during the course of my studies.). For the purpose of this study, burnout was treated as a uni-dimensional variable rather than three separate sub-dimensions. This approach is not uncommon in the research since it simplifies the results and provides better understanding of the outcomes (Brenninkmeijer, & Van Yperen, 2003). It is beneficial to test the interactions and mediation between the predictors and the consequences of burnout using a single dimensional construct. In addition, uni-dimensional concept is utilized to investigate the prevalence of burnout within that specific sample (cf. Schaufeli, & Enzmann, 1998). All items of burnout were elicited by a Likert scale as follows: 1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree.

Academic Achievement Items

Academic achievement was measured by the students' grade point average (GPA) at the end of the semester.

Control variables

Demographic variables such as age, gender (0=female; 1=male), educational status (0=two year program; 1=four year program), marital status, and class size (0=ideal class size; 1=overcrowded class size) were treated as control variables.

Results

Scores obtained from the items were averaged to yield a composite score to represent the study constructs. Table 1 depicts the correlations between the variables. The correlation coefficients between the study constructs ranged from $-.28$ for the correlation between interactional justice and burnout, to 0.41 for the correlation between procedural justice and interactional justice. Age was negatively correlated with GPA ($-.07$). Gender was negatively related to distributive justice, interactional justice and GPA ($-.06$, $-.07$, and $-.18$ respectively), and it was positively correlated with burnout ($.09$). Educational status was negatively correlated with burnout ($-.06$) and marital status was negatively correlated with GPA ($-.05$). Class size was negatively related to distributive justice, interactional justice, and GPA ($-.08$, $-.07$,

and $-.05$ respectively) but was positively correlated with burnout ($.08$). Furthermore, distributive justice was negatively related with burnout ($-.23$) and positively correlated with GPA ($.14$). Procedural justice was negatively correlated with burnout ($-.19$) and positively correlated with GPA ($.07$). Interactional justice was negatively correlated with burnout ($-.29$) and positively correlated with GPA ($.15$). Finally, burnout was negatively correlated with GPA ($-.14$).

Results of hierarchical regression analyses are presented in Table 2. Distributive justice (DSJUST) was found to be negatively related to burnout. This relationship was significant ($\beta = -.19$, $t = -7.65$), thus H1 was supported. H2 was set out to predict a negative relationship between procedural justice (PROJUST) and burnout. The results of the regression analysis revealed that this relationship was significant ($\beta = -.07$, $t = -2.67$), hence supporting H2. Interactional justice (INJUST) was predicted to have a negative correlation with burnout. The results demonstrated that this relationship was significant ($\beta = -.23$, $t = -8.71$). Therefore, H3 was also supported by the results.

Table 1. Means, Standard Deviations and Correlations among Study Variables ($n = 1505$)

	1	2	3	4	5	6	7	8	9	10
Age	1									
Gender	.22**	1								
Educational Status	.07**	.02	1							
Marital Status	.23**	-.05	.00	1						
Class size	.11**	-.03	.09**	.04	1					
DSJUST	-.01	-.06*	.02	-.00	-.08**	1				
PROJUST	.00	-.01	-.02	.03	.04	.14**	1			
INJUST	-.03	.07**	.00	.04	-.07*	.12**	.41**	1		
Burnout	-.05	.09**	.06*	.05	.08**	-.23**	-.19**	.29**	1	
GPA	-.07*	-.18**	.02	-.05*	-.05*	-.14**	-.07**	.15**	-.14**	1
Mean	1.56	.50	.97	1.14	.41	3.26	3.36	3.32	2.79	2.67
SD	.57	.50	.19	.49	.48	.70	1.16	1.19	.68	.63
Cronbach Alpha						.88	.86	.91	.88	

Remarks: Scores obtained from related items were averaged to yield a composite score to represent the study constructs. DSJUST= Distributive justice; PROJUST= Procedural justice; INJUST= Interactional justice; GPA= Grade Point Average (Academic Achievement); SD= Standard Deviation.

* $p < .05$.

** $p < .01$.

Furthermore, distributive, procedural and interactional justice (hypotheses 4, 5, and 6 respectively) were predicted to have a positive relationship with academic achievement (GPA). The results revealed that distributive justice and interactional justice (H4 and H6) did have a significant positive relationship with GPA ($\beta = .10$, $t = 3.88$; $\beta = .10$, $t = 3.66$ respectively), thus H4 and H6 were supported. Procedural justice (H5) did not yield any significant relationship with GPA. Therefore, H5 was not supported. Finally, H7 was set to predict a negative relationship of burnout with GPA. The results depicted that this relationship was negative and significant ($\beta = -.07$, $t = -2.45$), thus H7 was supported.

