



The Association of Experienced in-service EFL teachers' immunity with engagement, emotions, and autonomy

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Abstract

The construct of language teacher immunity has recently been introduced as a robust protective armor allowing language teachers to take on challenges within classroom context. However, due to the novelty of the concept, scant research attention has been given to the predictors of language teacher immunity, especially in English as a Foreign Language (EFL) contexts. Thus, this study aimed to investigate the association between autonomy, emotions, engagement, and immunity of experienced in-service EFL teachers ($N=390$) in the Iranian context. After collecting data through four electronic questionnaires, standard multiple regression analysis was performed. The results indicated that autonomy, emotions, and engagement could be significant predictors of language teacher immunity. More specifically, the findings suggested that teacher autonomy had the strongest explanatory power in predicting experienced in-service EFL teachers' immunity. In addition, regarding the inextricable connection between EFL teachers' immunity, autonomy, engagement, and emotions, the centrality of language teacher immunity was underscored. These findings contribute to the field of teacher education by depicting the areas on which educators should focus to develop EFL teachers' immunity. The findings imply that providing experienced EFL teachers with opportunities to exercise autonomy, demonstrate commitment, and regulate emotions through teacher education courses can be helpful to facilitate their productive immunity development. Finally, suggestions for future research are offered.

Keywords Teacher immunity · Teacher autonomy · Teacher engagement · Teacher emotions · Experienced in-service EFL teachers

Introduction

Language teacher immunity, introduced by Hiver and Dörnyei (2017), has been conceptualized as “a robust armoring system that emerges in response to high-intensity threats and allows teachers to maintain professional equilibrium and instructional effectiveness” (Hiver 2017, 669). As voiced by Hiver and Dörnyei (2017, 407), as 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”. Besides, teachers' emotional status, motivational level, and instructional efficacy hinge upon the development of language teacher immunity (Hiver 2016). According to Hiver and

Dörnyei (2017), the maintenance of professional equilibrium requires L2 teachers to have some form of immunity. In effect, Hiver and Dörnyei (2017) believed that language teacher immunity could act as a double-edged sword. Whereas productive teacher immunity can motivate teachers to welcome new opportunities for change (Hiver and Dörnyei 2017), maladaptive immunity prohibits teachers from innovation in instructional practices and classroom management which may lead them to burnout and attrition (Rahimpour et al. 2020).

Teacher attrition has been considered as a serious challenge for educational systems worldwide (Long et al. 2012). Not only are novice teachers likely to abandon the profession (Schaefer et al. 2020), but also are experienced teachers prone to the risk of attrition (Bennet et al. 2013). According to Eros (2011), experienced teachers are those teachers who remain in the profession and in the context of classroom beyond the initial years of induction they have experienced. In effect, since experienced English as a Foreign Language (EFL) teachers are not exempt from the challenges which early career EFL teachers may experience in the initial years they commence the profession, it can be promising to explore what

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makes contribution to language teacher immunity to help experienced in-service EFL teachers maintain their motivation, survive the coalition of limiting factors, adapt enthusiastically to changes, and cope with threats to their well-being and effective instructional practices (Hiver 2017; Hiver and Dörnyei 2017).

Language teacher immunity has been shown to be related to teachers' autonomy, engagement, and emotional states (Hiver 2017). Lack of autonomy may impede innovation and reflectivity which are regarded as common practices of immunized teachers (Hiver 2017). As well, there is evidence that teachers with productive immunity are emotionally well-adjusted (Hiver 2016). Moreover, lack of commitment and engagement are regarded as challenges of language teaching which lead teachers to defensive teaching, lack of motivation to change, and maladaptive immunity (Hiver 2017).

In spite of the effect of teacher immunity on teachers' behaviors and professional practices (Haseli Songhori et al. 2018), the positive impact of autonomy on various domains of teachers' profession (Teng 2018), and the centrality of emotions and engagement as two core categories of positive psychology which influence teachers' well-being (Seligman 2011), it is surprising why inspecting whether there are ties between teachers' immunity, autonomy, engagement, and emotional inventory has remained an untouched area of research. That little is known about the association between language teachers' immunity, autonomy, engagement, and emotions might be due to the fact that studies on language teacher immunity and psychology are in nascent stages (Haseli Songhori et al. 2018; Hiver and Dörnyei 2017). Therefore, it seems necessary to conduct a new study to investigate the relationship between EFL teachers' emotions, engagement, autonomy, and immunity.

Literature Review

Language Teacher Immunity

Language teacher immunity is a crucial factor which profoundly affects language teachers' behavior, outlook on the profession, and professional identity (Haseli Songhori et al. 2018; Hiver 2015, 2016). In effect, language teacher immunity elucidates how language teachers' defense mechanism comes into operation to assuage the adverse effects of turbulences on L2 teachers' professional identity (Hiver and Dörnyei 2017). In other words, teacher immunity emerges to armor teachers with what they need to successfully cope with stress in complex conditions in order to have an effective instruction (Hiver 2017).

Parallel to its biological counterpart, this armoring system reveals into two forms in adverse situations; productive and maladaptive. The former refers to a situation in which

immunity system imbues language teachers with enthusiasm, resilience, and motivation while protecting teachers in stressful conditions whereas the latter form of immunity causes teachers to experience emotional exhaustion, cynicism, and callousness (Hiver 2015; Hiver and Dörnyei 2017). In the current study, language teacher immunity refers to the protective armoring system which assists experienced in-service EFL teachers to cope resiliently with challenges, to be open to change, to enhance their sense of self-efficacy, to regulate their emotions, and to be affectionate towards language teaching.

