Occupational anxiety and self-efficacy levels among prospective teachers

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ABSTRACT

This study examined the relationship between occupational anxiety and self-efficacy levels of prospective teachers enrolled in pedagogical formation training certificate program at the faculty of education in universities under the Council of Higher Education to teach in secondary schools and high schools in Turkey, and evaluated them based on diverse variables (gender, department, high school type, educational level of parents). It was a descriptive study using survey model. The study group comprised 236 prospective teachers. Research data were gathered through “Teaching Occupation Anxiety Scale” and “Teachers’ Sense of Efficacy Scale”. The study concluded that the prospective teachers’ anxiety about the teaching profession was low, whereas they had high occupational self-efficacy, and there was a moderate, negative relationship between the two variables. The study also found that occupational self-efficacy levels of the participants differed in relation to the educational level of father.

1. INTRODUCTION

The primary teacher training faculty in Turkey is education faculty at universities. In addition, the faculty of arts and sciences, faculty of economics and administrative sciences, faculty of nursing, faculty of fine arts, and vocational school of physical education, etc. that teach subject knowledge through busy programs also play an active role in teacher training. Students graduating from these faculties must have pedagogical formation certificate given by the faculty of education and members of this faculty to take a central exam as requisite for getting appointed and to teach at schools. Formation training programs comprise the pedagogy of how students trained in areas other than the faculty of education can teach their subject knowledge. Within this program, it is compulsory to take 10 courses and 25 credits determined by the Council of Higher Education (CoHE). Currently, students who want to register in the program must pay a fee. Students who complete the program get the pedagogical formation that every faculty of education graduate already possess. Thus, they can begin to teach at schools under the Ministry of National Education (MoNE). However, the starting point of this study was a classroom observation that prospective teachers enrolled in this program have a moderate level of anxiety compared to prospective teachers at the faculty of education.

Anxiety is a critical state of feelings that brings along many negative emotions like timidity, lack of self-confidence and unhappiness, and has an adverse effect on job performance. Kyriacou and Sutcliffe maintained that anxiety is a negative condition that causes sadness in people [1]. Many researchers defined anxiety in various aspects. It is defined as a state of arousal manifesting itself through physical, emotional and cognitive differences experienced by individuals in the case of a subjective danger; a disturbing feeling...
that emerges when a strong desire or impulse seems not to achieve its purpose; an inner response showed in the case of imminent danger [2]-[4]. Turkish Language Association describes anxiety as sadness, a worrying thought, sorrow and a feeling of tension due to an unknown reason that usually stems from the idea that something bad will happen. Usually characterised as negative and causing other negative feelings, anxiety creates serious problems in terms of practising one’s profession when experienced in relation to that profession. It causes considerable damage for the persons themselves, in the process when students develop success and the self, and in terms of the sense of duty, particularly when experienced at the beginning of and during the practising of the teaching profession. Wagner reported that the anxiety levels of probationary teachers were higher than experienced teachers [5].

Sadıkoğlu, Hastürk and Polat cited the types and impacts of teachers’ occupational anxiety from a study conducted by Fuller (1969). Accordingly, teachers’ occupational concerns are classified as self-centred, task-centred and student-centred [6]. Self-centred concerns are related to such aspects as having adequate knowledge of the subject matter, sufficient pedagogical knowledge, being emotionally balanced, being objective, and success expectancy, and focuses on the problem of whether they can perform their occupation successfully. They relate to the aptitude of personal characteristics for the occupation. Task-centred concerns are relevant to such characteristics as following and applying the developments and innovations in their respective area, openness to cooperation and ability to adapt, and concentrates on practising the teaching profession effectively and sufficiently. Student-centred concerns are about aspects such as taking educational responsibilities into account, regarding student expectations, proper planning and practicing of teaching, differences into account, regarding student expectations, proper planning and practicing of teaching, and centres around the idea of being competent enough to meet student needs. Atmaca indicated prospective teachers’ concerns about the teaching occupation concentrates on certain aspects in different periods: graduation period, getting appointed, central exam and anxiety about finding a job [7].

It can be claimed that anxiety also affects motivation at work in a negative way. Thus, it can also be noted that anxiety plays a role in the motivational processes described by Hui: Aim (success-goal orientation: aim of the self or aims involving the self, learning goals, performance goals, task or goals involving a task, aims of escaping the work, social aims), intrinsic and extrinsic motivation, interest (personal and situational interest), self-planning (agency, exhaustion, self-competence, self-efficacy) [8]. Particularly its impact on self-efficacy that involves a self-evaluation process in terms of occupation brought to mind a question especially inquired about by the researcher.

