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ARTICLE



Pre-service teachers' sentiments, attitudes and concerns about inclusive education in Turkey

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ABSTRACT

This investigation focused on pre-service teachers' sentiments, attitudes, and concerns regarding inclusive practices in Turkey. A total of 406 students from different departments of a university school of education participated in this study. The Sentiments, Attitudes and Concerns about Inclusive Education Revised (SACIE-R) scale was used as a data collection tool to measure pre-service teachers' engagement with and perceptions of inclusion and assess the rationales underlying their beliefs about and support for the practice. The findings indicated that there is a significant difference in terms of pre-service teachers' attitudes, concerns, and sentiments regarding inclusion among departments and according to respondents' levels of confidence in teaching students with disabilities. The pre-school education teacher candidates had more positive attitudes towards inclusion. The findings revealed that pre-service teachers need more opportunities to interact with and teach students with special needs during their school practicums. They also revealed that pre-service teachers need to have experience and confidence as well as knowledge about legislation and policies related to inclusion.

KEYWORDS

Inclusive education; pre-service teacher; attitude; sentiment; concerns

Introduction

Acknowledging that all individuals are different from each other and ensuring that they have equal opportunities in education remains a worldwide challenge (European Agency for Development in Special Needs Education 2011). Inclusive education, which promotes respect for individual differences and equal opportunities for all, responds to the diverse needs of learners by increasing their participation in education, culture and society and reducing discrimination within the education system (Florian and Black-Hawkins 2011; Murdaca, Oliva, and Costa 2018). According to UNESCO (2015), inclusive education, as a dynamic approach of responding positively to pupil diversity rather than seeing individual differences as problems, puts the right to education into action by reaching out to all learners, respecting their diverse needs, abilities and characteristics and eliminating all forms of discrimination in the learning environment. In Turkey, the concept of inclusive education is defined as a focus on providing equal learning opportunities to all children and young people with different cultural, social and learning backgrounds, taking into

account their individual differences (The Ministry of National Education [MONE] 2018). In general, inclusive education emphasises the right of all children, with or without special needs, to have equal access to the same social, cultural and educational opportunities in the same educational settings as their peers (Ferguson 2008; Dyson, Howes, and Roberts 2004).

It is argued, therefore, that mainstream schools must become capable of educating all children in their local communities (Meijer and Watkins 2019; Opertti, Walker, and Zhang 2014). Achieving equal access through accommodations and following universal design principles is considered as the basic condition of inclusive education in mainstream schools (Ainscow, Chapman, and Hadfield 2020; Jordan, Schwartz, and McGhie-Richmond 2009). UNESCO's Salamanca Statement (2015) concluded that, 'Regular schools with [an] inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system' (UNESCO 2015). As this key passage indicates, there is an *educational justification* for ensuring adequate accessibility in schools. It is more likely that the learning of all students will benefit from an approach that is diversified according to the needs of students and individual learning performance is prioritised over standardisation in education. *Social justification* is based on the premise that inclusive education will succeed by creating an attitude that supports change for a more just society. *Economic justification* means that it is likely to be less costly to establish and maintain inclusive schools which educate all children together.

The effectiveness of inclusion depends on the schools, the teachers, support for effective teaching, and other external variables (Engelbrecht et al. 2013; Forlin et al. 2011). Kaczmarek and Rakap (2010) emphasises ways to accommodate children with special educational needs, teaching strategies and curriculum adaptations as well as providing support services. Long-term positive effects of inclusive schooling may be realised by providing an environment in which all children make friends with each other, developing a culture of respect and belonging, and giving children the opportunity to learn about and accept individual differences (McLeskey and Billingsley 2008; Savolainen et al. 2012). However, all these positive outcomes depend on teachers' attitudes towards and perceptions of inclusive education (Hernandez, Hueck, and Charley 2016; Sucuoğlu, Akalin, and Sazak-Pinar 2010). Thus, it is important to examine the potential social and psychological effects of the inclusive classroom environment not only on students with disabilities and their non-disabled peers, but also on the teachers' emotions, attitudes, and concerns related to teaching in inclusive classrooms (Alexiadou and Essex 2016; Özokçu 2018; Sucuoğlu et al. 2014; Yildiz et al. 2012).