In a recent study, Hiver (2016) attempted to examine what psychological traits differentiated committed and motivated teachers with high levels of creativity and innovation from demotivated teachers who merely tried to survive. In his pioneering study, Hiver (2016) found that teacher immunity acted as a buffering mechanism against the accrued work-related hassles so as to quell the disturbances by means of experiencing self-organization achieved through four stages: triggering, coupling, re-alignment, and stabilization. Further, employing a retrodictive qualitative modelling approach, Hiver (2017) investigated the processes underlying immunity archetypes among K-12 language teachers in South Korea. The analysis of focus group data and cluster analysis data indicated six core archetypes of language teacher immunity (the spark plug archetype, the visionary archetype, the fossilized archetype, the defeated archetype, the sell-out archetype, and the over-compensator archetype) and seven main factors (teaching self-efficacy, attitudes to teaching, coping, classroom affectivity, burnout, resilience, and openness to change) which were essential to forming the aforementioned archetypes.

In a recent study, Haseli Songhori et al. (2018) attempted to investigate the dominant type of Iranian English teachers' immunity and the ways Iranian language teachers developed their immunity type. They found maladaptive immunity as the dominant type of Iranian EFL teachers' immunity. Similar to Hiver's (2016) research study, their study revealed that English teachers in Iran followed four stages (i.e. triggering, coupling, realignment, and stabilization) to form their immunity. However, Haseli Songhori et al. (2018) did not explicitly stress what factors influence different immunity archetypes during different stages of immunity development. Moreover, the relationship between language teachers' emotions, self-efficacy, and immunity was not tested in the quantitative phase of their study.

In a qualitative study, Rahmati et al. (2019) investigated Iranian EFL teachers' immunity development. They identified teachers' low self-confidence and income, students' low motivation, time shortage, and parents' high expectations as the major disturbances which triggered the teachers' immunity. They pointed out that the tutors utilized specific strategies such as preparing lesson plans, creating a positive atmosphere

in the class, and negotiating objectives with parents in order to deal with the aforementioned disturbing factors. Although the study of Rahmati et al. (2019) provided promising results, it did not employ a quantitative design with a large sample size containing teachers from both public and private sectors to explore what constructs were interconnected with language teacher immunity. In addition, while the authors suggested that teacher educators should raise EFL teachers' awareness about developing productive immunity, they made no attempt to clarify how this aim should be achieved.

Since language teacher immunity “affects almost everything that teachers do in their careers (Hiver 2015, 226), it is suggested that exploring language teacher immunity offers promising insights into teachers' identity, cognition, and expertise (Hiver and Dörnyei 2017). However, reviewing the related literature on language teacher immunity shows that investigating the factors which predict EFL teachers' immunity has received scant attention. The only exception is that of Rahimpour et al. (2020). Based on the personality model of HEXACO (Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience), Rahimpour et al. (2020) developed a model on the personality trait predictors of language teacher immunity. Their study indicated that agreeableness, extroversion, and emotionality were three personality-related factors which had indirect effects on Iranian EFL teachers' immunity. In addition, job insecurity and reflective teaching were proved to have significant and direct effects on teacher immunity. Yet, exploring motivational, emotional, and vocational factors (such as autonomy, emotions, and engagement) predicting EFL language teachers' immunity is highly recommended.

Language Teacher Autonomy

Teacher autonomy has been conceptualized as one of the professional characteristics of teachers who enthusiastically develop their teaching repertoire and take improvement opportunities in various educational settings (Thavenius 1999). As stated by Teng (2018, 34), “teacher autonomy is a hot topic which deserves more discussions in teaching English as a foreign language”. This emphasis derives from the key role teacher autonomy plays in improving teacher efficacy (Skaalvik and Skaalvik 2014), enhancing language teachers' self-regulation (Authors, 2020), increasing tendency to remain in the profession (Pearson and Moomaw 2006), and furthering language teachers' development (Teng 2018). In this study, teacher autonomy is operationally defined as the degree to which an experienced in-service EFL teacher can control his or her professional and curricular activities.

Examining the relationship between teacher autonomy, on-the-job stress, and job satisfaction, Pearson and Moomaw (2006) figured out that increase in curriculum autonomy caused decrease in on-the-job stress. According to Skaalvik

and Skaalvik (2014), autonomous teachers indicate higher levels of self-efficacy, job satisfaction, and professional engagement. Teng (2018) believes that confident, autonomous language teachers are less likely to leave the profession. Autonomous teachers' tendency to stay in the profession can be explained by increased levels of self-regulation they achieve (Authors 2020), furthered professional development they have (Teng 2018), and decreased levels of burnout they feel (Skaalvik and Skaalvik 2014).

Teacher autonomy has also been found to be closely connected to empowerment and professionalism (Pearson and Moomaw 2006). Thus, the feeling of powerlessness caused by lack of autonomy will probably provoke teachers' anxiety leading them into a sense of frustration (Mayer et al. 2013). Moreover, the lack of autonomy may vanish the feelings of professionalism among language teachers (Teng 2018). Given that restricted teacher autonomy is a stress-inducing factor in language teaching (Hiver and Dörnyei 2017), it may influence EFL teachers' immunity in that teacher immunity acts as an armoring system against professional stressors (Hiver 2017).

