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LANGUAGE TEACHER IMMUNITY: INSIGHTS FROM TURKEY

Research article

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Abstract

The construct of L2 teacher immunity refers to the self-established protective shield that teachers develop against challenges posed by the instruction process. Therefore, the aim of the present study was to measure this construct of L2 language teacher immunity, which was put forward by Hiver and Dörnyei (2017), based on the constituents constructs such as teacher resilience, burnout, attitude, openness, classroom affectivity, and coping. The present study was designed as a quantitative study. A questionnaire, offered by Hiver (2017), was administered to 87 EFL teachers. Purposeful sampling method was used to select the participants. both experienced and inexperienced teachers were selected to enable comparison possible. Another point in the selection of the participants was to select those who hold postgraduate degrees as well. The results indicated that the EFL teachers in the present study have a moderate level of immunity. Moreover, results also indicated that although experience did not play a significant role in L2 teacher immunity, graduation was more important. Finally, the cluster analysis demonstrated that highly immunized tended to have lower levels of burnout and tend to use more coping strategies.

Keywords: teacher immunity, teacher identity, teacher resilience, self-efficacy

1. Introduction

Within applied linguistics, the application of psychological perspective to the understanding of the knowledge base of language teachers and the purposes and practices of second language teacher education is in its infancy (Hiver, 2017; Mercer, 2016). To bridge such a gap, inspired by the term *biological immunity*, Hiver and Dörnyei (2017) proposed the concept of "L2 teacher immunity" in order to explain the relationships between psychological aspects of language teaching and contextual realities of classroom practice. Hiver and Dörnyei (2017) conceptualized the "teacher immunity" as a "robust armoring system" (Hiver, 2017, p. 669) that stems from as a result of highly demanding threats. This armoring system can take two forms productive (positive) and maladaptive (negative), which develop in stressful and unwanted situations. It enables teachers to enhance "professional equilibrium" and instructional effectiveness. The present study frames teacher immunity in line with Hiver and Dörnyne's (2017) and aims to measure Turkish L2 teachers' level of immunity.

Hiver and Dörnyne's (2017) referred to the concept of "teacher immunity" as a "double-edged sword" in the sense that it may work both to the benefit of teacher or to the detriment of teachers. First, the productive outcome acts like a protective shield that functions against inconveniences that appear in the practice. On the other hand, just like its biological counterpart, language teacher immunity (LTI) may also hinder the survival of the individual through cynicism, apathy, or resistance to change by developing into "maladaptive

immunity". To be specific, Rahimpour et al. (2020) put forward that teachers may be inhibited by maladaptive immunity and this may hinder their innovative abilities. In order to understand these related issues, practitioners' adaptivity and openness to change, commitment to the profession, and investment in the quality of students' learning and their own psychological well-being are offered as sub-dimensions to measure immunity. As such, the present study includes sub-dimensions like teaching self-efficacy, burnout, resilience, attitudes toward teaching, openness to change, classroom affectivity, and coping.

Recently, concepts and constructs like teacher quality, teacher agency, emotions and beliefs, engagement and commitment, self-efficacy, and adaptivity to professional demands have received remarkable attention as key components within this discourse of teacher effectiveness and stability (Kennedy 2010; Day and Gu 2014). Scholars foreground professional identity as an important influencing teachers' enthusiasm and effort, motivation and commitment, instructional effectiveness, psychological well-being, and persistence in the profession (Day et al. 2006; Beauchamp and Thomas 2009).

2. The concept of L2 teacher immunity

The focus on the psychological well-being and effectiveness of language teachers brought about a new term, L2 teacher immunity. Hiver (2017) states that teacher immunity is a context-bound and dynamic construct stemming from peculiar difficulties of the classroom. It is not considered as an innate construct or a personal trait. It is closely related to constructs like stress and coping; burnout—a feeling of exhaustion resulting from long-term chronic stress (Maslach and Jackson 1981); hardiness—a personality trait which is believed to ward off the effects of stress on performance (Maddi 2004); buoyancy—self-perceptions of individuals' ability to handle daily anxieties (Martin and Marsh 2008); and resilience—the ability to get over adverse or unfavorable experiences or maintain effective functioning despite hardships (Masten 2001).

According to Hiver and Dörnyei (2017), these constructs have been important areas of study in mainstream educational psychology research; nonetheless, applied linguistics literature has been slow to adopt them and integrate them into language teacher research. Hiver and Dörnyei (2017) stated that teacher immunity "bridges individual concerns with wider contextual considerations, this concept is a central factor at the heart of some of the key concerns in the language teaching profession" (p. 407).