Table 2. Hierarchical Regression Results

Burnout			
Variables	β	t	VIF
Step 1			
Age	.03	1.23	1.13
Gender	.05	1.90	1.06
Educational Status	-.06*	-2.58	1.01
Marital Status	.05	1.90	1.06
Class size	.04	1.76	1.03
DSJUST	-.19*	-7.65	1.03
PROJUST	-.07*	-2.67	1.22
INJUST	-.23*	-8.71	1.22
R^2	.14		
F	29.91		
ΔR^2	.01		
Academic Achievement (GPA)			
Variables	β	t	VIF
Step 2			
Age	-.02	-.72	1.13
Gender	-.15	-5.86	1.06
Educational Status	.02	.02	1.01
Marital Status	-.04	-1.56	1.06
Class size	-.03	-1.11	1.03
DSJUST	.10*	3.88	1.07
PROJUST	.00	.13	1.22
INJUST	.10*	3.66	1.28
Burnout	-.07*	-2.45	1.16
R^2	.07		
F	12.56		
ΔR^2	.07		

Remarks: Burnout was the dependent variable in step 1 and GPA was the dependent variable in step 2. Multi-collinearity was not problematic, since all variance inflation factor (VIF) values were less than 5 (Groebner, Shannon, Fry, & Smith, 2005).

* $p < .05$.

Mediation test

Hypothesis 8 predicted a mediating role of burnout between the dimensions of justice and academic achievement. Hence, burnout was treated as a mediating variable between dimensions of justice (distributive, procedural and interactional) and academic achievement (GPA). All the steps proposed by Baron and Kenny (1986) were first assessed to determine if burnout was eligible to be equated as a mediating variable. The assessment of 4 steps (Baron, & Kenny, 1986) was fulfilled, thus, burnout was equated as a mediator variable between justice dimensions and academic achievement. In establishing mediation, the following steps were utilized. Step 1 utilized Y (academic

achievement) as the criterion variable in a regression equation and X (justice) as a predictor. Step 2 utilized M (mediator: burnout) as the criterion variable in the regression equation and X (justice) as a predictor. Step 3 utilized Y (academic achievement) as the criterion variable in a regression equation, and X (justice) and M (mediator: burnout) as predictors. Finally, in step 4, in order to establish that M completely mediates the X-Y relationship, the effect of X on Y is controlled through M (Baron, & Kenny, 1986). In detail, control variables and perceptions of justice were first treated as independent variables of the criterion variable of burnout using an enter method. Second, control variables, perceptions of justice and burnout were equated as the independent variables of the criterion variable of academic achievement. This hierarchical approach was used to depict the direct effects and the potential mediation of burnout. Hierarchical regression results revealed that there was a reduction of the effects of justice dimensions on academic achievement after including burnout as a mediator. In order to examine the significance of this mediation, Sobel test (Baron, & Kenny, 1986) was conducted. It revealed that burnout partially mediated the effect of distributive justice on academic achievement ($t = -3.51, p = .000$). Burnout also partially mediated the effect of interactional justice on academic achievement ($t = -3.38, p = .001$). However, there was no significant mediation of burnout between procedural justice and academic achievement. The β and t values presented in Table 2 provide evidence for this mediation test.

Discussion, Implications and Limitations

Hierarchical regression analyses were conducted to test the study hypotheses. Control variables were included in the regression analyses, however, results illustrated that control variables did not affect the hypothesized relationships. The results suggested that when there is distributive, procedural, and interactional justice in the classroom, students' burnout levels decrease. This finding supports the prior research on perceptions of equity and burnout (Van Dierendonck, Schaufeli, & Buunk, 2001). Yang (2004), on the other hand, found no relationship between fairness (uni-dimensional measure of justice) and burnout. Furthermore, distributive justice and interactional justice increase students' achievement scores (GPA). This result is also consistent with previous research which also found that fairness has a positive effect on student achievement (Yang, 2004). In order to assure students' academic achievement, schools and instructors/lecturers should employ fair policies and regulations. Specifically, lecturers should distribute fairness, design transparent and fair procedures and interact fairly/equally with students. These policies and regulations will also alleviate the levels of burnout. Procedural justice, however, did not have any significant effect on GPA. This is a surprising result because procedural justice was hypothesized to have an effect on GPA and hence, needs further attention in future studies.

The results also support the idea that burnout negatively influences academic achievement. These findings provide further confirmation of previous research (Yang, 2004) and corroborate the relationship with burnout and performance (Bandura, 1986).

According to equity theory, imbalance (injustice) in an environment may create negative outcomes such as stress/burnout. On the contrary, when justice exists in an environment, it should create positive outcomes hence reducing detrimental effects of burnout which may lead to higher academic performance. The present results pertaining to the mediation analysis of burnout between justice dimensions and GPA provide theoretical implications towards burnout research where justice reduces the negative effect of burnout on students' GPA.