Although extensive research has been carried out on teacher autonomy, one major drawback of previous studies is that they have not particularly specified how experienced EFL teachers' autonomy is related to or influenced by psychological constructs such as language teacher immunity. To the best of our knowledge, no exclusive study has already been dedicated to the investigation of the relationship between experienced in-service EFL teachers' immunity and autonomy. However, since self-efficacy as a subcomponent of language teacher immunity (Hiver 2017) is closely connected to autonomy (Skaalvik and Skaalvik 2014) and engagement (Li et al. 2019), it is hypothesized that teacher autonomy and engagement are linked to teacher immunity. However, empirical evidence is required to test this claim.

Language Teacher Engagement

As a motivational concept, work engagement refers to the intentional allocation of personal resources for taking on professional responsibilities (Christian et al. 2011). From the perspective of Van Beek et al. (2012), work engagement pertains to high levels of passion for, satisfaction with, and involvement in the job. Building an understanding of teachers' engagement at work is necessary to obtain vital information about the psychological processes which underlie effective instruction (Klassen et al. 2013). In the present study, teacher engagement refers to the experienced in-service EFL teachers' cognitively, emotionally, and socially engaged acts of doing their professional responsibilities.

A new trend of research has been dedicated to the exploration of factors which influence or are influenced by work engagement. For instance, teachers' work engagement has been shown to be closely tied to their status (fulltime and substitute),

gender, job satisfaction, and perceived self-efficacy (Li, et al. 2019; Perera et al. 2018; Topchyan and Woehler 2020). Additionally, according to Hakanen et al. (2006), job demands drain teachers' psychological and physical energy, while job resources are the main predictors of teachers' work engagement and motivational state. In addition, teaching experience has been shown to exert positive influence on teachers' engagement and self-efficacy (Daniels et al. 2017).

Language teacher engagement studies have mainly focused on the investigation of language teachers' engagement with research (Borg 2010; Wyatt and Dikilitaş 2016). That most previously published studies in the field of language teacher education have only focused on language teachers' research engagement is a major limitation. Hence, the existing accounts fail to specify how language teachers' cognitive, emotional, and social engagement can help them overcome work-embedded challenges. Reviewing the literature indicates that inspecting the association between L2 teachers' engagement and their immunity has not been brought to the foreground of research foci. In addition to commitment, teachers' emotional states are also determinant to their immunity (Hiver 2017). Describing emotions as agency, Benesch (2018) noted that language teachers' emotions can be regarded as sources of engagement. In other words, emotions which indicate whether one's present situation should be transformed can mobilize a teacher to energetically act in the classroom (Benesch 2018). Based on PERMA (Positive emotions, Engagement, Relationships, Meaning, and Accomplishments) model of positive psychology proposed by Seligman (2011), two factors which pave the path for promotion of teachers' well-being are their engagement and emotions.

Language Teacher Emotion

Emotions have been regarded as a key factor influencing the negotiation and construction of teacher identity (Benesch 2012). Frenzel and Stephens (2013, 5) defined emotions as "multidimensional constructs comprising affective, psychological, cognitive, expressive, and motivational components". Generally, emotions have been classified into two categories in cognitive approaches; negative and positive emotions (Benesch 2018). Whereas positive emotions have been identified to be desirable in language teaching and learning, negative emotions have been recognized to have detrimental effects on language teaching (Benesch 2018). In the current study, teacher emotions refer to positive (e.g. joy and love) or negative (e.g. sadness, anger, and fear) affective experiences characterized by psychobiological changes that an experienced EFL teacher undergoes in the classroom context.

Researchers view emotions to be effective in improving teachers' well-being, professional development, and job satisfaction (Atmaca et al. 2020; Gallo 2016; Khajavy et al. 2017). In fact, teachers' professional and personal lives are affected by the

emotions they experience through the career (Schutz and Zembylas 2009). The narrative research study of Cuéllar and Oxford (2018) indicated how a language teacher could manage her emotions and eliminate work-related suffering. In their influential study, Cuéllar and Oxford (2018) stressed that negative emotions did not destroy opportunities for invoking positive changes. In addition, as reported by Cuéllar and Oxford (2018), when teachers teach themselves to teach with passion, they can invoke happiness, excitement, and other positive feelings among their students and remain compassionate and strong, regardless of background difficulties. Although the study of Cuéllar and Oxford (2018) contributed to our understanding how a language teacher should regulate his or her emotions to tackle the professional problems, their study relies heavily on qualitative analysis of one language teacher's narratives. Thus, their study would have been much more contributing if the authors had examined a larger sample size or included a mixed-methods research design, rather than taking a merely qualitative approach.

In another qualitative study, Cowie (2011) found that although experienced EFL teachers described their relationship with the students as positive experiences of emotional warmth, they attributed more negative terms regarding their relationship with their colleagues and institutions. In addition, liking and caring as two positive emotions and anger as a negative emotion were found to be commonly perceived by experienced EFL teachers. Cowie (2011) acknowledged that the emotional aspect of experienced EFL teachers should be considered in EFL research studies. However, it is appalling that inspecting emotions has gone unheeded in English teaching studies (Martínez Agudo 2018) over the past years. Mercer et al. (2016) have already echoed this clear gap in the field of teacher psychology and urged that helping teachers thrive in the profession, promote their well-being, and facilitate their professional development should be taken into account to make the career worth striving.

All in all, in spite of the significance of teacher immunity, scrutinizing the related literature on language teacher immunity revealed the scarcity of empirical data on the contributing factors to the immunity of language teachers, especially experienced in-service EFL teachers. As well, regarding the centrality of the concept of language teacher immunity, further research is needed to fine-tune the ideas about this neglected dimension of teacher motivation (Hiver and Dörnyei 2017). Hence, the current study is a response to the call for better understanding of teacher immunity by identifying its predictors. Therefore, this study seeks to investigate the association of teacher immunity with engagement, emotions, and autonomy. Henceforth, the study addresses the following research question.