In addition, the concept of teacher immunity rests upon three factors (Hiver & Dörnyei, 2017):

1. It is like the biologically acquired system: According to Day and Gu (2014), developing vigorous immunity is a must to survive in the profession.

2. Language teacher immunity is dual-natured, sometimes serving as a protective shield sometimes threatening the individual's functioning: Hiver (2017) cautions that L2 teacher immunity may develop into maladaptive immunity where it hinders the survival of teachers.

3. Language teacher immunity is an integral part of professional identity.

It suggested that language teacher immunity emerges in four stages (Hiver, 2015): (a) productively immunized (i.e., possessing a robust, beneficial form of teacher immunity), (b) maladaptively immunized (i.e., possessing a rigid, counterproductive form of teacher immunity), (c) immunocompromised (i.e., having not developed any coherent form of teacher immunity), or (d) partially immunized (i.e., having developed half-way features of teacher immunity).

L2 teacher immunity is not always something positive. Just like its biological counterpart, which may threaten body parts of organs by overreacting or causing allergies (Rahmati et al. 2019), L2 teacher immunity may turn out to be maladaptive immunity. According to Hiver and Dörnyei (2017), maladaptive immunity hinders innovation and risk-taking on the part of teachers. Rahmati et al. (2019) resembles it to chemotherapy, which kills cancer cells but at the same time destroys other healthy cells. In a similar manner, if teachers are maladaptively immunized, they may lose their innovative spirit and develop conservatism, fossilization, cynicism, and apathy (Hiver, 2015, 2017; Hiver & Dörnyei, 2017). Moreover, Hiver and Dörnyei (2017) warn that "one preeminent danger of maladaptive immunity is its stealth" (p. 417) and the fact that most language teachers are unaware of its development." (p.417).

2.1. How does L2 teacher immunity emerge?

A number of stages have been offered in the emergence of L2 teacher immunity. These are triggering stage, linking stage, realignment stage, and stabilization stage (Hiver and Dörnyei, 2017).

2.2.1. Triggering stage

Hiver and Dörnyei (2017) suggested that what leads to the triggering stage of L2 teacher immunity are high-threat events that may emerge in the classroom. They may range from destructive student behavior and delinquency, to punitive evaluations or to accountability measures. Such threats are likely to lead to exhaustion, cynicism, and burnout if they do not ignite the immunity process.

2.2.2. Linking stage

Having received the triggering factor(s), L2 teachers tend to develop coping strategies for these triggering factors. As time goes on, teachers may form a coping repertoire intended to solve undesirable or disturbing situation, either from inside the class or outside the class and to encourage them to be more productive.

2.2.3. Realignment stage

During this stage, the friction between disturbing events in the class and the reactions of the teacher make it possible for the language teacher to opt for the productive aspects of their jobs although the threat-generating events in the class have negative effects. Effective realignment leads to self-efficacy. Therefore, the emerging protective function can be seen the result of a pile of experiences of adversity.

2.2.4. Stabilization stage

In the stabilization stage, as the name implies, L2 teachers strengthen the newly-formed repertoire and make it a part of their immunity. However, the emergent immunity may be both positive or maladaptive immunity. Care must be taken to reduce the maladaptive immunity development on the part of teachers.

2.1. Resilience

Rather recent phenomenon, resilience is proposed as the most comprehensive component of language teacher immunity by Hiver and Dörnyei (2017) along with coping, burnout, hardiness, buoyancy. According to Kim and Kim (2017), resilience is "the sum of an individual's abilities that allow him or her to bounce back from adversity and even thrive in the face of difficult times" (p.2). It is also defined as mobilizing all the means or resources in

a constructive way to attain success as a reaction to unfavorable conditions (Day and Gu, 2014). In short, resilience can be viewed as a lifelong process and involve specific strategies referred to in case of obstacles and challenges. By means of these strategies, one can handle stressful situations and gain new insights about future encounters.

Literature underlines both personal and social factors in the emergence and maintenance of resilience. Studies underscore cognitive, social, emotional and moral factors (Truebridge, 2015), outgoing personalities, self-esteem, and ability to solve problems (Masten & Obradovic, 2006) as crucial factors in resilience. Research also show that social factors, the ability to obtain social support, compassionate relationships, and opportunities for responsible participation (Masten & Obradovic, 2006) are also vital in resilience.