The concerns and attitudes held by pre-service and in-service teachers regarding inclusive education and their degree of comfort with interaction with students with disabilities have been a recent focus of research due to their potentially large impact on the successful implementation of inclusive education (Bhatnagar and Ajay 2014; Sharma et al. 2006). Because pre-service teachers' attitudes towards students with special education are among the most important factors affecting the success of students in inclusive classrooms, it is particularly important to investigate these (Monsen, Ewing, and Boyle 2015; Pearson et al. 2003).

Teachers' attitudes towards inclusive education are associated with a multiple of demographic factors such as a) teachers' characteristics (e.g., age, gender, teaching experience, number of special education courses taken), (b) student-related factors (e.g., types and nature of the children's disabilities) and (c) environmental factors (e.g., availability of support staff and access to instructional materials) (Berry 2011; Gunnþórsdóttir & Jóhannesson, 2014). Conflicting findings have been reported on the relationship between demographic variables and teachers' attitudes. Sharma et al. (2008) and Van Reusen, Shoho, and Barker (2000) reported that teachers with special education backgrounds or training and those who already have positive attitudes towards students with disabilities may be predisposed to seek out additional inclusive education practices and be more willing to be assigned to inclusive classrooms. On the other hand, Avramidis, Bayliss, and Burden (2000) and Orakçı et al. (2016) reported that gender and special education training did not affect teachers' attitudes towards inclusive education significantly. Of the moderating factors observed in their studies, only the differences in teachers' branches were found to be of significance.

In an examination of the attitudes of high school teachers in Australia, Boyle, Topping, and Jindal-Snape (2013) found that inclusive education policies needed to be aligned with the views of practising teachers. They also suggested that intervention is required with mid-career teachers to support their efforts to include children with special needs in their classes and to prevent the possibility of teachers leaving the profession. (Boyle, Topping, and Jindal-Snape 2013; Rakap and Kaczmarek, 2010). In a study of the attitudes of Serbian preschool, primary, middle and high school teachers towards inclusive education for children with special educational needs, Galović, Brojčin, and Glumbić (2014) determined that high school and preschool teachers as well as teachers with previous positive experience working in an inclusive environment reported more positive attitudes than those from primary and middle schools and those with negative experiences with inclusive practices.

Generally, successful implementation of effective inclusive teaching practices is contingent on teachers' positive attitudes towards inclusive education (Berry 2011; Goodman and Burton 2010). Symeonidou and Phtiaka (2009) found that variables such as gender, interactions with persons with disabilities, knowledge about local legislation, and length of relevant training had significant relationships with teachers' perceived teaching-efficacy and their attitudes towards inclusive education. Changes in educational policies essentially require changes in the mindsets of teachers. Murdaca, Oliva, and Costa (2018) argue that their training should prepare teachers to take greater responsibility for providing a participatory and relevant school experience for all students, without exception and to enable teachers to experience new multidimensional educational models. For these reasons, in this study the Sentiments, Attitudes and Concerns about Inclusive Education Revised (SACIE-R) Scale (Forlin et al. 2011) was used to measure pre-service teachers' perceptions of inclusion in relation to various demographic variables. In this context, answers to the following research questions were sought:

- (1) What are the levels of sentiments, attitudes, and concerns of pre-service teachers regarding inclusion?
- (2) How do the pre-service teachers' levels of sentiments, attitudes, and concerns differ in relation to different variables?