RQ: To what extent experienced in-service Iranian EFL teachers' engagement, emotions, and autonomy can predict their immunity?

Method

Participants

In the current study, a sample of 390 experienced in-service EFL teachers from diverse geographical areas of Iran took part in completing the survey forms on teacher immunity, engagement, emotions, and autonomy. They mainly had done their Masters of Art in Teaching English as a Foreign Language (TEFL). While the majority of these teachers had experience in teaching English in state high schools and private language institutes, the others had taught at private high schools. In fact, the present study involved a group of in-service EFL teachers with a wide range of teaching experience ($M = 14.62$, $SD = 5.97$). The demographic information of the participants is presented in Table 1.

Instruments

The Teacher Autonomy Scale (TAS)

The Teacher Autonomy Scale (TAS) was initially developed by Pearson and Hall (1993) as a reliable instrument for measuring teachers' autonomy ($\alpha = 0.80$). Replicating the original study, Pearson and Moomaw (2006) provided evidence in support of the reliability and validity of the original instrument (CFI = 0.92, RMSEA = 0.05). The TAS contains 18 items related to general autonomy and curriculum autonomy. The items are rated on a four-point Likert scale. Pearson and Moomaw (2006, 50) stated that "the items also are logically consistent with the literature; researchers therefore might use it in future studies of the autonomy construct". In our study, the total reliability of the TAS estimated via Cronbach's alpha was 0.74.

The Engaged Teacher Scale (ETS)

Teachers' engagement is measured with the Engaged Teacher Scale (ETS) developed by Klassen et al. (2013). The measure comprises 16 items, rated on a seven-point Likert scale, on four factors, naming cognitive engagement, emotional engagement, social engagement: students, and social engagement: colleagues. There is evidence on the reliability, validity,

and practical usability of the ETS (Klassen et al. 2013; Topchyan and Woehler 2020). One of the distinguishing features of the scale which makes it superior to other measures is the inclusion of social engagement with students as a major constituent of teachers' work engagement (Klassen et al. 2013). In our study, the reliability of the ETS estimated via Cronbach's alpha was 0.89.

The Teacher Emotions Inventory (TEI)

The Teacher Emotions Inventory (TEI), developed by Chen (2019b), was used to measure teachers' emotions. The scale includes 26 items on two positive dimensions (joy and love) and three negative aspects (sadness, fear, and anger). There is credible evidence supporting the use of the TEI as a reliable measure of teachers' emotions (Atmaca et al. 2020; Chen 2016, 2019a). Chen (2019a) modified the earlier version of the scale based on the results of Confirmatory Factor Analysis (CFA) to achieve 26-item TEI with a good model fit (CFI = 0.92, SRMR = 0.058, RMSEA = 0.060). Therefore, for the purpose of the present study, the 26-item TEI with 6-point frequency rating scale was used. In the current study, the total reliability of the TEI was estimated via Cronbach's alpha and turned out to be 0.84.

The Teacher Immunity Scale (TIS)

The Teacher Immunity Scale (TIS) developed by Hiver (2017) comprises 39 items with 6-point response scale on seven factors including teacher self-efficacy (7 items), burnout (5 items), resilience (5 items), attitudes towards teaching (6 items), openness to change (6 items), classroom affectivity (5 items), and coping (5 items). The reported reliability indices of all the aforementioned subscales in the study of Hiver (2017), presented in order, were acceptable; $\alpha = 0.82, 0.80, 0.82, 0.85, 0.74, 0.81, 0.78$. In the current study, the reliability of the TIS estimated via Cronbach's alpha was 0.73.

Procedures

For collecting data, four electronic survey forms including the TAS, the ETS, the TEI, and the TIS were created through Google Forms. Conducting the user-friendly survey forms electronically is an easy and convenient way for researchers and participants alike helps researchers collect a large set of data from different regions where teachers with a broad range of experience can participate in the research. The language used for all four measures was English in order to remove the risk of introducing a construct irrelevant factor. The link for filling the four surveys was forwarded to 439 experienced in-service EFL teachers. The teachers were reminded that only in-service EFL teachers who were experienced (i.e. passed the initial years of their instruction) could participate in filling out

Table 1 The demographic information of the participants

Gender	Major	Degree	Experience
Male = 139	English Linguistics = 9	B.A. = 163	$M = 14.62$
Female = 251	Translation Studies = 44	M.A. = 192	$SD = 5.97$
Total = 390	Teaching English = 288	Ph.D. = 35	Min = 5
	English Literature = 49		Max = 38

the questionnaires. In addition, no deadline was imposed for submitting their answers. Data collection process took about 3 months, from October 2019 to December 2019. Then, 390 forms were completed (return rate = 88%). As the items of the scales were designed in a way to be necessarily selected, there were no missing data among completed questionnaires. After data collection, standard multiple regression analysis was performed via SPSS version 25 to investigate the explanatory power of the predicting variables.