Perceived self-efficacy was first proposed by Bandura in 1977 and used as a framework in behavioural and social learning theories in the subsequent years (1986, 1989), and it is the key term of Social Cognitive Theory which asserts that individuals first must have self-confidence in an area to utilise their skills in that area in an effective way [9], [10].

The concept of self-efficacy can be defined as people's beliefs about their capabilities to organise the necessary activity to display a certain performance and carry out that activity successfully, and their internal belief about the answer to the question of “What can I do?” with their skills [11]-[14]. Self-efficacy is also people’s belief that they have cognitive, motivational and behavioural resources needed for controlling events that affect their lives as well as the capability to mobilise these resources when necessary. Thus, initially used for referring to the internal belief about a situation / task dependent capacity, the concept of self-efficacy later started to be addressed as a generalised belief that people have the capability to deal with events affecting their lives.

Self-efficacy belief develops as result of the selection, evaluation and integration of knowledge coming from many sources related to efficacy. If a person has strong self-efficacy, they can be more resilient to changes. On the other hand, people who have low self-efficacy about their capabilities may think that they are vulnerable to change. People’s perceived self-efficacy influences the effort to be exerted for choosing their acts, the span of patience in solving a problem, level of anxiety and trust, and how they should think, feel, motivate themselves and act. The stronger self-efficacy, the more effort they make, and the more persistent and resistant they become to fulfil the task. Self-efficacy beliefs may also have an influence on people’s way of thinking, problem solving skills and emotional responses. People with low self-efficacy think that things are more difficult than they seem, and hence, they have a narrower point of view for everything and have difficulty in solving the problems they face. However, people with high self-efficacy are expected to feel more comfortable in difficult situations and works, and act more confidently and strongly [15], [16]. Thus, having strong and significant perceived self-efficacy increases success. People who are highly confident about their own abilities achieve difficult tasks more easily. However, those who are unaware of their skills or have doubts about them show a tendency to avoid difficult tasks [17]. Thus, it can be noted that both anxiety and self-efficacy play a significant role in developing occupational competence. Such significance is also the source of the present study.
The main aim of this study was to explore the relationship between occupational anxiety and self-efficacy levels of prospective teachers enrolled in pedagogical formation training certificate program and evaluate them based on diverse variables. To that end, the following questions were asked: (1) What are the occupational anxiety and self-efficacy levels of prospective teachers? (2) Do occupational anxiety and self-efficacy levels significantly differ based on gender, department, high school type and educational level of parents among prospective teachers? (3) Is there a significant relationship between occupational anxiety and occupational self-efficacy levels of prospective teachers?

2. RESEARCH METHOD
2.1. Study group
This is a descriptive study that was conducted by using survey model. The study group consisted of 236 prospective teachers participating in the pedagogical formation training program at a university. 62% of the participants were female (n=149). There were 78% attending (n=185) the faculty of arts and sciences, 12% (n=28) the school of physical education and sports, and 10% (n=23) the faculty of fine arts. Also 34% of the participants graduated from Anatolian high school while the mothers of 50% (n=117) and fathers of 38% (n=90) were “primary school graduate”.

2.2. Data collection tools
The research data were gathered by using the “Teaching Occupation Anxiety Scale” [18] and “Teachers’ Sense of Efficacy Scale” [19]. Teaching Occupation Anxiety Scale is a 5-point Likert type scale with 45 items and 8 factors, and all the factors explained 65.72% of total variance. The Cronbach’s alpha reliability coefficients of the factors varied between 0.94 and 0.67. Teachers’ Sense of Efficacy Scale, a 9-point Likert type measurement instrument, consists of three factors and 22 items. The Cronbach’s alpha reliability coefficient for the whole scale was .93. The present study found the alpha coefficient for both scale was .94.

2.3. Data analysis
As the results of examinations found that data sets did not fulfil the premises of normality, non-parametric tests were used in the analyses. In the analysis of TOAS, mean scores were taken into consideration. Accordingly, the scoring was determined as follows: -1.80 “very anxious”; 1.81-2.60 “moderately anxious”; 2.61-3.40 “somewhat anxious”; 3.41-4.20 “slightly anxious”; 4.21-5.00 “not anxious at all”. As for the analysis of the Teachers’ Sense of Efficacy Scale, the study investigated whether the mean was close to 9, and the following scoring was used to assess the mean score: 1.00-3.67 “insufficient”; 3.68-6.34 “moderately sufficient”; 6.35-9.00 “sufficient” [20].