Literature on resilience also indicates that resilience is crucial for beginning or novice teachers as a component of career preparation, teaching effectiveness, and persistence in the profession (Tait 2008; Johnson et al., 2014, Wosnitza et al., 2018). There are also studies that explore whether resilience is acquired or not. They conclude that most teachers are able to survive hardships and unfavorable conditions, which attests to the fact that resilience plays a crucial role in teacher effectiveness and long-term commitment to the profession (Mansfield et al. 2012; Gibbs and Miller 2014).

There are few studies conducted on resilience and most of them focus on learners rather than teachers. (see Kim et al., 2018, Nguyen et.al. 2015). Serdar Tülüce (2018) conducted a study on pre-service teachers' resilience and found that pre-service teachers' learning process was plagued by a number of obstacles like ineffective methodologies used by teachers, anxiety caused by examinations, obstacles in language skills especially speaking. The participants stated that as they were overcoming these problems, they resorted to not only personal protective factors but also social/environmental protective factors, which increased their resilience.

2.2. Teaching Self-efficacy beliefs

Gibbs and Andy (2014) report that there is general agreement as to the relation between motivation and performance attainments of teachers and their perceived self-efficacy. Bandura (2000; 75) states that:

> Efficacy beliefs influence whether people think erratically or strategically, optimistically or pessimistically; what courses of action they choose to pursue; the goals they set for themselves and their commitment to them; how much effort they put forth in given endeavors; the outcomes they expect their efforts to produce; how long they persevere in the face of obstacles; their resilience to adversity; how much stress and depression they experience in coping with taxing environmental demands; and the accomplishments they realize.

3. Literature review

From the related literature, it is possible to conclude that there is a variety and interplay of variables that influence and impact on teachers' work and lives (Ávalos, 2013; Day, 2017; Mirici, 2019; Flores, 2012). In the case of "immunity", the related factors are teaching self-efficacy, resilience, attitudes toward teaching, burnout, and coping with difficulties. Therefore, recent literature related to all these variables will be reviewed in this section. In addition, within the scope of the present study, all these factors were sought after.

The concept of teacher immunity has been studied in relation to several constructs. Noughabi et al (2020), for example, studied the construct in relation to autonomy, emotions, and engagement. Their study found that constructs like autonomy, emotions, and engagement are significant predictors of teacher immunity. Noughabi et al (2020) further reported that the

most significant predictor of teacher immunity was teacher autonomy for in-service EFL teachers. The role of emotions in teacher immunity has also been voiced by Hiver (2017).

In another recent study, Rahmati et al (2019) worked on EFL teachers. Their study reported that teaching is a stressful occupation, the causes of which can be counted as EFL teachers themselves, learners, educational or organizational constraints, and contextual factors. Rahmati et al's (2019) also reported that lack of self-confidence is a main cause of lack of immunity and this lack of confidence may stem from, according to the authors, limited linguistic proficiency of EFL teachers.

In another recent study, Haseli Songhori et al. (2018) tried to see the most common type of Iranian EFL teachers' immunity and how they developed this immunity. Their results indicated that maladaptive immunity was the dominant type of immunity. The qualitative phase in their study also indicated that Iranian EFL teachers passed through four stages, triggering, coupling, realignment, and stabilization, as their immunities developed. A similar finding was also reported by Hiver (2016).

Nevertheless, L2 teacher immunity was most comprehensively studied in Hiver's (2017) seminal article. In that article, Hiver used retrodictive qualitative modeling, a new research method "reverses the usual research direction by starting at the end – the system outcomes – and then tracing back to see why certain components of the system ended up with one outcome option and not another" (Dörnyei, 2014, p. 80). In this study, Hiver initially interviewed 44 EFL teachers in focus groups and at the end these interviews he identified four global classifications: productively immunized, maladaptively immunized, partially immunized, and immunocompromised. Then, he conducted a survey and as a result of this survey, he identified six L2 teacher immunity archetypes: *the spark-plug*, and the *visionary* (productively immunized), the *sell-out*, and the *fossilized* (maladaptively immunized), the *over-compensator*, (partially immunized), and finally the *defeated* (immunocompromised). The main inspiration for the present study stemmed from Hiver's (2017) study. The questionnaire offered by Hiver (2017) was used in present study.