Overall, the notion of burnout exists in higher educational context (Uludag, & Yaratan, 2010) and it is not industry specific. Revealing the potential predictors of burnout may help students to engage in their studies. Hence, the concept of justice tested in this study has negative association with burnout. Justice was found to have a positive influence on academic achievement. Therefore, designing and implementing sound distributive, procedural and interactional justice policies may help to lower the magnitude of burnout and may provide higher academic engagement and success. Replicating the current study may provide better understanding of the relationships between justice, burnout, and academic achievement.

There are certain limitations to this study. The collected data was cross-sectional in nature. Future studies should concentrate on collecting data from longitudinal designs. Another limitation is that of sampling bias. This study utilized convenience sampling procedure. Future research should obtain data generated from random sampling procedure. Moreover, the utilization of academic achievement (GPA) relied on self-report measure. Future studies should try to obtain GPA results from the registrar of the institution to reduce the possibility of inflated results.

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Učinci pravednosti i sagorijevanja na uspjeh: empirijsko istraživanje među studentima

Sažetak

Istraživanje se bavi odnosima između pravednosti, sagorijevanja i akademskog uspjeha na uzorku ($N=1.505$) preddiplomskih sveučilišnih studenata sveučilišta u sjevernom dijelu Cipra. Hijerarhijskom regresijskom analizom testirane su hipoteze. Rezultati su pokazali da postoji povezanost između distributivne pravednosti, proceduralne pravednosti i interakcijske pravednosti sa sagorijevanjem. Nadalje, rezultati su pokazali da postoji značajan pozitivan odnos između distributivne i interakcijske pravednosti i akademskog uspjeha. Proceduralna pravednost nije bila značajno povezana s akademskim uspjehom dok je sagorijevanje bilo negativno povezano s akademskim uspjehom studenata. Osim toga, sagorijevanje je tretirano kao posrednik između dimenzija pravednosti i akademskog uspjeha. Rezultati Sobelova testa pokazali su da je sagorijevanje dijelom posredovalo učinak distributivne i interakcijske pravednosti na akademski uspjeh. U istraživanju se donosi prikaz rasprave, ograničenja i smjernica za buduća istraživanja.

Ključne riječi: akademski uspjeh; očuvanje resursa; pravednost; sagorijevanje; visoko obrazovanje.

Uvod

Povećanje zahtjevnosti i konkurentnosti studijskih programa dovodi do povećanja stresa i pritiska (tj. sagorijevanja) kod studenata upisanih u pojedine studijske programe. Osim toga, nepoštenje (nepravda) koju studenti zamjećuju kod svojih predavača/profesora također podiže razinu sagorijevanja u akademskom okruženju. Sve navedeno ima izrazito štetan učinak na akademski uspjeh studenata. Na temelju navedenih interakcija pravednosti, sagorijevanja i akademskog uspjeha u odgojno-obrazovnom kontekstu u ovom se istraživanju ispituju učinci pravednosti i sagorijevanja na akademski uspjeh. Kao područje znanstvenog istraživanja percipirana pravednost (pravičnost) i sagorijevanje proučavaju se u različitim disciplinama. Neke su od tih disciplina marketing, ponašanje unutar organizacije i politička znanost.

Naime, koncept pravednosti opsežno se proučava u različitim kontekstima, ali još uvijek ne dovoljno u kontekstu nastave (Tyler, 1987; Chory-Assad, 2002; Chory-Assad i Paulsel, 2004a; Chory-Assad i Paulsel, 2004b; Chory, 2007). Stoga je potrebno detaljnije proučiti posljedice ponašanja (npr. agresivnost) u odnosu na percepciju pravednosti (Chory-Assad, 2002). Osim toga, mjerenje sagorijevanja pojedinaca u okruženju koje nije povezano s određenim zanimanjem (tj. nastavno okruženje/među studentima) proširuje izvornu teoriju sagorijevanja (usporedi Gan, Yang Zhou i Zhang, 2007). Stoga je potrebno provesti mjerenja sagorijevanja kao prediktora akademskog uspjeha (Uludag i Yaratan, 2010).