Method

Research design and sample of the study

Descriptive survey research, a quantitative research method, was used in this study. Descriptive survey research is based on the opinions of participants about a situation or event to determine their interests, abilities, attitudes, etc (Patton 2002). A translation of the SACIE-R into Turkish by Bayar, Özaşkın, and Bardak (2015) was used as a data collection tool. The SACIE-R has strong psychometric properties, including test-retest, good internal reliability, and acceptable cross-cultural validity. The Attitudes Towards Inclusive Education Scale (ATIES) and the Interactions with Disabled Persons (IDP) scale are 6-point scales and the Concerns about Inclusive Education Scale (CIES) is a 4-point scale. The 60 items of those scales were reduced to a 19-item scale through statistical data reduction techniques based on an examination of international data (Forlin et al. 2011). The 19-item scale solicited responses on a forced-choice 4-point Likert scale (1 = Strongly Agree, 2 = Agree, 3 = Disagree, and 4 = Strongly Disagree) designed to eliminate a neutral midpoint response. The Cronbach alpha value for the 19-item scale was 0.83. The 19 items of this scale were then reduced to 15 items. The first part of the survey elicited demographic information, including the pre-service teachers' gender, their levels of interaction with students who need special education, the departments in which they were studying, the amount of education they had received for dealing with students with special education needs, their levels of knowledge about local legislation and policies regarding students with special education needs, their levels of experience working with disabled individuals, and their levels of self-confidence in working with disabled individuals. The scale was consisted of the 15 4-point Likert items covering three components: (1) Sentiments about engaging with students with special needs, (2) Attitudes (acceptance of students with different support needs), and (3) Concerns about inclusive education, the overall Cronbach Alpha reliability of the Turkish version of the scale was .88, and .86 for Sentiments, .88 for Attitudes, and .85 for Concerns. These three components accounted for 61.454% of the total variance (Sentiments, 27.860%; Attitudes, 18.481%; and Concerns, 15.113%). These values indicate that the scale is reliable and can be used with confidence.

The participants were recruited using convenience sampling methods. The inclusion criteria for students were to be active at the time of the data collection, to have no disability or illness preventing them from completing the questionnaire on their own, and to accept participation in the study. The first two reflected the focus of the study on the perceptions of pre-service students of students with special needs. The sample comprises 406 pre-service teachers studying at two public universities, one in the east and one west of Turkey, in the 2019–2020 academic year. Students of different socio-economic levels were included. The demographic characteristics of the sample are as follows (Table 1): Gender: 71.9% female and 28.1% male; Department: 28.8% Preschool Education, 17% Turkish, 24.1% General Teacher Education, 12.1% Social Studies 5.9% Science Education, and 12.1% Elementary Mathematics Education; Socio-economic status: 7.9% very low, 22.9% low, 51.7% middle, and 15.8% high. At the time of the study, 44.6% were in interaction with students with special education needs and 55.4% were not, and 1.7% reported being very self-confident in working with disabled individuals. With regard to experience in special education, 36.2% of them had no experience. 55.9% had little

Table 1. Demographic of the sample.

		f	%		f	%	
Gender	Female	292	71.9	Level of interaction with disabled individuals	Yes	181	44.6
	Male	114	28.1		No	225	55.4
Department	Preschool	117	28.8	Level of attending special education courses	Never	147	36.2
	Turkish	69	17.0		Little	227	55.9
	Classroom Teacher	98	24.1	Top (at least 40 hours)	32	7.9	
	Social Science	49	12.1	Never	49	12.1	
	Science	24	5.9	Weak	135	33.3	
	Elementary Mathematics	49	12.1	Middle	184	45.3	
Self-confidence in working students with special needs	Very low	32	7.9	Good	32	7.9	
	Low	93	22.9	Very good	6	1.5	
	Middle	210	51.7	Never	267	65.8	
	High	64	15.8	Little	127	31.3	
	Very high	7	1.7	Top (at least 30 days)	12	3.0	

Table 2. Sentiment, attitude and concerns level of the pre-service teachers.

Scores	\bar{X}	SD	Min	Max
SACIE-R total score	2.63	.32	1.33	3.66
Sentiments subscale	2.78	.46	1.4	4
Attitude subscale	2.69	.45	1	4
Concerns subscale	2.41	.44	1	4

experience, and 7.9% had considerable experience. Also 65.8% had no experience in providing education to students with special education needs, 31.3% had little experience, and 3% had considerable experience concerning knowledge of local legislation and policies regarding students with special education needs, 12.1% had no knowledge, 33.3% had little knowledge, 45.3% had moderate knowledge, had 7.9% good knowledge and 1.5% had considerable knowledge.