Research questions

Depending on the discussion above, the present study aims to answer the following research questions:

1. How immunized are EFL teachers?

2. Do male and female EFL teachers differ in terms of their immunity levels?

3. Do teachers immunity levels differ in terms of experience or school type?

4. What is the correlation between and among the sub-dimensions of L2 teacher immunity?

4. Methodology

The present study is a quantitative study. A questionnaire, prepared by Hiver (2017), was used. In-depth interviews were conducted with the participants.

4.1. Instruments and data collection

As data collection method, the L2 teacher immunity questionnaire, prepared by Hiver (2017), was used in the present study. This questionnaire consists of 8 sections. The first section includes demographic and education background information about the participants. The remaining seven sections are teaching self-efficacy (7 items), burnout (5 items),

resilience (5 items), attitudes towards teaching (5 items), openness to change (6 items), classroom affectivity (6 items), and coping mechanisms (5 items). In total, there are 39 items in the questionnaire. The questionnaire is a 5-point Likert-type questionnaire consisting of options that range from strongly agree to strongly disagree. The sub-dimensions of the questionnaire, namely teaching self-efficacy, burnout, resilience, attitudes towards teaching, openness to change, classroom affectivity, and coping mechanisms, are the psychological bases of teacher immunity.

Table 1. *Reliability analysis*

Variable	Number of items	Cronbach's alpha value
Self-efficacy	5 (one item deleted)	,535
Burnout	5	,776
Resilience	5	,643
Attitude	5	,639
Openness	5 (one item deleted)	,515
Classroom affectivity	6	,785
Coping	5	,535
Total	38	,632

Since they violated the reliability measures, items 1,3,4,5 in resilience section, items 1,3,4,5, in attitude section, all the items in classroom affectivity sections were reversed. As a result of this, the total reliability level of the questionnaire was calculated as ,632, which is an acceptable level.

4.2. Participants

The participants of the present study were 87 EFL teachers working at primary school, secondary school, high school, and university. Purposeful sampling was used in order to select the participants. Two criteria were adhered to in the selection of the participants. First of all, teachers from all levels of education ladder were selected, namely primary school, secondary school, high school, and university in order to make it possible to draw comparisons. The aim was to see whether the institution makes a difference in teacher immunity. The second criterion was experience. Care was taken to select participants who have various levels of experience.

Of the 87 participants, 72 are female and 15 are male. The number of teachers with 0-4 years of experience is 13, 5-9 is 23, 10-14 is 15, 15-20 is 27, and 21 and more is 9. The number of primary school teachers is 9, secondary school is 28, high school is 25, and university is 25. The number of teachers who hold B.A. degree is 52, M.A. in ELT is 10, M.A. in English language and literature is 16, M. A. in translation is 1, Ph.D in ELT is 2, and Ph.D in English language and literature is 6. None of the participants hold Ph.D in translation studies.

Table 2. *Characteristics of participants*

Demographic characteristics	n	%
Gender		
Male	15	17,2
Female	72	82,8
Experience		
0-4	13	14,9
5-9	23	26,4

10-14	15	17,2
15-20	27	31,0
21 over	9	10,3
School type		
Primary school	9	10,3
Secondary school	28	32,2
High school	25	28,7
University	25	28,7
Gradution		
B.A.	52	59,8
M. A. in ELT	10	11,5
M.A. in English language and literature	16	18,4
M. A. in translation	1	1,1
Ph.D in ELT	2	2,3
Ph.D in English language and literature	6	6,9
Total	**87**	**100,0**

4.3. Data analysis

Since the present study is a quantitative study, descriptive, correlational and inferential statistics were employed. In order to give a clear picture of the immunity level of the EFL teachers in the present study, we resorted to descriptive statistics. As a second step, we conducted variance analysis to see whether there are statistically significant differences in terms of gender, graduation, experience, and school type teachers work at. Finally, to see what clusters teachers form in terms of their immunity profiles, we conducted cluster analysis.

5. Findings

Table 3 presents the findings regarding the sub-dimensions of teacher immunity. As can be understood from the table, teachers have high level of self-efficacy (44,18%), attitudes to teaching (43,02%), class effectivity (44,18%), and coping (43,02%). When it comes to resilience, teachers seem to have a low level of resilience (57,67%) and opened to teaching (43,02%).