Pojam pravednosti razvijen je i operacionaliziran u organizacijskom okruženju. Cropanzano i Greenberg (1997) definiraju organizacijsku pravednost kao „percepciju pravednosti i evaluacije o primjerenosti ishoda ili procesa vezanih uz radno mjesto“ (prema Chory-Assad i Paulsel, 2004b, str. 254). Definicija pravednosti u nastavnom okruženju slična je definiciji pravednosti u organizacijskom okruženju i odnosi se na „percepciju pravednosti i evaluacije s obzirom na ishode ili procese koji se odvijaju u nastavnom kontekstu“ (Chory-Assad i Paulsel, 2004b, str. 254). Percepcija pravednosti podijeljena je na tri različita konstrukta: distributivnu, proceduralnu i interakcijsku pravednost. Deutsch (1985) predlaže definiciju distributivne pravednosti „kao percepcije da su ishodi određene transakcije pravedni“ (prema Chory-Assad i Paulsel, 2004a, str. 101). Na primjer, studenti procjenjuju i ocjenjuju pravičnost usporedbom stvarne ocjene sa zasluženom ocjenom i/ili ocjenom koju dobivaju njihovi vršnjaci. Proceduralna pravednost odnosi se na „predodžbe o pravednosti procesa koji se koriste za postizanje određenih ishoda“ (Byrne i Cropanzano, 2001, prema Chory-Assad i Paulsel, 2004a, str. 101). Navedeni se postupci mogu klasificirati kao predavanje, način ocjenjivanja kratke provjere znanja ili ispita i kriteriji ocjenjivanja. Prema Bies i Moag (1986) interakcijska se pravednost očituje u situaciji u kojoj studenti i nastavnici/profesori međusobno surađuju prilikom provedbe određene politike i postupaka. Interakcijska pravednost događa se u nastavnom okruženju u kojem dolazi do međuljudske komunikacije između nastavnika i studenata (Chory-Assad i Paulsel, 2004a).

U postojećoj se literaturi podkonstrukti sagorijevanja opisuju kao emocionalna iscrpljenost, depersonalizacija i nedostatak osobnog postignuća. Točnije, Maslach i Jackson (1981, str. 99) navode da se emocionalna iscrpljenost odnosi na „smanjenje emocionalnih resursa koje nastaje kao posljedica zahtjeva međuljudskih kontakata“. Depersonalizacija je opisana kao „ciničan stav prema vlastitom poslu“, dok se nedostatak osobnog postignuća može opisati kao „tendencija da se vlastiti rad negativno ocijeni“ (ibid.).

Točnije, sagorijevanje u nastavnom kontekstu i/ili sagorijevanje studenata odnosi se na „osjećaj iscrpljenosti koji nastaje zbog napora tijekom učenja, ciničnih stavova prema studiju i osobnog osjećaja nesposobnosti u ulozi studenta“ (Schaufeli, Salanova, Gonzales-Roma i Bakker, 2002, str. 73). Dakle, kao dimenzije sagorijevanja možemo

navesti: emocionalnu iscrpljenost, cinizam i smanjenu profesionalnu učinkovitost (Uludag i Yaratan, 2010).

Akademski uspjeh odnosi se na akademska postignuća studenata u nastavi. Kao mjera uspjeha koristi se prosjek ocjena studenta (Brown, Lent i Larkins, 1989). Isti je pristup koristio i Butler (2007). Stoga će se i u ovom istraživanju koristiti prosjek ocjena (prema podacima dobivenim od studenata) kao mjera akademskog uspjeha.

Istraživanje se temelji na dvjema teorijama. Prema Adamsu (1965), teorija pravednosti definira se kao usporedba ulaganja pojedinaca s obzirom na ishode. Teorija pravednosti u današnje vrijeme ima veći značaj u neekonomskim nastojanjima u odnosu na ekonomski usklađene institucije (usporedi s Deutsch, 1985). Adams (1965) posebno ističe da pravila i uloga pravednosti postoje u odnosu između nastavnika i studenata. Autor dalje navodi kako se pravednost prepoznaje prilikom raspodjele ocjena. Također naglašava da postoji ravnoteža između odnosa doprinosa/ulaganja i koristi/ishoda kod pojedinca (Adams 1965). No, taj se odnos može poremetiti ako se poremeti ravnoteža (pravednost) među sudionicima. Rezultat toga može biti da se pojedinci počnu negativno ponašati kada je ta ravnoteža (pravednost) poremećena (Taris, Van Horn, Schaufeli i Schreurs, 2004). Prethodna istraživanja također potvrđuju ideju da je nepravda povezana sa sagorijevanjem (Van Horn, Schaufeli i Taris, 2001). Prema teoriji očuvanja resursa ljudi neće biti u stanju zadržati resurse (npr. vrijeme i znanje) ako doživljavaju stres (Hobfoll, 1989). Također, teorija očuvanja resursa potvrđuje činjenicu da se razina stresa poveća kada pojedinac gubi resurse. U tom bi slučaju to moglo dovesti do gubitka energije i motivacije, a time i do lošijeg akademskog uspjeha.