Data analysis

The data were analysed in SPSS-21. As the items (1, 2, 4, 5, 7, 9, 10, 11, 13, 14) in sentiments and concerns subscales contained negative expressions, they were reversed scored. The Kolmogorov-Smirnov test was used to determine whether the study group showed normal distribution because the kurtosis and skewness values and group size were more than 50. It was determined that the study group showed a normal distribution, and parametric tests were used in the analysis of the data. An independent groups t-test was used to determine whether the pre-service teachers' sentiments, attitudes, and concerns differed according to gender and level of interaction with students who need special education. Variance analysis (ANOVA) was used to analyse data related to the pre-service teachers' departments, their levels of education, their levels of experience dealing with disabled students, their levels of experience working with disabled students, their levels of self-confidence in working with disabled students, and their levels of knowledge about local legislation and policies. In cases of differentiation, a Tukey multiple comparison test was used to determine which groups differed.

Table 3. Sentiments, attitudes and concerns scores according to gender and level of interaction.

Scores	\bar{X}	SD	\bar{X}	SD	t	p
	Male (N = 292)		Female (N = 114)			
Gender						
SACIE-R total score	39.83	5.07	38.64	4.52	2.19	.029
Sentiments subscale	14.11	2.33	13.42	2.25	2.70	.007
Attitudes subscale	13.55	2.35	13.32	2.05	.904	.367
Concerns subscale	12.16	2.29	11.88	2.08	1.11	.267
	Yes (N = 181)		No (N = 225)			
Level of interaction						
SACIE-R total score	40.63	4.95	38.58	4.75	4.24	.000
Sentiments subscale	14.31	2.18	13.61	2.39	3.04	.002
Attitudes subscale	13.88	2.30	13.16	2.19	3.23	.001
Concerns subscale	12.43	2.16	11.80	2.26	2.82	.005

Findings

In this section, the levels of pre-service teachers’ sentiments, attitudes, and concerns regarding inclusion in relation to demographic variables (department, gender, level of interaction with students in need of special education, level of attending special education courses, local legislation on students in need of special education and the level of knowledge about policies, the level of self-confidence in working disabled students, level of experience in working with disabled individuals) are reported.

Findings are presented in Table 2, which shows that the average total score of the pre-service teachers on the SACIE-R was $\bar{x} = 2.63$, which indicates a relatively positive perspective on inclusive education. The highest score was on the sentiments subscale ($\bar{x} = 2.78$), followed by attitudes ($\bar{x} = 2.69$) and concerns ($\bar{x} = 2.41$).

Findings regarding the distribution of pre-service teachers’ sentiments, attitudes, and concerns levels according to demographic variables

The pre-service teachers’ sentiments, attitudes, and concerns level scores on demographic variables are given below. An independent groups t-test was used to reveal differences in terms of gender and level of interaction with students who need special education.

As seen in Table 3, participants’ total scores and sentiments subscale scores show that gender was an important variable in perceptions of student with disabilities [$t(404) = 2.19$, $p < .05$; $t(404) = 2.70$, $p < .05$]. However, there is no significant difference in attitude and concern subscale scores of the participants according to gender variable [$t(404) = .904$, $p > .05$; $t(404) = 1.11$, $p > .05$]. It is also shown that female teacher candidates’ perception was more positive than those of male teacher candidates at all points. This finding can be interpreted as there is a significant relationship between perception and gender.

As shown in Table 3, level of interaction with disabled students was a significant variable in pre-service teachers’ sentiments, attitudes, and concerns [$t(404) = 4.24$, $p < .05$; $t(404) = 3.04$, $p < .05$; $t(404) = 3.23$, $p < .05$; $t(404) = 2.82$, $p < .05$]. Participants had opportunities to observe and interact with third and fourth grade disabled students in

Table 4. Sentiments, attitudes and concerns scores according to the departments.

Scores	Preschool (N = 117)		Turkish (N = 69)		Classroom Teacher (N = 98)		Social Science (N = 49)		Science (N = 24)		Elementary Mathematics (N = 49)		f	p
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD		
SACIE-R total score	41.02	5.05	38.43	5.24	39.74	4.70	37.26	4.48	38.58	3.91	39.53	4.57	5.348	.000
Sentiments subscale	14.42	2.50	13.30	2.26	14.08	2.25	13.04	1.99	13.50	2.18	14.38	2.13	4.273	.001
Attitudes subscale	13.95	1.99	13.43	2.53	13.68	2.48	12.83	2.10	12.66	1.71	13.10	2.22	2.937	.013
Concerns subscale	12.64	2.21	11.69	2.35	11.97	2.04	11.38	2.28	12.41	1.83	12.04	2.38	3.037	.011

Table 5. Sentiments, attitudes and concerns scores according to level of attending special education courses.