3. RESULTS AND DISCUSSION
Table 1 provides the results of descriptive analysis on the participants’ scores on the Teaching Occupation Anxiety Scale and Teachers’ Sense of Efficacy Scale. An analysis of Table 1 indicates that the occupational anxiety level of the prospective teachers was “slightly anxious”, and their score on the Teachers’ Sense of Efficacy Scale was “sufficient”. This result demonstrates that the participants had low occupational anxiety, whereas their occupational self-efficacy was high.

<table>
<thead>
<tr>
<th>Scales</th>
<th>n</th>
<th>$\bar{X}$</th>
<th>S.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Occupation Anxiety Scale</td>
<td>236</td>
<td>3.58</td>
<td>.69</td>
</tr>
<tr>
<td>Teachers’ Sense of Efficacy Scale</td>
<td>236</td>
<td>7.22</td>
<td>1.08</td>
</tr>
</tbody>
</table>

Table 2 presents the results of the Mann Whitney U test for the differentiation of pre-service teachers’ scores from the Teaching Occupation Anxiety Scale and Teachers’ Sense of Efficacy Scale by gender. The examination of Table 2 reveals that there was no significant difference between the participants’ scores on the Teaching Occupation Anxiety Scale and Teachers’ Sense of Efficacy Scale based on gender ($^{*}p>.05$). This result can be interpreted as that occupational anxiety and self-efficacy levels of both the female and male participants were similar.
Table 2. Results of Mann Whitney U test based on gender

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Gender</th>
<th>n</th>
<th>Mean rank</th>
<th>Rank sum</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Occupation Anxiety Scale</td>
<td>Female</td>
<td>149</td>
<td>112.28</td>
<td>16729.00</td>
<td>5554.00</td>
<td>.06*</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>87</td>
<td>129.16</td>
<td>11237.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers’ Sense of Efficacy Scale</td>
<td>Female</td>
<td>149</td>
<td>113.61</td>
<td>16928.00</td>
<td>5753.00</td>
<td>.15*</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>87</td>
<td>126.87</td>
<td>11038.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 presents the results of the Kruskal Wallis test for the differentiation of pre-service teachers’ scores from the Teaching Occupation Anxiety Scale and Teachers’ Sense of Efficacy Scale by department. According to Table 3, no significant difference was found between the occupational anxiety and self-efficacy scores of the participants in relation to their department (*p>.05). In other words, prospective teachers’ occupational anxiety and self-efficacy levels did not differ based on department.

Table 3. Results of the Kruskal Wallis test based on department

<table>
<thead>
<tr>
<th>Scales</th>
<th>Department</th>
<th>n</th>
<th>Mean rank</th>
<th>Sd</th>
<th>Χ²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Occupation Anxiety Scale</td>
<td>Turkish language and literature</td>
<td>63</td>
<td>110.26</td>
<td>4.27</td>
<td>3.89</td>
<td>.13*</td>
</tr>
<tr>
<td></td>
<td>English language and literature</td>
<td>49</td>
<td>112.52</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Arabic language and literature</td>
<td>41</td>
<td>118.57</td>
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<tr>
<td></td>
<td>Sports management</td>
<td>28</td>
<td>106.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>History</td>
<td>32</td>
<td>137.25</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music</td>
<td>23</td>
<td>147.13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers’ Sense of Efficacy Scale</td>
<td>Turkish language and literature</td>
<td>63</td>
<td>103.94</td>
<td>4</td>
<td>9.92</td>
<td>.07*</td>
</tr>
<tr>
<td></td>
<td>English language and literature</td>
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<td>109.80</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Arabic language and literature</td>
<td>41</td>
<td>128.72</td>
<td>4</td>
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</tr>
<tr>
<td></td>
<td>Sports management</td>
<td>28</td>
<td>125.02</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>History</td>
<td>32</td>
<td>118.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music</td>
<td>23</td>
<td>150.61</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the Kruskal Wallis test conducted in order to determine whether the teacher candidates' high school type variables have a significant difference on the occupational anxiety and self-efficacy scale scores are presented in Table 4. According to Table 4, the prospective teacher’s scores on both scales did not differ significantly based on the type of high school they graduated from (*p>.05).