Table 3. *Descriptive statistics regarding the sub-dimensions of teacher immunity*

Variables	**Low**		**Moderate**		**high**	
	f	*%*	*f*	*%*	*f*	*%*
Teacher self-efficacy	31	36.04	17	19.76	**38**	**44.18**
Burnout	**41**	**57.67**	9	10.46	36	41.86
Resilience	**41**	**57.67**	19	22.09	26	30.23
Attitudes to teaching	34	39.53	15	17.44	**37**	**43.02**
Openness to change	**37**	**43.02**	12	13.95	**37**	**43.02**
Class affectivity	20	23.25	28	32.55	**38**	**44.18**
Coping	30	34.88	21	24.41	**37**	**43.02**
Total	35	40.69	6	6.97	**45**	**52.32**

Table 4 presents the general mean scores for the sub-dimensions of teacher immunity. The total mean score for teacher immunity is 3,56, indicating that the participants are moderately immunized. The mean value for *teacher self-efficacy* is 3,31. This shows that the participants are undecided about the items here. The teachers in the present study are undecided about whether they could handle unmotivated students and whether they have sufficient training and experience to deal with all the problems likely to arise in classes. They are also undecided about whether they can effectively deal with the problems of their students. The mean value for *burnout* is 2.95, which shows that the participants are not actually going through a burnout process. The mean score for the next sub-dimension, *resilience*, is 3,76, implying that the participants are moderately resilient. This shows that they can partially get through difficult times and can find their way in stressful situations. When it comes to *attitudes*, we can see that the mean score is 4,05, which shows that the participants agree with the items in this category. They believe that teaching brings them pleasure. But the items here contain some negative ideas. Therefore, we can say that the participants have rather negative attitudes towards the teaching profession. For example, they think that teaching brings very little satisfaction and if they had the chance, they would no choose to become a teacher.

Next, the mean value for *openness to change* is 2,97, which shows that the participants are undecided about how open they to changes. When it comes to *classroom affectivity*, the participants agreed with most of the items (M=4,12). However, this shows EFL teachers participating the present study do not seem to feel depresses as they are teaching, but they at the same time do not believe that more good things are going to happen to them. Finally, in regard to *coping* sub-dimension, the participants are undecided about most of the items here. They agree that they can handle stressful situations and they do something to overcome the situation.

Table 4. *Mean scores for the sub-dimensions of teacher immunity*

Epistemological beliefs	N	Minimum	Maximum	Mean	Std. Deviation
Teacher self-efficacy	87	1	5	3.31	2.78446
Burnout	87	1	5	2.95	4.11545
Resilience	87	1	5	3.76	2.06836
Attitudes to teaching	87	1	5	4.05	2.53849
Openness to change	87	1	5	2.97	2.83937
Class affectivity	87	1	5	4.12	2.33231
Coping	87	1	5	3.59	2.73416
Total	87	1	5	3.56	6.99729

5.1. Gender differences

Having established the general picture as to the immunity level of EFL teachers, the next step is to see whether there are gender differences in terms of the sub-dimensions of teacher immunity. Only in terms of one point did the male and female participants differ. This is about whether the participants feel burnout or not. The results are presented in Table 5. As we can understand from this table, male participants seem to suffer more from burnout (M=3,8667) compared to female participants (M=3,0282).

Table 5. *Gender differences in terms of the sub-dimensions of teacher immunity*

	gender	N	Mean	Std. Deviation	t	sig.
At school I feel burned out from my work.	female	71	3.0282	1.15847	-2.709	,008
	male	15	3.8667	.63994		

5.2. Differences in terms of school type

In order to see whether or not there are differences in terms of teacher immunity sub-dimensions in relation to school type teachers work, we conducted Kruskall Wallis test. The reason why we conducted Kruskal Wallis is that the number of the participants are not normally distributed. The results are presented in Table 6. Table 6 indicates that based on school type teachers work there is difference in two points. As can be understood from the table, there is a difference between primary level EFL teachers (M=2,6667) and secondary level EFL teachers (M=4,00). The mean score for high school teachers is also relatively high (M=3,8400). This shows that primary level EFL teachers seem to have more engagement to their jobs. Secondly, secondary level EFL teachers (M=4,3571) slightly differ from university level teachers (M=3,9167) in terms of whether or not they would choose the same job. Primary and secondary level EFL teachers seem to be less likely to select the same job again.