Scores	Never (N = 147)		Little (N = 227)		Top (N = 32)		f	p
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD		
SACIE-R total score	37.84	4.58	40.30	4.91	41.34	4.81	14.376	.000
Sentiments subscale	13.45	2.26	14.18	2.31	14.28	2.50	4.803	.009
Attitudes subscale	12.93	2.40	13.73	2.12	14.28	2.17	7.805	.000
Concerns subscale	11.44	2.26	12.39	2.16	12.78	2.01	10.105	.000

their education courses and perhaps interacted with disabled students in other situations. Also, pre-service teachers who interacted with students who need special education were more positive than the pre-service teachers who do not interact with these students on all points. This finding can be interpreted as a significant relationship between sentiments, attitudes, and concerns regarding inclusion and interactions with students who need special education. A directional variance analysis (ANOVA) was used to determine differences in terms of teacher candidates' departments, levels of special education coursework, levels of knowledge about local legislation and policies, levels of self-confidence in working with students with special education needs, and levels of experience of working with students with special education needs. It is seen that there is a significant difference between teacher candidates' level of interaction with students who need special education between both their total score and their sentiments, attitudes, and concerns scores [$t(404) = 4.24, p < .05$; $t(404) = 3.04, p < .05$; $t(404) = 3.23, p < .05$; $t(404) = 2.82, p < .05$]. When the averages of these data were analysed, it was observed that the pre-service teachers who interact with students who need special education are more positive than the pre-service teachers who do not interact at all points. This finding can be interpreted as a significant relationship between sentiments, attitudes, and concerns about inclusion and interacting with students who need special education. In order to determine the differentiation in terms of teacher candidates' differentiation in terms of the department they are studying, the level of education they receive to work with students who need special education, the level of knowledge about local legislation and policies, the level of self-confidence in teaching students with special education needs, and the experience of working with students with special education needs directional variance analysis (ANOVA) was used.

As shown in Table 4, The pre-service teachers' sentiments, attitudes, and concerns subscale scores differed greatly according to departments [$F(5-400) = 5.348, p < .05$; $F(5-400) = 4.273, p < .05$; $F(5-400) = 2.937, p < .05$; $F(5-400) = 3.037, p < .05$]. According of

Table 6. Sentiments, attitudes and concerns scores according to the level of knowledge on legislation and policy on special education.

Scores	Never (N = 49)		Weak (N = 135)		Middle (N = 184)		Good (N = 32)		Very Good (N = 6)		F	p
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD		
SACIE-R total score	37.73	5.61	38.03	4.15	40.57	4.70	41.21	5.48	44.50	6.28	9.996	.000
Sentiments subscale	13.69	2.34	13.34	2.17	14.28	2.28	14.34	2.58	15.50	3.01	4.386	.002
Attitudes subscale	12.83	2.79	13.18	2.15	13.78	2.16	13.96	2.34	14.00	.89	2.867	.023
Concerns subscale	11.20	2.51	11.50	1.94	12.50	2.06	12.90	2.53	15.00	3.22	10.269	.000

Table 7. Sentiment, attitudes and concerns scores according to the level of self-confidence in working students with special education needs.

Scores	Very little (N = 32)		Little (N = 93)		Middle (N = 210)		High (N = 64)		Very High (N = 7)		f	p
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD		
SACIE-R total score	36.31	5.50	37.04	4.08	39.88	4.14	43.04	5.33	42.71	6.65	22.147	.000
Sentiments subscale	12.50	2.34	13.08	2.04	14.08	2.15	15.17	2.45	15.42	2.82	12.910	.000
Attitudes subscale	13.50	2.68	12.77	2.18	13.46	2.07	14.48	2.42	14.57	2.43	6.070	.000
Concerns subscale	10.31	2.59	11.18	1.83	12.33	1.91	13.39	2.47	12.71	3.19	17.445	.000

Table 8. Sentiment, attitudes and concerns according to level experience in working students with special needs.