Results

To measure the explanatory power of the predicating variables, naming teacher autonomy, teacher engagement, and teacher emotions, standard multiple regression analysis was performed. Initial analysis of the assumptions of multiple regression indicated no major violation. First, the sample size of the present study was large enough to run multiple regression with regard to the criteria given by Tabachnick and Fidell (2013, $N > 50 + 8m$, where m = number of independent variables). Second, to check the univariate normality of distribution, Kolmogorov-Smirnov test of normality was run which ensured the normality of data for all four variables ($p > 0.05$). Third, to ensure multivariate normality, Mahalanobis' and Cook's distance were evaluated. According to Larson-Hall (2010), Mahalanobis values over 15 and Cook's distance beyond 1 are concerning in the case of larger sample sizes. In the current study, the Mahalanobis value did not exceed 13.43 and Cook's distance was not over 0.11. Fourth, tolerance values were calculated to check possible multicollinearity. The tolerance values in the current study (0.68, 0.89, 0.69) were in an acceptable range regarding the criteria given by Tabachnick and Fidell (2013, tolerance values less than 0.10 show possible multicollinearity). Finally, the collinearity of data was assessed via VIF value. In this study, VIF values turned out to be 1.46, 1.12, 1.44 which were way below cut-off point since VIF values beyond 5 show collinearity (Larson-Hall 2010).

Next, to address the research question, a multiple linear regression was carried out to predict experienced in-service EFL teachers' immunity based on their autonomy, engagement, and emotions. As we aimed to explore how much of the relationship was contributed uniquely by each explanatory variable, we preferred to use standard multiple regression. The model summary (Table 2) indicated that EFL teachers' engagement, autonomy, and emotions together could explain 51% of the variance of their immunity which was a considerable figure.

Moreover, ANOVA results (as shown in Table 3) revealed that the model was a significant predictor of experienced EFL teachers' immunity; $F(3, 386) = 137.20$, $p < 0.001$ with an $R^2 = 0.51$. Therefore, it was concluded that teachers'

autonomy, emotions, and engagement were significant predictors of experienced in-service EFL teachers' immunity.

Specifically, as indicated in Table 4, language teachers' autonomy contributed more significantly ($B = 1.27$, $t = 11.17$, $p = 0.00$) than their engagement ($B = 0.41$, $t = 6.99$, $p = 0.00$) and emotions ($B = 0.26$, $t = 5.26$, $p = 0.00$) to the model.

In sum, the findings showed that experienced in-service EFL teachers with higher levels of autonomy, engagement, and emotions indicated higher levels of immunity in the Iranian context. This finding contributes to the fields' understanding of how experienced EFL teachers' immunity can be predicted by looking at their autonomous practices, emotional states, and engaged behaviours. As indicated by the findings of the current study, developing in-service EFL teachers' autonomy can result in improving their immunity. In addition, experienced teachers with higher levels of social, emotional, and cognitive engagement tend to have a more robust immunity system. Moreover, experienced EFL teachers who reveal higher rates of emotions regarding their profession and students are supposed to have an advanced and productive immunity. Hence, it is highly suggested to provide experienced in-service EFL teachers with opportunities to exercise autonomy, enhance different aspects of engagement and commitment, and regulate their emotions.

In effect, our findings underscore the fact that even experienced EFL teachers are in need of attending professional courses to learn how to manage their emotions, how to act autonomously, and how to remain emotionally, socially, and cognitively committed to their students and engaged with their work. Such opportunities can be provided through enriched teacher education courses which are targeted at advancing EFL teachers' autonomous decision making, developing their sense of belonging to the profession, and regulating their positive and negative emotions. Thus, it might be beneficial to find different ways to improve experienced in-service EFL teachers' autonomy, engagement, and emotions as means for developing language teacher immunity.

Discussion

The present study aimed to examine the interrelatedness of four constructs, naming teacher autonomy, teacher engagement, teacher emotions, and teacher immunity. In the field of English language teaching, particularly in EFL contexts, the association between these constructs has not been investigated previously. The results indicated that experienced in-service EFL teachers' immunity could be explained by their perceived autonomy, emotions, and engagement. In other words, experienced EFL teachers with stronger immunity systems reported higher levels of autonomy, higher rates of emotions, and higher degrees of engagement. This finding may

Table 2 Model summary of multiple regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.718	.516	.512	11.396	.516	137.208	3	386	.000

Predictors: Emotions, Autonomy, Engagement; Dependent Variable: Immunity

broaden our knowledge of language teacher immunity by specifying the constructs which are inextricably interwoven with language teachers' armouring system. Given that language teacher autonomy, emotions, and engagement are different, albeit related constructs, the idea that language teacher immunity "affects almost everything that teachers do in their careers" (Hiver 2015, p. 226), is supported by the findings of the current study. An important implication for teaching is the value of developing language teachers' immunity to avoid teacher attrition caused by professional problems because language teachers' response to threats hinges on their commitment, emotion regulation, and autonomous pedagogies.

The results indicated a significant association between the teachers' immunity and engagement suggesting that part of teachers' tendency to rise to the challenges and to stay in the profession in an energetic fashion is due to their engagement and commitment. Therefore, it might be interpreted that various aspects of teacher engagement (i.e. cognitive engagement, emotional engagement, social engagement with learners, and social engagement with colleagues) could affect experienced EFL teachers' immunity. A possible explanation for this is that resilience, which is a contributing factor to language teacher immunity (Hiver 2017), can help teachers remain committed to the profession and deal with the challenges (Gu and Day 2007). An implication for instruction is that effective language teachers show remarkable resilience during teaching pressures (Hiver and Dörnyei 2017). It might not be implausible to argue that experienced EFL teachers' engagement is an immunizing factor which equips them to deal with different situations energetically and to overcome the challenges successfully. This finding corroborates Hiver's (2017) idea that engagement and commitment can help teachers overcome the obstacles in the way of productive immunity. This reciprocal relationship between immunity and engagement might be explained in terms of self-efficacy as

one of the main components of teacher immunity (Hiver 2016) which is associated with engaged behaviours (Perera et al. 2018). Therefore, in support of the earlier studies which reported a positive correlation between teachers' engagement and self-efficacy (Skaalvik and Skaalvik 2014), the results of the current study suggest that teachers' immunity and engagement are tied together by their sense of self-efficacy. However, the mediating role of self-efficacy needs to be empirically studied.