Table 6. *Difference in terms of school type*

Items		n	mean	f	sig.	Dif.
Teaching is my life and I can't imagine giving it up.	Primary	9	2,6667			Primary - Secondary
	Secondary	28	4,0000	2.6	.020	
	High	25	3,8400			
	University	25	3,3333			
If I could choose an occupation today, I would not choose to be a teacher.	Primary	9	4,3333	2,8	.048	Secondary - University
	Secondary	28	4,3571			
	High	25	3,9200			
	University	25	3,9167			

5.3. Differences in terms of year of experience

In order to see whether or not there are differences in terms of teacher immunity sub-dimensions in relation to school type teachers work, we conducted Kruskall Wallis test. The reason why we conducted Kruskal Wallis is that the number of the participants are not normally distributed. The results are presented in Table 7. Table 7 indicates that based on experience EFL teachers only differ in terms of whether they would use strategies about what to do ($p.003<0.005$). The difference is between the teachers with 5-9 years of experience and those with more than 21 years of experience. The mean score for 5-9 years of experience is 3,5909 while the mean score for those who have more than 21 years of experience is 4,4444. When we analyze the mean scores, we can see that there is a upward trend as teachers become more experienced. This indicate the role of experience in handling things through strategies.

Table 7. *Differences in terms of year of experience*

		n	mean	SD	F	Sig.	Dif.
When things get really stressful, I try to come up with a strategy about what to do.	0-4	13	3,9231	,49355	4,373	,003	5-9 – 21 years over
	5-9	22	3,5909	,85407			
	10-14	15	4,2667	,59362			
	15-20	27	4,1111	,50637			
	21 over	9	4,4444	,52705			
	Total	86	4,0116	,67726			

5.4. Differences in terms of educational background

Within the scope of the study, we also looked into whether graduation makes a difference in terms of graduation. Among the participants of the study are B.A., M.A. and PhD. graduates. However, since the number of those who hold M.A. degree in translation and PhD degrees, we combined all M.A. and PhD. students under the category of "postgraduate". This way it is hoped that a more dependable comparison will be possible. The results are presented in Table 8. As we can understand from Table 8, there are several differences between B.A. graduates and those who hold postgraduate degree. First of all, teachers with a postgraduate degree believe that they can deal with problems effectively (p.003<.005), that they don't want to give up their jobs (p.013<.005). Moreover, those with a postgraduate degree also reported that they opted for the tried-out ways (p.001<.005). Finally, teachers with an B.A. degree reported that they would prefer the familiar to the unknown (p.010<.005).

Table 8. *Graduation differences in terms of teacher immunity*

Items	gender	N	Mean	Std. D	t	p
1. I can deal effectively with the problems of my students.	B.A.	52	3,7885	,74981	9,655	,003
	Postgraduate	35	4,2941	,71898		
2. Teaching is my life and I can't imagine giving it up.	B.A.	52	3,3725	1,24837	6,480	,013
	Postgraduate	35	4,0000	,90749		
3. As a teacher, I prefer the familiar to the unknown.	B.A.	52	3,4706	1,02670	6,907	,010
	Postgraduate	35	2,8571	1,11521		
4. The "tried and true" ways of teaching are the best.	B.A.	52	2,4706	,90228	11,551	,001
	Postgraduate	35	3,2000	1,07922		
5. I don't feel that I can cope with problems that come my way.	B.A.	52	3,6078	,82652	5,839	,018
	Postgraduate	35	3,9429	,90563		

5.5. Correlations among the variables of teacher immunity

In order to see the potential correlations among the variables of teacher immunity, we conducted correlation analysis. The results are presented in Table 9. We can understand from Table 9 that there is moderate and high positive correlations between and among the sub-variables of teacher immunity. To start with, there is a moderate level of negative correlation between self-efficacy dimension and burnout (r = .-334, p < .01). However, a moderate level of positive correlation was perceived between self-efficacy dimension and affectivity (r =

.304, p < .01). Moderate level of correlation was also observed between burnout and resilience (r = .-358, p < .01) and attitudes (r = .-332, p < .01). What is more, a high level of negative correlation was perceived between burnout and affectivity (r = .-533, p < .01). The resilience dimension highly correlated with attitudes (r = .356, p < .01), affectivity (r = .494, p < .01), and coping (r = .476, p < .01). With regard to attitudes, it can be seen that there is a high level of correlation with affectivity (r = .494, p < .01) and a moderate level of correlation with coping (r = .325, p < .01). As for openness, a moderate level of correlation was observed between it and affectivity (r = .-295, p < .01). finally, a moderate level of correlation was observed between coping and affectivity (r = .368, p < .01).