Table 4. Result of the Kruskal Wallis test based on high school type

<table>
<thead>
<tr>
<th>Subscales</th>
<th>High school type</th>
<th>n</th>
<th>Mean rank</th>
<th>Sd</th>
<th>Χ²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Occupation Anxiety Scale</td>
<td>Common high school</td>
<td>67</td>
<td>110.33</td>
<td>4</td>
<td>2.47</td>
<td>.64*</td>
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<tr>
<td></td>
<td>Anatolian high school</td>
<td>81</td>
<td>126.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anatolian religious high school</td>
<td>34</td>
<td>119.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anatolian vocational high school</td>
<td>29</td>
<td>120.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>25</td>
<td>110.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers’ Sense of Efficacy Scale</td>
<td>Common high school</td>
<td>67</td>
<td>115.39</td>
<td>4</td>
<td>.44</td>
<td>.97*</td>
</tr>
<tr>
<td></td>
<td>Anatolian high school</td>
<td>81</td>
<td>120.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anatolian religious high school</td>
<td>34</td>
<td>123.76</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anatolian vocational high school</td>
<td>29</td>
<td>117.28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>25</td>
<td>115.70</td>
<td></td>
<td></td>
<td></td>
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</table>

Table 5 presents the results of the Kruskal Wallis test for the differentiation of pre-service teachers' scores from the Teaching Occupation Anxiety Scale and Teachers’ Sense of Efficacy Scale by educational level of parents. Table 5 shows that there was no significant difference between the participants’ occupational anxiety and self-efficacy scale scores based on the educational level of mother (*p>.05), whereas the scores on the Teachers’ Sense of Efficacy Scale differed significantly based on the educational level of father (p<.05; p=.02). To determine from which educational levels such difference derived, the study performed the Mann Whitney U test. In this phase, Bonferroni correction was used to reduce Type I errors, and the significance level was set at 0.008. (.05/6=.008). The results of analyses revealed that the participants whose father graduated from primary school or secondary school had lower occupational self-efficacy compared to those whose fathers were university graduate. (primary school-university U=329.50, p=.004; secondary school-university U=125.50, p=.002).
To determine the relationship between occupational anxiety and self-efficacy, the study utilized Spearman's correlation method. The analysis of Table 6 reveals a negative, moderate significant relationship between occupational anxiety and occupational self-efficacy levels of the prospective teachers. As a result of these findings, the present study concluded that prospective teachers' occupational anxiety level was low while they had high occupational self-efficacy. The quality of education the participants received, their personal characteristics and attitudes toward the occupation may have an impact on reaching this conclusion. There are studies indicating that prospective teachers had low occupational anxiety [6], [21], [22], and high self-efficacy [23], [24]. Considering the negative impact of anxiety on performance, success, physiological and psychological health, and attitudes, a low level of occupational anxiety in prospective teachers shows they have self-confidence in performing their profession. In addition, the participants' having high occupational self-efficacy has positive implications for the effectiveness of education and teaching, because teacher's self-efficacy mirrors their beliefs and views about how students can learn better [25] and demonstrates their perceived self-efficacy in organising effective learning settings and carrying our various activities [26].

One of the results of this study was that gender was not a significant variable in terms of the participants' occupational anxiety levels. This may have resulted from the fact that women and men have increasingly similar social roles because of the time we live in. In the age of information and technology, every man and women are supposed to have the knowledge and skills to live on their own, make their own decisions, practice a profession, and understand the problems relating to their profession or daily life and solve them without any concerns and fears. Indeed, similar results were also found in the studies by Gümrükçü-Bilgici and Deniz; Dursun and Karagün; Bozdam and Taşğın, and Temiz [27]-[30]. Furthermore, the present study also indicated that gender was not a significant variable in relation to the participants’ occupational self-efficacy. Uysal and Kösemen proposed that self-efficacy is nourished by experience and indirect practices while self-efficacy beliefs are influenced by the goals individuals set for themselves [31]. The finding of the present study that the participating women and men had similar goals during the pedagogical formation training and had similar learning experiences to achieve these goals may be the reason.
for that their occupational self-efficacy levels did not differ based on gender. The studies by Bakaç and Özen, and Elkatmış, Demirbaş and Ertuğrul also reported similar findings [32], [33].

The results of the study demonstrated that occupational anxiety and self-efficacy levels of the participants did not differ significantly based on their department. The factors leading to this result can be that the participants did not have sufficient time and opportunities for professional development since they had not completed their pedagogical formation training yet, and had not received “school experience” and “teaching practice” courses which are among major courses at the faculty of education enabling prospective teachers gain pre-service practical experience.