In support of Hiver (2016), the findings suggest that emotional status of language teachers is an indispensable part of their immunity. While in the earlier studies on teacher immunity (e.g. Hiver 2016, 2017; Hiver and Dörnyei 2017) it has not been explicitly stated to what emotional states referred, the present study offered an operational definition for language teachers' emotions including five emotions including joy, love, sadness, fear, and anger. In other words, in the present study, it was shown that both negative and positive emotions were related to experienced EFL teachers' immunity system. Therefore, the current study contributes to the field by identifying the emotions (joy, love, sadness, fear, and anger) which were shown to be interrelated with experienced language teachers' immunity.

The results are in accord with prior studies indicating the centrality of emotions in improving teaching (Schutz and Zembylas 2009), achieving job satisfaction (Atmaca et al. 2020), and affecting experienced EFL teachers' professional and personal lives (Cowie 2011). As for the results confirming the association between teacher emotion and teacher immunity, it might be interpreted that regulating emotions is a necessary skill for improving teacher immunity with the ultimate goal of gaining job satisfaction and job security. This corroborates the ideas of Cuéllar and Oxford (2018) who suggested that language teachers who managed their emotions could experience job satisfaction. As well, this supports the idea of Benesch (2012) who argued that teachers' regulation of emotions, particularly negative ones, could offer great opportunities for pedagogical change. This finding has important implications for signifying the value of regulating emotions in helping language teachers deal with hurdles. Based on the findings, it can be interpreted that language teachers' emotional intelligence and self-efficacy are interrelated (Authors 2016) suggesting that self-efficacious teachers are productively immunized and emotionally well-adjusted (Hiver 2017). This finding highlights the importance of EFL

Table 3 ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53,457.848	3	17,819.283	137.208	.000
	Residual	50,130.049	386	129.871		
	Total	103,587.897	389			

Dependent Variable: Immunity; Predictors: Emotions, Autonomy, Engagement

Table 4 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error				Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	26.427	6.710		3.939	.000					
Engagement	.415	.059	.300	6.994	.000	.547	.335	.248	.681	1.468
Autonomy	1.279	.114	.419	11.176	.000	.570	.494	.396	.893	1.120
Emotions	.261	.050	.225	5.267	.000	.504	.259	.186	.690	1.449

teachers' emotional competence and suggests that the promotion of language teacher immunity affects EFL teachers and learners alike because EFL teachers who develop their own emotional competence can alleviate their learners' anxiety, enhance their learners' motivation, and create a positive atmosphere in classroom setting (Dewaele 2017).

An interesting finding was that teacher autonomy was the strongest predictor of experienced EFL teachers' immunity. That EFL teachers' perceived autonomy correlates with their immunity supports the idea that autonomous teachers tend to remain in the profession, to take opportunities for reflection, and to develop professionally (Pearson and Moomaw 2006; Teng 2018). Therefore, teachers' restricted autonomy damages their immunity, causes anxiety among them, and makes them feel frustrated (Mayer et al. 2013). Given that teacher autonomy is a prerequisite for developing learner autonomy (Teng 2018), an implication of this finding for language learning is that productive immunity development may indirectly facilitate the promotion of language learners' autonomy through improving teacher autonomy. In addition, this finding has important implications for developing teachers' professional education. Teacher educators should address teacher autonomy as a valid educational concern through providing teachers with opportunities for enacting autonomous practices in the classroom settings (Manzano Vázquez 2018). Given that empirical research is still inadequate to identify how teacher autonomy can be furthered in pre-service and in-service language teacher education programs (Teng 2018), there is a pressing need to revise current teacher education programs in order to find efficient means of improving teacher autonomy which simultaneously serves as a means to immunize experienced in-service EFL teachers.

All in all, the present results are significant in two major respects. First, this study indicated three predictors of language teacher immunity, naming teacher autonomy, teacher emotion, and teacher engagement, in the EFL context of Iran. Given that EFL teachers are confronted with a bewildering range of challenges compared to teachers of other fields (Borg 2006), it might be promising to improve their autonomous pedagogies, emotional regulation, and work commitment through teacher education programs with the ultimate goal of helping experienced EFL teachers overcome the

challenges and develop their productive immunity archetype. Second, the results highlighted the necessity of raising EFL teachers' awareness of their immunity, so the teachers can autonomously apply required strategies to regain their energetic activism, to be open towards pedagogically constructive changes, and to get emotionally armored against work-related hurdles.

Conclusion

This study was an attempt to contribute to the sparse knowledge on the predictors of language teacher immunity by identifying the association between immunity, autonomy, engagement, and emotions among experienced in-service EFL teachers in the Iranian context. The results of multiple regression analysis suggested that experienced in-service EFL teachers' autonomy, engagement, and emotions were significant predictors of their immunity. The implication is that teacher educators can develop EFL teachers' immunity via giving experienced teachers a variety of opportunities to exercise autonomy, demonstrate their commitment, and manage both negative and positive emotions through specific teacher education courses. The regulated mutuality of emotional influences within classroom climate can help language teachers strengthen their emotional caring, gain job satisfaction, meet learners' needs, and enhance the quality of instruction.