Scores	Never (N = 267)		Little (N = 127)		Top (N = 12)		f	p
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD		
SACIE-R total score	38.71	4.64	40.90	5.09	42.08	6.17	10.629	.000
Sentiments subscale	13.74	2.21	14.25	2.50	14.33	2.80	2.268	.105
Attitudes subscale	13.29	2.31	13.83	2.07	14.00	2.95	2.725	.067
Concerns subscale	11.66	2.17	12.81	2.07	13.75	2.66	15.810	.000

the Tukey test, the perceptions of pre-service teachers' in the preschool education department were more positive than those of students studying in the Turkish and social studies departments. Similarly, it is seen that the general education department pre-service teachers had more positive attitudes than those in the social studies department.

As shown in Table 5, level of attending special education coursework was a significant variable in pre-service teachers' sentiments, attitudes and concerns [$F(2-403) = 14.376, p < .05$; $F(2-403) = 4.803, p < .05$; $F(2-403) = 7.805, p < .05$; $F(2-403) = 10.105, p < .05$]. According to the results of the Tukey test, pre-service teachers who have taken special education courses are more positive than those who have not.

As shown in Table 6, the pre-service teachers' level of knowledge about disability policies regarding special education is a determining factor in their sentiments, attitudes, and concerns [$F(4-401) = 9.999, p < .05$; $F(4-401) = 4.386, p < .05$; $F(4-401) = 2.867, p < .05$; $F(4-401) = 10.269, p < .05$]. The Tukey test results indicate that the perceptions of the pre-service teachers who have very good, good or moderate knowledge about local legislation and policies are more positive than those who have poor or no knowledge.

As seen in Table 7, the level of self-confidence in working with disabled students was a significant difference in sentiment, attitudes, and concerns subscale [$F(4-401) = 22.147, p < .05$; $F(4-401) = 12.910, p < .05$; $F(4-401) = 6.070, p < .05$; $F(4-401) = 17.445, p < .05$]. According to the Tukey test, pre-service teachers who have very high, high, and middle self-confidence working with disabled students are more positive than those who have very low and low self-confidence. Likewise, it is seen that pre-service teachers who have a high level of self-confidence have more positive perception than those with a middle level of self-confidence.

Table 8 shows that level of experience working with students with special needs was a significant variable in the pre-service teachers' concerns subscale [$F(2-403) = 10.629, p < .05$; $F(2-403) = 15.810, p < .05$]. However, there was no significant difference between sentiment and attitudes scores [$F(2-403) = 2.269, p > .05$; $F(2-403) = 2.725, p > .05$]. According to the Tukey test, the perceptions of the students who had either a high or a moderate level of experience teaching students with special were more positive than the perceptions of those who had no experience.

Results and discussion

In this study, pre-service teachers' sentiments, attitudes, and concerns about inclusion were analysed. Overall, the participating pre-service teachers scored 2.63 out of 4 points

on the SACIE-R, which indicates moderately favourable perceptions of inclusion. The highest average score, 2.78, was on the sentiments subscale, followed by 2.69 on the attitudes subscale and 2.41 on the concerns subscale. with points. Variables that affected the teacher candidates' perceptions of for inclusion were gender, level of interaction with disabled students, department, level of special education coursework, level of knowledge about local legislation and policies regarding students with special needs, level of self-confidence in working with students with special needs, and level experience in working students with special needs.

Female participants had a more positive perceptions of inclusion than males. This finding is similar to results obtained in other studies (Avramidis, Bayliss, and Burden 2000; Kumar 2016; Loreman, Deppeler, and Harvey 2005). However, some studies have found that gender does not significantly affect inclusion education, inclusion practices, or perceptions of inclusion students (Özokçu 2018; Çıkılı and Karaca 2019; Karasu 2019).