Svrha je ovoga istraživanja ispitati učinke pravednosti i sagorijevanja na akademski uspjeh studenata (vidi sliku 1). Vjeruje se da je uspjeh ili postignuće studenata jedan od najvažnijih elemenata u nastavi. Istraživanja problema akademskog uspjeha studenata mogu pomoći u predviđanju prekida studiranja (Ekstrom, Goertz, Pollack i Rock, 1986) i antisocijalnog ponašanja (Tremblay, Masse, Perron, LeBlanc, Schwartzman i Ledingham, 1992). Stoga bismo mogli zaključiti da je mjerenje akademskog uspjeha i njegovih mogućih prediktora neophodno. S tim u vezi Uludag i Yaratan (2010) smatraju da istraživanja odnosa između sagorijevanja i akademskog uspjeha mogu pružiti nove spoznaje značajne za razumijevanje odnosa između konstrukata. Međutim, istraživanja dimenzija pravednosti u nastavnom okruženju tek su u početnoj fazi (Chory-Assad, 2002, Chory, 2007), pa su stoga potrebna daljnja istraživanja. Osim toga, novije istraživanje koje su proveli Horan, Chory i Goodboy (2010) ističe da emocionalne mjere, kao što su stres (npr. sagorijevanje) i bihevioralne mjere (npr. uspjeh) treba ispitati u odnosu na pravednost u nastavi.

Prema Maslach i Leiter (1997) nedostatak pravednosti (nepravda) ključni je element koji doprinosi povišenim razinama sagorijevanja. U skladu s tom mišlju, okruženje koje nije pravedno i nije transparentno rezultirat će nižim nastavnim uspjehom (Finn i Rock, 1997). Suprotno tomu, ako studenti percipiraju okruženje kao pošteno

i transparentno, njihov će se akademski uspjeh i emocionalna stabilnost povećati (Yang, 2004). Nadalje, Moliner, Martinez-Tur, Peiro, Ramos i Cropanzano (2005) otkrili su da su sve razine pravednosti (distributivna, proceduralna i interakcijska) značajno korelirale s dimenzijama sagorijevanja (iscrpljenost, cinizam i nedostatak učinkovitosti). U longitudinalnom istraživanju koje su proveli, Taris i suradnici (2001) otkrili su da je kod učenika percipirana nepravda imala značajan utjecaj na dimenzije sagorijevanja. Salmela-Aro, Kiuru, Pietikainen i Jokela (2008) također su utvrdili da postoji negativan odnos između prosjeka ocjena učenika (uspjeha) i sagorijevanja u školi. Teorija očuvanja resursa također podržava ideju o negativnom odnosu između uspjeha i stresa (tj. sagorijevanja). Kada pojedinci osjećaju da su pod stresom, njihova razina postignuća ima tendenciju smanjenja (usporedi Hobfoll, 1989). Koliko je autorima poznato, ne postoji istraživanje koje je ispitalo učinke posredovanja sagorijevanja u odnosu na pravednost i akademski uspjeh u odgojno-obrazovnom kontekstu. Dakle, ovo bi istraživanje moglo pružiti dokaze kojima bi se potvrdilo navedeno posredovanje.

Slika 1.

Hipoteze

Na temelju navedene literature i rezultata empirijskih istraživanja definirane su sljedeće hipoteze:

H1: Distributivna pravednost negativno je povezana sa sagorijevanjem.

H2: Proceduralna pravednost negativno je povezana sa sagorijevanjem.

H3: Interakcijska pravednost negativno je povezana sa sagorijevanjem.

H4: Distributivna pravednost pozitivno je povezana s akademskim uspjehom.

H5: Proceduralna pravednost pozitivno je povezana s akademskim uspjehom.

H6: Interakcijska pravednost pozitivno je povezana s akademskim uspjehom.

H7: Sagorijevanje je negativno povezano s akademskim uspjehom.

H8: Sagorijevanje posreduje u odnosu između pravednosti i akademskog uspjeha.

Metode

Uzorak

Sudionici ovog istraživanja bili su preddiplomski studenti sveučilišta u sjevernom dijelu Cipra. Metoda prigodnog uzorkovanja korištena je za prikupljanje podataka. Podaci su prikupljeni tijekom travnja i svibnja 2010. Do krajnjeg je datuma prikupljeno ukupno 1.550 upitnika. Četrdeset pet upitnika eliminirano je zbog nepotpunih podataka. Ukupan broj ispravnih upitnika nakon eliminacije bio je 1.505. Dobna struktura ispitanika bila je sljedeća: 719 ispitanika bilo je u dobi od 17 do 21 (47,8%), 727 ispitanika bilo je u dobi od 22 do 26 (48,3%), 58 ispitanika bilo je u dobi od 27 do 31 (3,9%), a samo je jedan ispitanik bio u skupini iznad 32 godine (0,1%). Podjela ispitanika prema spolu bila je slična, odnosno 748 (49,7%) ispitanika bile su djevojke, a 757 (50,3%) ispitanika bili su mladići. Većina ispitanika, tj. njih 1.453 (96,5%) bila

je upisana u četverogodišnje studijske programe (prvostupnici), dok ih je samo 52 bilo upisano u dvogodišnje programe (stručni stupanj). Većina je ispitanika (1.375) izjavila da nisu u bračnoj zajednici, 45 da jesu u bračnoj zajednici, a 85 je odabralo kategoriju "drugo". Kako bi se izbjegli narušavanje privatnosti studenata i društveno poželjni odgovori, studenti koji su odabrali kategoriju "ostalo" nisu bili definirani kao razvedeni/udovci ili kao da žive s partnerom.