Moreover, the significant correlation between teacher autonomy and teacher immunity signifies that improving teacher autonomy might be an influential factor in protecting experienced EFL teachers against hurdles in the profession. As teacher autonomy was found to be the most significant predictor of language teacher immunity, it is highly suggested to offer experienced EFL teachers a variety of opportunities to exercise their autonomy with a greater decision latitude with the ultimate goal of developing their immunity. In sum, the findings of this study are encouraging, despite being a modest first step in investigating the relationships between teacher engagement, autonomy, emotions, and immunity. Bearing in mind that teachers' immunity system is dynamic throughout the profession, we conclude that it is needed to empower

teacher immunity both at the initial and the later stages of the teaching profession.

Suggestions for Future Research

The results of the current study need to be interpreted in light of the following three limitations. First, the study presented herein utilized self-report data which possibly may not reflect experienced EFL teachers' actual perception of their emotions, engagement, autonomy, and immunity in the Iranian context. Further studies are required to adopt mixed-method approaches and to triangulate data by means of employing other instruments such as observation checklists and focused interviews. Second, multiple-regression used in the study could not indicate the causal relationships between the variables and their constituents. Then, future studies may advance our understanding of language teacher immunity by considering the direction and the strength of the relations between the variables and their subcomponents via structural equation modelling (SEM). Third, this study did not qualitatively explore how experienced EFL teachers' immunized systems have been formed from the initial years onwards. Therefore, further investigations may target pre-service EFL teachers' narratives to dig deeper into the dynamic process of immunization. Ultimately, further research should be undertaken to investigate whether language teacher immunity plays a role in enhancing language learners' achievement.

Authors' Contributions Not applicable.

Data Availability Not applicable.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

Consent for Publication Not applicable.

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References

Authors (2016).
Authors (2020).

- Atmaca, Ç., Rızaoğlu, F., Türkoğlu, T., & Yaylı, D. (2020). An emotion focused approach in predicting teacher burnout and job satisfaction. *Teaching and Teacher Education*, 90, 103025. <https://doi.org/10.1016/j.tate.2020.103025>.
- Benesch, S. (2012). *Considering emotions in critical English language teaching: Theories and praxis*. New York: Routledge.
- Benesch, S. (2018). Emotions as agency: Feeling rules, emotion labor, and English language teachers' decision-making. *System*, 79, 60–69.
- Bennet, S., Brown, J., Jr., Kirby-Smith, A., & Severson, B. (2013). Influences of the heart: Novice and experienced teachers remaining in the field. *Teacher Development*, 17(4), 562–576.
- Borg, S. (2006). The distinctive characteristics of foreign language teachers. *Language Teaching Research*, 10(1), 3–31.
- Borg, S. (2010). Language teacher research engagement. *Language Teaching*, 43(4), 391–429.
- Chen, J. (2016). Understanding teacher emotions: The development of a teacher emotion inventory. *Teaching and Teacher Education*, 55, 68–77.
- Chen, J. (2019a). Efficacious and positive teachers achieve more: Examining the relationship between teacher efficacy, emotions, and their practicum performance. *The Asia-Pacific Education Researcher*, 28(4), 327–337.
- Chen, J. (2019b). Exploring the impact of teacher emotions on their approaches to teaching: A structural equation modelling approach. *British Journal of Educational Psychology*, 89(1), 57–74.
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64, 89–136.
- Cowie, N. (2011). Emotions that experienced English as a foreign language (EFL) teachers feel about their students, their colleagues and their work. *Teaching and Teacher Education*, 27, 235–242.
- Cuellar, L., & Oxford, R. L. (2018). Language teachers' emotions: Emerging from the shadows. In J. D. de Martínez Agudo (Ed.), *Emotions in second language teaching* (pp. 53–72). London: Springer.
- Daniels, L. M., Radil, A. I., & Goegan, L. D. (2017). Combinations of personal responsibility: Differences on pre-service and practicing teachers' efficacy, engagement, classroom goal structures and wellbeing. *Frontiers in Psychology*, 8, 906–918.
- Dewaele, J. M. (2017). Psychological dimensions and foreign language anxiety. In S. Loewen & M. Sato (Eds.), *The Routledge handbook of instructed second language acquisition* (pp. 433–450). London: Routledge.
- Eros, J. (2011). The career cycle and the second stage of teaching: Implications for policy and professional development. *Arts Education Policy Review*, 112(2), 65–70.
- Frenzel, A. C., & Stephens, E. J. (2013). Emotions. In N. C. Hall & T. Goetz (Eds.), *Emotion, motivation, and self-regulation: A handbook for teachers* (pp. 1–56). Bingley: Emerald.
- Gallo, E. (2016). "I want to be happy as a teacher". How emotions impact teacher professional development. In D. Gabrys-Barker & D. Galajda (Eds.), *Positive psychology perspectives on foreign language learning and teaching* (pp. 249–266). Switzerland: Springer International Publishing.
- Gu, Q., & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education*, 23(8), 1302–1316.
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43(6), 495–513.
- Haseli Songhori, M., Ghonsooly, B., & Afraz, S. (2018). Language teacher immunity among Iranian EFL teachers: A self-organization perspective. *Iranian Journal of English for Academic Purposes*, 7(1), 128–143.
- Hiver, P. (2015). Once burned, twice shy: The dynamic development of system immunity in language teachers. In Z. Dörnyei, P. D.