Pre-service teachers who had interacted with students with special needs had more positive perceptions than those who had not had interactions with such students. This finding is similar to those of studies showing that the perceptions of teachers who had previously worked disabled more positive than teachers who have not worked with them (Loreman, Deppeler, and Harvey 2005; Özokçu 2018; Avramidis, Bayliss, and Burden 2000; Shaukat, Sharma, and Furlonger 2013; Bek et al., 2009). Nketsia and Saloviita (2013) however have found no significant relationship between teachers' perceptions and their interactions with disabled students.

Other pre-service teachers' perceptions were more positive than those of the students studying in the Turkish and social studies departments, who had the most negative sentiments and concerns about inclusion, while pre-service teachers studying in the science education department have the most negative attitudes. The most notable finding is that the preschool teachers' perceptions were more positive than those of students studying in the social studies department. These results are similar to Çıkılı and Karaca (2019) findings that the pre-service teachers studying in the social sciences department had the most negative sentiments about inclusive education, the pre-service teachers studying in the preschool department had the most negative attitudes, and those in the psychological counselling and guidance department had the most concerns. Laarhoven et al. (2007) concluded that the pre-service teachers' perceptions in the special education department had more positive perceptions than the students studying in the other departments.

Countries have deployed efforts to make their education systems more inclusive of persons with disabilities and to remove barriers that prevent children with disabilities from accessing education both within and outside the education system. In this sense, raising disability awareness beginning in an early childhood is more important than legal regulations. Therefore, pre-school teachers have a great responsibility to increase young children's awareness of accepting each other (UNESCO 2015).

Pre-service teachers who had taken special education course had more positive perceptions than those who had not. This finding is consistent with other studies showing that there is a significant relationship between teachers' concern about and attitudes towards inclusive education and the variable of having taken special education courses (Berry 2011; Bayar and Üstün 2017; Karasu 2019; Özokçu 2018).

Pre-service teachers who have very good, good, and moderate knowledge about local legislation and policies related to disabled students have more positive perceptions than those who have weak or no knowledge. According to the findings, while the level of knowledge about local legislation and policies regarding disabled caused a difference in pre-service teachers' sentiments and concerns, it did not make a difference in their attitudes. These results accord with other studies (Shaukat, Sharma, and Furlonger 2013; Subban and Sharma 2006) that found that the more knowledge teachers have about the laws and policies regarding inclusive education, the more positive are their perceptions towards inclusion.

Pre-service teachers who had very high, high, and mid-level self-confidence in working with disabled students were more positive than those who had low and very low self-confidence. Also as the pre-service teachers' self-confidence increased, their levels of concerns decreased. Özköçü (2018) also concluded that the attitudes of teachers who have more self-confidence in working with students with special needs are more positive.

Finally, it was concluded that the pre-service teachers' perceptions of inclusion were significantly related to the variable of experience working with disabled students. It was found that pre-service teachers who had either high level or some experience were more positive than those who had no experience according to their concerns scores. However, it was concluded that sentiments and attitudes were not related to working experience. Temel (2000), and Bayar and Üstün (2017) also found that teachers who had worked with the disabled had more positive perceptions. Likewise, Demir and Açar (2011), in their study investigating teachers' experiences with and opinions about inclusive students, concluded that teachers who had little experience with disabled students did not support inclusive education practices. On the other hand, Karasu (2019) concluded that pre-service teachers' sentiments, attitudes, and concerns related to inclusive education were not related to whether or not they had experience with student with special education needs.

According to the results, it is seen that pre-service teachers' perceptions of inclusion are closely related to their levels of interaction with individuals with special needs, amount of special education coursework, knowledge of local laws and policies, levels of self-confidence in working with disabled individuals, and levels of experience in working with disabled individuals. To reduce pre-service teachers' concerns about inclusion and to increase their self-confidence in their teaching practices, it should be ensured that pre-service teachers have opportunities to interact with students needing special education. Educational programmes for teachers to gain knowledge, teaching skills, and practical experience with regard to inclusive education in both pre-service and in-service training activities can raise teachers' self-confidence and encourage their positive sentiments, attitudes and concerns about inclusive education. In line with this purpose, undergraduate teacher candidates can be provided with internships or practicums in inclusive classrooms. Additionally, pre-service teachers need training on legal regulations, which should be included in their teacher education programs

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