Instrumenti

Sve su čestice u anketi najprije pripremljene na engleskom jeziku, a zatim prevedene na turski jezik (Mullen, 1995). Međujezičnu usporedivost upitnika ispitali su članovi nastavnog osoblja sveučilišta koji su stručnjaci u svojim poljima. Za mjerenje pravednosti i sagorijevanja korištena je 5-stupanjnska Likertova skala. Prosjek ocjena (prema podacima dobivenim od studenata) korišten je kao mjera akademskog uspjeha.

Čestice distributivne, proceduralne i interakcijske pravednosti

Četrnaest čestica koje su koristili Chory-Assad i Paulsel (2004b) korišteno je za distributivnu pravednost (primjer čestice: Vaša ocjena na posljednjem ispitu u usporedbi s ocjenama ostalih studenata na ispitu), a sedamnaest je čestica korišteno za proceduralnu pravednost (primjer čestice: Nastavnikov način ocjenjivanja ispita itd.). Osam je čestica prilagođeno prema Chory (2007) za interakcijsku pravednost (primjer čestice: Nastavnikova komunikacija sa studentima). Sve čestice pravednosti procijenjene su s pomoću Likertove skale na sljedeći način: 1=izrazito nepošten; 2=nepošten, 3=neutralan, 4=pravedan; 5=izrazito pravedan.

Čestice sagorijevanja

Za mjerenje sagorijevanja korišten je MBI-SS (Maslachin inventar sagorijevanja – upitnik za studente [Maslach Burnout Inventory - Student Survey]) prema Schaufeli, Martinez, Pinto, Salanova i Bakker (2002). Pet čestica korišteno je za mjerenje iscrpljenosti (primjer čestice: Studiranje me emocionalno iscrpljuje), četiri čestice korištene su za mjerenje cinizma (primjer čestice: Postala/o sam cinična/an kada je u pitanju potencijalna korisnost mog studija), a šest čestica korišteno je za mjerenje profesionalne učinkovitosti (primjer čestice: Naučila/o sam mnogo zanimljivih stvari tijekom studija). Za potrebe ovog istraživanja sagorijevanje je bilo tretirano kao jednodimenzionalna varijabla umjesto kao tri odvojene poddimenzije. Taj pristup nije neuobičajen u istraživanju jer pojednostavljuje rezultate i osigurava bolje razumijevanje ishoda (Brenninkmeijer i Van Yperen, 2003). Koristan je za testiranje interakcija i posredovanje između prediktora i posljedica sagorijevanja upotrebom jednodimenzionalnog konstrukta. Osim toga, jednodimenzionalan koncept koristi se kako bi se istražila učestalost sagorijevanja u određenom uzorku (usporedi Schaufeli i Enzmann, 1998). Sve čestice sagorijevanja procijenjene su prema Likertovoj skali na sljedeći način: 1=Uopće se ne slažem, 2=Ne slažem se, 3=Niti se slažem niti se ne slažem, 4=Slražem se, 5=Potpuno se slažem.

Čestice akademskog uspjeha

Akademski uspjeh dobiven je prema prosjeku ocjena studenata na kraju semestra.

Kontrolne varijable

Demografske varijable kao što su dob, spol (0=ženski; 1=muški), obrazovni status (0=dvogodišnji program; 1=četverogodišnji program), bračni status i broj polaznika (0=idealno broj polaznika; 1=prevelik broj polaznika) tretirane su kao kontrolne varijable.

Rezultati

Za rezultate dobivene prema česticama izračunat je prosjek kako bi se dobili kompozitni rezultati koji prikazuju istraživane konstrukte. Tablica 1 prikazuje korelacije između varijabli. Koeficijenti korelacije između istraživanih konstrukata kretali su se od -.28 za korelacije između interakcijske pravednosti i sagorijevanja do 0.41 za korelacije između proceduralne i interakcijske pravednosti. Dob je negativno korelirala s prosjekom ocjena (-.07). Varijabla spola negativno je povezana s distributivnom pravednošću (-0.06), interakcijskom pravednošću (-.07) i prosjekom ocjena (-.18), a pozitivno je povezana sa sagorijevanjem (.09). Obrazovni status negativno je povezan sa sagorijevanjem (-.06), dok je bračni status negativno povezan s prosjekom ocjena (-.05). Veličina skupine negativno je povezana s distributivnom pravednošću (-.08), interakcijskom pravednošću (-.07) i prosjekom ocjena (-.05), a pozitivno je povezana sa sagorijevanjem (.08). Nadalje, distributivna pravednost negativno je povezana sa sagorijevanjem (-.23), a pozitivno je povezana s prosjekom ocjena (.14). Proceduralna pravednost negativno je povezana sa sagorijevanjem (-.19), a pozitivno je povezana s prosjekom ocjena (.07). Interakcijska pravednost negativno je povezana sa sagorijevanjem (-.29), a pozitivno je povezana s prosjekom ocjena (.15). Na kraju, sagorijevanje je negativno povezano s prosjekom ocjena (-.14).