Table 9. Correlations between and among the sub-dimensions

Self-efficacy	Burnout	Resilience	Attitudes	Openness	Affectivity	Coping
Self-efficacy	**-,334****	,166	,094	,048	**,304****	,085
Burnout		**-,358****	**-,332****	,121	**-,533****	,-260
Resilience			**,356****	-,040	**,497****	**,476**
Attitudes				-,185	**,494****	**,325**
Openness					**-,295****	,014
Affectivity						**,368**
Coping						

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Cluster analysis

In order to decide which type of immunity is dominant among Turkish L2 teachers, we conducted the two-step cluster analysis. The results are presented in Table 10. As a result of the analysis, two clusters formed. The number of EFL teachers in cluster 1 is 21 and the number of EFL teachers in cluster 2 is 59. Attitudes was the determining factor in forming the clusters. Table 10 presents the five clustering variables means and standard deviations for the two clusters. In this study, the variables of *coping* and *burnout* were used as criterion variables. This means that they were not included in the cluster types. These teachers form the 26.5% of the sample. These teachers have relatively high levels of perceived teaching self-efficacy (M=24,10), attitudes (M=23,43), and affectivity (M=27.29). The second cluster have relatively lower levels for teaching self-efficacy (M=23.07), attitudes (M=19,18), and affectivity (M=23.85).

Table 10. *Cluster analysis*

	Cluster 1 (n=21/ 26.5%)		Cluster 2 (n=59 / 73,75%)	
	M	SD	M	SD
Self-efficacy	24,10	1,85582	23,07	2,78739
Resilience	16,71	1,10871	15,18	1,64680
Attitudes	23,43	1,75113	19,18	2,42571
Openness	16,62	2,53568	18,02	3,00024
Affectivity	27,29	1,57851	23,85	1,93879

To understate whether the two clusters differed in terms of the controlling variables, burnout and coping, we conducted T-test. The results are presented in Table 11. As can be understood, there are clear differences between clusters in terms of coping and burnout. As

for *coping*, there is statistically significant difference (p.033<.005). The mean value for cluster 1, the high immunity group (M=19.3333), is higher than cluster 2 (M=17,4915).

Table 11. *T-test results comparing clusters*

Items	gender	N	Mean	Std. D	t	p
Coping	Cluster 1	21	19,3333	3,49762	2,257	,033
	Cluster 2	59	17,4915	2,21572		
Burnout	Cluster 1	21	11,5714	3,82846	-4,555	,000
	Cluster 2	59	15,8833	3,70108		

6. Discussion

The present study was designed to see the immunity levels of in-service EFL teachers. The results offered significant insights as to the connection between the sub-dimensions of immunity. To begin with, the study first investigated the level of immunity on the part of EFL teachers. Results indicated that teachers have a moderate level of self-efficacy.

The secondary aim of the present study was to see whether there are differences in terms of gender, type of school EFL teachers work, year of experience, and graduation. Several key differences were observed. In terms of gender, male participants were found to suffer more from burnout compared to female counterpart. As for differences in terms of school type, there are two point where the participants differed. These items are about the engagement and commitment about work. Primary level EFL teachers were found to have more engagement to their jobs. In addition, primary and secondary level EFL teachers reported that they would not select the same job again. As to the differences in terms of experience, the study found that the capacity to cope with stressful occasions increases with experience. Last but not the least, the present study emphasized the role of graduation in teacher immunity. Teachers with a post graduate degree reported that they can deal better with problems that may arise in classrooms,

As for the correlations between and among the variables of teacher immunity, the study found strong positive and negative correlations. First of all, it was observed that there is a moderate level of negative correlation between self-efficacy dimension and burnout. This shows that if teachers believe that they get overcome hardships, they suffer less from burnout.

An important objective of the present study was to see whether it is possible to group L2 teachers in terms of their L2 teacher immunity profiles. The analysis indicated that it is possible to group the L2 teachers in the present study in two clusters. The first cluster, consisting of relatively smaller number compared to the second cluster, includes teachers who have relatively positive immunity (productive immunity). The second cluster consists of teachers who have relatively negatively immunized (maladaptive immunity). Positively immunized group tends to have higher levels of teacher self-efficacy, more positive attitudes and more positive affectivity. Variance analysis indicated that L2 teachers with a positive immunity tended to have lower levels of burnout and higher levels of coping. This indicates that L2 teacher immunity is a significant predictor of teacher burnout.

Flores (2019) indicated that teachers' resilience is directly influenced by strong professional values, their sense of professionalism and their sense of identity. Gu and Day (2007, p. 1314) assert that resilience is determined by 'the interaction between the internal assets of the individual and the external environments in which the individual lives and grows or does not grow', which can be viewed as a component of professionalism. The results of the present study indicated that resilience is an important component of L2 teacher immunity. Therefore, in future studies the role of teachers' values and sense of professionalism can be studied in relation to teacher immunity.