Another finding of the study was that the type of high school the participants graduated from did not cause any significant difference in their occupational anxiety. This may have resulted from the fact that it had been a while since they graduated from high school, or their high occupational self-efficacy. In parallel with this finding, Dursun and Karagün found that prospective teachers’ occupational anxiety did not differ based on high school type. Actually, another reason for that may be the size of the study group [28]. The majority of the participants in the present study graduated from Anatolian high school (n=81) and common high school (n=67). And those graduating from these schools mostly go to such departments as Turkish language and literature (n=63), Arabic language and literature (n=41), History (n=32), and English language and literature (n=49) which do not require much practical experience. Having a larger sample in terms of department and high school type may provide different results. The relevant literature comprises studies indicating significant differences between high school type and occupational anxiety among prospective teachers studying various bachelor programs [34]. The present study determined that high school type did not cause any significant difference in the participants’ occupational self-efficacy. The introduction of professional teaching knowledge and skills in undergraduate level in Turkey is the reason for reaching such a conclusion in the present study. In fact, Anatolian Teacher Training High Schools were established at secondary school level in the past in Turkey to provide human resource to teacher training institutions at undergraduate level, and to help prospective teachers develop positive attitudes toward the profession. However, these schools became science, social sciences and Anatolian high schools in 2014, which resulted in providing students with professional teaching knowledge, skills, attitudes and self-efficacy only at undergraduate level.

The study also revealed that the educational level of the participants’ parents did not cause any significant difference in occupational anxiety levels, whereas the father’s educational level did make a significant difference in their occupational self-efficacy level. It was found that the prospective teachers whose fathers graduated from “university” had higher occupational self-efficacy than those whose fathers were “primary school” or “secondary school” graduate. This finding may have resulted from the influence of families on the prospective teachers’ choice of profession. Indeed, Övet suggested that having a teacher in the family or immediate circle may be one of the reasons for preferring this occupation [35]. On the other hand, Akbayır maintained that parents respond positively to students’ preferring teaching as a career [36]. To link these findings with the result of the present study, it can be claimed that having a practising teacher in the family or immediate circle may provide prospective teachers with self-confidence, and may have resulted in having no concerns regarding the occupation. Eret-Orhan and Ok examined the demographic characteristics of prospective teachers enrolled in the faculty of education, and discovered that some of the participants’ fathers were teacher (7.9%) [37]. As a potential factor affecting the choice of occupation, this finding may also apply to the present study. That is to say, individuals whose fathers are teacher may join the pedagogical formation training program to become a teacher, and it may affect their occupational self-efficacy. However, there is need for further research aimed at exploring whether the occupation of father is among the factors predicting teacher’ self-efficacy level.

Finally, the study found a significant moderate, negative relationship between occupational anxiety and self-efficacy levels of the prospective teachers. This finding may be interpreted as that occupational anxiety will decline as occupational self-efficacy increases. People’s belief about achieving a task, namely their self-efficacy may cause a feeling of satisfaction with the task while the opposite may cause stress and anxiety. Tschanne-Moran and Hoy asserted that high self-efficacy helps teachers feel less anxious, be more resilient to failure, and be less critical of student mistakes [26].

4. CONCLUSION

As a result, it was determined that the level of occupational anxiety about the prospective teachers participating in the pedagogical formation training program was low and occupational self-efficacy levels were high. In addition, it was determined that the level of occupational anxiety and self-efficacy of the prospective teachers did not differ significantly according to the gender, the department that educated, the type of high school. Parents education status variable did not cause any significant difference in the level of
occupational anxiety of teacher candidates, while father's education status variable caused a significant difference in the teacher self-efficacy level of the teacher candidates. The level of occupational self-efficacy of prospective teachers whose fathers graduated from “university” had higher than those whose fathers graduated primary school and secondary school. It is an important finding of the study that there is a negative correlation between the level of professional anxiety and self-efficacy of pre-service teachers.

5. SUGGESTION

Similar studies should also be conducted on prospective teachers studying at the faculty of education. Occupational anxiety and self-efficacy levels of participants should be analyzed, and various arrangements (inviting teachers with considerable occupational experience to the classroom, giving more importance and time to the applied aspects of the courses on professional teaching knowledge, etc.) in teaching-education process, when necessary.

A similar study should be conducted on a larger study group with more diverse aspects (diversity in high school, diversity in department, diversity in the occupations of parents, diversity in family income, etc.), and hence both the validity of the present study results should be tested and contributions should be made to the relevant literature.

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