Rezultati hijerarhijskih regresijskih analiza prikazani su u tablici 2. Distributivna pravednost (DSJUST) negativno je povezana sa sagorijevanjem. Taj je odnos bio značajan ($\beta = -.19, t = -7.65$), čime je potvrđena H1. Drugom je hipotezom predviđen negativan odnos između proceduralne pravednosti (PROJUST) i sagorijevanja. Rezultati regresijske analize pokazali su da je taj odnos bio značajan ($\beta = -.07, t = -2.67$) pa je time potvrđena i H2. Pretpostavljeno je i da će interakcijska pravednost (INJUST) negativno korelirati sa sagorijevanjem. Rezultati su pokazali da je taj odnos bio značajan ($\beta = -.23, t = -8.71$). Stoga taj rezultat podupire i H3.

Tablica 1.

Nadalje, pretpostavljeno je i da će odnos distributivne, proceduralne i interakcijske pravednosti (hipoteze 4, 5 i 6) s akademskim uspjehom (prosjek ocjena) biti pozitivan. Rezultati su pokazali da su distributivna i interakcijska pravednost (H4 i H6) imale značajan pozitivan odnos s prosjekom ocjena ($\beta = .10, t = 3.88$; $\beta = .10, t = 3.66$), čime su potvrđene te dvije hipoteze. Odnos proceduralne pravednosti i prosjeka ocjena (H5)

nije se pokazao značajnim. Stoga H5 nije potvrđena. Napokon, predviđen je negativan odnos sagorijevanja s prosjekom ocjena (H7). Rezultati su pokazali da je taj odnos bio negativan i značajan ($\beta = -.07$, $t = -2.45$), čime je potvrđena H7.

Tablica 2.

Test posredovanja

Hipotezom 8 predviđena je posrednička uloga sagorijevanja među dimenzijama pravednosti i akademskog uspjeha. Dakle, sagorijevanje je tretirano kao posrednička varijabla između dimenzija pravednosti (distributivna, proceduralna i interakcijska) i akademskog uspjeha (prosječna ocjena). Svi koraci koje predlažu Baron i Kenny (1986) najprije su procijenjeni kako bi se utvrdilo ispunjava li sagorijevanje uvjete potrebne za varijablu posredovanja. Procjenom 4 koraka (Baron i Kenny, 1986) uvjeti su bili ispunjeni, dakle, sagorijevanje je označeno kao posrednička varijabla između dimenzija pravednosti i akademskog uspjeha. Prilikom utvrđivanja posredovanja primijenjeni su sljedeći koraci. U koraku 1 korišten je Y (akademski uspjeh) kao kriterijska varijabla u regresijskoj jednadžbi i X (pravednost) kao prediktor. U koraku 2 korišten je M (posrednik: sagorijevanje) kao kriterijska varijabla u regresijskoj jednadžbi i X (pravednost) kao prediktor. U koraku 3 korišteni su Y (akademski uspjeh) kao kriterijska varijabla u regresijskoj jednadžbi te X (pravednost) i M (posrednik: sagorijevanje) kao prediktori. Na kraju, u koraku 4, kako bi se utvrdilo da M u potpunosti posreduje u odnosu X-Y, učinak X na Y kontroliran je s pomoću M (Baron i Kenny, 1986). Točnije, kontrolne varijable i percepcija pravednosti najprije su tretirani kao nezavisne varijable kriterijske varijable sagorijevanja primjenom „enter“ metode. Drugo, kontrolne varijable – percepcija pravednosti i sagorijevanje izjednačeni su kao nezavisne varijable kriterijske varijable akademskog uspjeha. Taj hijerarhijski pristup korišten je pri opisu izravnih učinaka i potencijalnog posredovanja sagorijevanja. Rezultati hijerarhijske regresije pokazali su smanjenje utjecaja dimenzije pravednosti na akademsko postignuće nakon što je sagorijevanje uključeno kao posrednik. Da bi se ispitao značaj tog posredovanja, primijenjen je Sobelov test (Baron i Kenny, 1986) koji je pokazao da je sagorijevanje djelomično posredovalo učinak distributivne pravednosti na akademski uspjeh ($t = -3.51$, $p = .000$). Sagorijevanje je također djelomično posredovalo učinak interakcijske pravednosti na akademski uspjeh ($t = -3.38$, $p = .001$). Međutim, nije bilo značajnog posredovanja sagorijevanja između proceduralne pravednosti i akademskog uspjeha. Potvrda testa posredovanja prikazana je kroz β i t vrijednosti u tablici 2.