There are studies on language teacher immunity, albeit limited. Yet, according to Hiver (2017), the "archetypes" teachers come into are still underexplored. Studies can be designed to investigate this aspect. Another important point that has been scarcely investigated is how teachers' emotions, beliefs, instructional practices, and persistence within challenging instructional settings are reflected in the concurrent teacher identity development. Therefore, future studies can focus on these aspects to provide valuable psychological insight.

Noughabi et al (2020) found that teacher immunity is closely related with teacher autonomy, and engagement and concluded that if EFL teachers are provided with opportunities to exercise autonomy, this can foster their immunity. Furthermore, Hiver (2017) put forward that "teachers who hope to foster positive capacities in their learners must first develop those capacities internally in themselves." (p. 684). Therefore, in-service teacher education programs can include programs that enhance teacher autonomy.

7. **Conclusion**

The present study indicated that the term "language teacher immunity" having been borrowed from medicine tends to be a proper indication of the psychological aspects of L2 teachers. According to Hiver and Dörnyei (2017), language teacher immunity is an important indication of teachers' cognition, experiences, and identities since it "affects almost everything that teachers do in their careers (Hiver, 2015, p.226). Hence, it is crucial to get an understanding of how EFL teachers are immunized.

One indication of the significance of the term language teacher immunity in the preset study was that highly immunized L2 teachers were found to have higher levels of coping and lower levels of burnout while teachers who are negatively immunized turned out to have higher levels of burnout and lower levels of coping strategies. These findings endorse the proposition that L2 teacher immunity functions as a "… robust armoring system… (Songhori & Ghonsooly, 2018, p. 129) which develops as a consequence of negative occurrences (Hiver, 2018) and which enable the survival of teachers (Hiver, 2015).

Gu (2018), among others, states that beliefs and identities of teachers are socially and institutionally mediated. Accordingly, it would be wise to investigate the development of teacher identity, as part of the construct of teacher immunity, both within the classroom and outside the classroom. Moreover, Gu and Lai (2019) propose that there is a scarcity of research that focus on the importance of Information Technologies on the development of L2 teacher identity. Therefore, future studies that intent to focus on L2 teacher immunity or L2 teacher identity may consider focusing on these aspects.

Moreover, from a critical perspective L2 teacher identity development should also be studied in terms of political impacts since, as was emphasized by Zembylas and Chubbuck

(2018), teacher identity is 'politicized, discontinuous, and shifting' (p. 183). What is more, L2 teacher identity can also be studied from a Foucauldian perspective, in which power plays a role. As was proposed by Morgan (2016), the productive nature of power may have an influence on teacher identity as power is distributed via knowledge systems and it is possible to talk about transformative teacher identities. As such, one suggestion for future studies could be to focus on the critical aspect of teacher identity as it may be directly related to teacher immunity.

In the introduction part of the present study, reference was made to the construct of maladaptive immunity, which is likely to cause some undesired implications like conservatism, fossilization, cynicism, or apathy on the part of teachers. The present study did not particularly focus on maladaptive immunity. Future studies could superficially focus on maladaptive immunity and how it affects EFL teachers' psychological lives.

Despite all the efforts, there are several limitations of the present study. One limitation of the present study may be the number of the participants. The number of the participants in the present study is 87. In future studies, this number can be increased. Another limitation of the present study is related to the data collection methods. The present study was based on a questionnaire and semi-structured interviews as data collection methods. They provided insightful data. However, in the original paper, Hiver and Dörnyei (2017) propose that the best way to gain insight into L2 teacher immunity is through narrative inquiry. Therefore, in future studies should adopt narrative inquire as the main means of data collection.

To conclude, we can say that teachers are assigned important roles. For example, Hiver and Dörnyei (2017) refer to them as "architects of society" (p. 405). According to Khani and Mirzae (2014), they are "critical pillars" (p. 1) and most importantly they are the most important factors in student learning (Maulana et al., 2016). Therefore, their psychological lives deserve attention. L2 teacher immunity being an important psychological construct, more studies should focus on this construct in terms of how it develops and how it is maintained by teachers. The present study found strong links between and among the sub-dimensions of L2 teacher immunity. In a similar manner, Hiver (2015) suggested that L2 teacher immunity determines teachers' behaviors and their responses to situations amidst a number of stressors.

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