- MacIntyre, & A. Henry (Eds.), *Motivational dynamics in language learning* (pp. 214–237). Bristol: Multilingual Matters.
- Hiver, P. (2016). Tracing the signature dynamics of language teacher immunity (Doctoral dissertation, University of Nottingham).
- Hiver, P. (2017). Tracing the signature dynamics of language teacher immunity: A retrodictive qualitative modeling study. *The Modern Language Journal*, 101(4), 669–690.
- Hiver, P., & Dörnyei, Z. (2017). Language teacher immunity: A double-edged sword. *Applied Linguistics*, 38(3), 405–423.
- Khajavy, G. H., Ghonsooly, B., & Hosseini Fatemi, A. (2017). Testing a burnout model based on affective-motivational factors among EFL teachers. *Current Psychology*, 36, 339–349.
- Klassen, R. M., Yerdelen, S., & Durksen, T. L. (2013). Measuring teacher engagement: Development of the engaged teachers scale (ETS). *Frontline Learning Research*, 2, 33–52.
- Larson-Hall, J. (2010). *A guide to doing statistics in second language research using SPSS*. London: Routledge.
- Li, R., Liu, H., Chen, Y., & Yao, M. (2019). Teacher engagement and self-efficacy: The mediating role of continuing professional development and moderating role of teaching experience. *Current Psychology*. <https://doi.org/10.1007/s12144-019-00575-5>.
- Long, J. S., McKenzie-Robbles, S., Schaefer, L., Steeves, P., Wnuk, S., Pinnegar, E., & Clandinin, D. J. (2012). Literature review on induction and mentoring related to early career teacher attrition and retention. *Mentoring and Tutoring: Partnership in Learning*, 20(1), 7–26.
- Manzano Vázquez, B. (2018). Teacher development for autonomy: An exploratory review of language teacher education for learner and teacher autonomy. *Innovation in Language Learning and Teaching*, 12(4), 387–398.
- Martínez Agudo, J. D. D. (2018). *Emotions in second language teaching: Theory, research, and teacher education*. New York: Springer.
- Mayer, A. P., Donaldson, M. L., LeChasseur, K., Welton, A. D., & Cobb, C. D. (2013). Negotiating site-based management and expanded teacher decision making: A case study of six urban schools. *Educational Administration Quarterly*, 49, 695–731.
- Mercer, S., Oberdorfer, P., & Saleem, M. (2016). Helping language teachers to thrive: Using positive psychology to promote teachers' professional well-being. In D. Gabrys-Barker & D. Gałajda (Eds.), *Positive psychology perspectives on foreign language learning and teaching* (pp. 213–229). Switzerland: Springer International Publishing.
- Pearson, L. C., & Hall, B. W. (1993). Initial construct validation of the teaching autonomy scale. *The Journal of Educational Research*, 86(3), 172–178.
- Pearson, L. C., & Moomaw, W. (2006). Continuing validation of the teaching autonomy scale. *The Journal of Educational Research*, 100(1), 44–51.
- Perera, H. N., Granziera, H., & McIlveen, P. (2018). Profiles of teacher personality and relations with teacher self-efficacy, work engagement, and job satisfaction. *Personality and Individual Differences*, 120, 171–178.
- Rahimpour, H., Amirian, S. M. R., Adel, S. M. R., & Zareian, G. R. (2020). A model of the factors predicting English language teacher immunity: A path analysis. *Indonesian Journal of Applied Linguistics*, 10(1), 73–83.
- Rahmati, T., Sadeghi, K., & Ghaderi, F. (2019). English as a foreign language teacher immunity: An integrated reflective practice. *Iranian Journal of Language Teaching Research*, 7(3), 91–107.
- Schaefer, L., Hennig, L., & Clandinin, J. (2020). Intentions of early career teachers: Should we stay or should we go now? *Teaching Education*, 1–14. <https://doi.org/10.1080/10476210.2020.1730317>.
- Schutz, P. A., & Zembylas, M. (2009). *Advances in teacher emotion research: The impact on teachers' lives*. Dordrecht: Springer.
- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York: Free Press.
- Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological Reports: Employment Psychology & Marketing*, 114(1), 68–77.
- Tabachnick, B., & Fidell, L. (2013). *Using multivariate statistics* (6th ed.). Boston: Pearson.
- Teng, M. F. (2018). Teacher autonomy: A buzzword in teaching English as a foreign language. In M. F. Teng (Ed.), *Autonomy, agency, and identity in teaching and learning English as a foreign language* (pp. 21–36). Singapore: Springer.
- Thavenius, C. (1999). Teacher autonomy for learner autonomy. In S. Cotterall & D. Crabbe (Eds.), *Learner autonomy in language learning: Defining the field and effecting change* (pp. 159–163). Frankfurt am Main: Peter Lang.
- Topchyan, R., & Woehler, C. (2020). Do teacher status, gender, and years of teaching experience impact job satisfaction and work engagement? Education and Urban Society, 001312452092616, <https://doi.org/10.1177/0013124520926161>.
- Van Beek, I., Qiao, H., Schaufeli, W. B., Taris, T., & Schreurs, B. H. J. (2012). For fun, love, or money: What drives workaholic, engaged, and burned-out employees at work. *Applied Psychology: An International Review*, 61(1), 30–55.
- Wyatt, M., & Dikilitaş, K. (2016). English language teachers becoming more efficacious through research engagement at their Turkish university. *Educational Action Research*, 24(4), 550–570.

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