Rasprava, implikacije i ograničenja

Hipoteze su testirane hijerarhijskim regresijskim analizama. Kontrolne varijable uključene su u regresijske analize, međutim rezultati su pokazali da kontrolne varijable nisu utjecale na odnose predviđene hipotezama. Rezultati su pokazali da se razina sagorijevanja kod studenata smanjuje kada u nastavnom kontekstu postoji distributivna, proceduralna i interakcijska pravednost. Dobiveni rezultati potvrđuju prethodno

istraživanje percepcije pravednosti i sagorijevanja (Van Dierendonck, Schaufeli i Buunk, 2001). Yang (2004), ali se, s druge strane, nije pronašla nikakva povezanost između pravičnosti (jednodimenzionalna mjera pravednosti) i sagorijevanja. Nadalje, distributivna i interakcijska pravednost povećavaju rezultate akademskog uspjeha (prosječna ocjena). Taj je rezultat u skladu s ranijim istraživanjima koja su također pokazala da pravednost ima pozitivan utjecaj na uspjeh studenata (Yang, 2004). Kako bi se osigurao akademski uspjeh studenata, škole i profesori/predavači trebaju primjenjivati princip pravednosti i poštivanja propisa. Naime, nastavnici bi trebali pravedno postupati prema svima, primjenjivati transparentne i poštene postupke i komunicirati pravedno/jednako sa svim učenicima. Ti principi i propisi također bi mogli umanjiti razinu sagorijevanja. Proceduralna pravednost, međutim, nije imala značajan utjecaj na prosjek ocjena. Taj rezultat začuđuje, jer je prema jednoj od hipoteza pretpostavljeno da proceduralna pravednost ima utjecaj na prosjek ocjena pa bi stoga tom aspektu trebalo posvetiti više pozornosti u budućim istraživanjima.

Rezultati također podržavaju ideju da sagorijevanje negativno utječe na akademski uspjeh. Ti podaci dodatno potvrđuju prethodna istraživanja (Yang, 2004), kao i postojanje povezanosti sa sagorijevanjem i uspjehom (Bandura, 1986).

Prema teoriji pravednosti, neravnoteža (nepravda) u okruženju može dovesti do negativnih rezultata, kao što su stres/sagorijevanje. Naprotiv, postojanje pravednosti u okruženju trebalo bi utjecati na pozitivne rezultate, čime bi se smanjili štetni učinci sagorijevanja pa bi se na taj način osigurao značajan akademski uspjeh. Rezultati koji se odnose na analizu posredovanja sagorijevanja između dimenzija pravednosti i prosjeka ocjena pružaju teorijske implikacije za istraživanja sagorijevanja u kojima bi pravednost smanjila negativan učinak sagorijevanja na prosjek ocjena studenata.

Općenito, pojam sagorijevanja postoji u kontekstu visokog obrazovanja (Uludag i Yaratan, 2010) i nije ograničen samo na određeno područje. Otkrivanje potencijalnih prediktora sagorijevanja može pomoći studentima da se kvalitetnije posvete studiranju. Dakle, koncept pravednosti ispitan u ovom istraživanju negativno je povezan sa sagorijevanjem. Utvrđeno je da pravednost ima pozitivan utjecaj na akademski uspjeh. Stoga izrada i provedba politike pouzdane distributivne, proceduralne i interakcijske pravednosti može pomoći u smanjenju značaja sagorijevanja i omogućiti veći akademski angažman i uspjeh. Repliciranje opisanog istraživanja može pružiti bolje razumijevanje odnosa između pravednosti, sagorijevanja i akademskog uspjeha.

Postoje određena ograničenja u ovom istraživanju. Prikupljeni podaci bili su presječni podaci. U budućim istraživanjima trebalo bi se usredotočiti na prikupljanje podataka longitudinalnim istraživanjima. Drugo je ograničenje pristrano uzorkovanje budući da je u ovom istraživanju korištena metoda prigodnog uzorkovanja. U budućim bi istraživanjima trebalo prikupljati podatke generirane slučajnim uzorkovanjem. Osim toga, vrijednosti akademskog uspjeha (prosjek ocjena) u opisanom su se istraživanju temeljile na podacima dobivenima od studenata. U budućim bi istraživanjima trebalo pokušati dobiti podatke o prosječnim ocjenama na temelju službenih dokumenata institucije, kako bi se smanjila mogućnost pogrešnih rezultata.