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Pre-Service Teachers' Beliefs about Inclusion in Turkey

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Abstract:

The purpose of this research was to explore pre-service teachers' beliefs about inclusion in Turkey. A total of 300 pre-service teachers were surveyed. Majority of the pre-service teachers expressed that they did not think that they had necessary skills to effectively work with children with disabilities. Lack of experience and knowledge, overcrowded classrooms, lack of collaboration between teachers and specialists were seen as barriers to inclusion. Majority of the participants indicated that they would be willing to accept students with physical disabilities, speech disorders, and ADHD while only a small percentage indicated that they would accept students with autism, mental retardation, and conduct disorder into their classrooms. Results indicated that program type, satisfaction with the field experience, and taking a special education course were found to be effecting pre-service teachers' beliefs about inclusion. In general, pre-service teachers who are in early childhood and elementary education programs, satisfied with the field experience and has taken a special education course expressed more positive beliefs about inclusion.

Key words: inclusion, inclusive education, pre-service teacher education, teacher beliefs, teacher education.

Introduction

Inclusion continues to be a widely debated topic among both educational researchers and practitioners. Proponents of inclusion argue that in order to prepare students with

disabilities for membership in a culture, they need to be a part of that community and culture. Such advocates are also concerned about limited constructive outcomes of separated special education placements as well as racial, gender, and social class bias in placement decisions (Bailey, McWilliam, Buysse, & Wesley, 1998; DEC & NAEYC, 2009; Hanson, et al., 1998; Kliewer, 1998; Lipsky & Gartner, 1997). However, opponents (Chesley & Calaluce, 1997; Fuchs & Fuchs, 1994) are concerned about the lack of focus in general education on functional and vocational skills and the general lack of services available to meet the particular needs of children with disabilities in general education settings. They posit that inclusion would not bring benefits to children with special needs, and could prevent early intervention efforts and impede such students' optimal development.

Education of Children with Disabilities in Turkey

Although the Special Education Act of 1983 included articles allowing children with special needs to receive their education in regular classrooms, inclusion was not a common practice until the enactment of 1997 Special Education Law in Turkey. However, despite the fact that the law requires placement into the least restrictive environment, children with disabilities are still mostly educated in separate education settings (Kucuker, Acarlar, & Kapci, 2006). Children with physical disabilities, developmental disabilities, and chronic illnesses are still placed in a limited number of self-contained special education programs. No specific public education programs/classes for children with learning disabilities and emotional and behavioural disorders are reported by Ministry of Education. However, the general tendency in schools is to place those children immediately in self-contained classes if possible.

During the past two decades, in response to pressure by parents and other advocates, the Turkish government has shown some interest in the lives of people with disabilities and

subsequently has developed policies that promise to make a difference in their education. There has been an initiation of efforts to make schools and public places accessible. It is now also stated in the law that the least restrictive environment shall be provided to children with special needs. As a result, interest in inclusive programs has become widespread and more and more programs are becoming inclusive. The number of children placed in inclusive programs increased dramatically during the past two decades (Rakap, & Kaczmarek, 2010; Sucuoglu, 2004). For example, while there were 9718 children with special education needs (SEN) receiving education in regular education classrooms in 1996-1997, the numbers of children with SEN in inclusive classrooms reached to 147048 in 2012-2013 school year (MNE, 2013).

Considering the increasing emphasis on inclusive practices, it would not be a surprise for Turkish general education teachers to be challenged by the requirement of including a child with special needs in their classes without receiving any training. How such teachers respond in this situation is likely to be strongly related with their expectations and beliefs about children with disabilities (Avramidis, Bayliss, & Burden, 1999; Brantlinger, 1996; Campbell & Gilmore, 2003; Cook, 2001; Hastings & Oakford, 2003; Kalyva, Gojkovic, & Tsakiris, 2007; Stoiber, Gettinger, & Goetz, 1998).

Turkish Teacher Education Programs

Teachers' expectations and beliefs about children with disabilities are strongly shaped by their teacher training programs. Currently, in order to become a teacher in Turkey, a student teacher has to complete eight semesters of courses at the university level. Teacher education curricula are developed by the Higher Education Council in cooperation with the Ministry of National Education, and expected to be followed by all teacher education programs (Cakiroglu & Cakiroglu, 2003). Titles, credits and brief contents of all required courses are

determined by the Higher Education Council (Grossman, Sands, & Brittingham, 2010). Universities are only allowed to offer a small number of courses of their choice as electives. Preschool, elementary, science, and social studies teacher education programs have a required special education course that introduces brief information about special education and children with disabilities. However, there is no required special education course for mathematics and secondary education teachers.

Research on Teachers' Perception of Inclusion

Many studies have been directed at studying teachers' attitudes toward inclusion. Yet, the research exploring teachers' perspectives on inclusion have shown inconsistent results. Factors such as race, gender, educational level, and inclusive education experience have been found to affect teachers' perception regarding children with disabilities and their attitudes toward teaching them in inclusive classrooms (Rao & Lim, 1999). A study conducted in the England revealed that there was an association between teachers' perceptions of the skills they possess and their attitude toward inclusion (Avramidis, et al., 1999). The study revealed that prospective female teachers had more positive attitudes than males. In another study, both general and special education teachers involved in two different inclusive programs provided positive comments that emphasized the role of inclusion in the social development of children and of providing opportunities for children with and without disabilities to get to know and learn about each other (York, Vandercook, MacDonald, Heise-Neff, & Caughey, 1992). Some of the teachers in this study stated that they provided few or no accommodations for children with disabilities while some others reported that accommodations were the most difficult aspect of inclusion. Devore and Hanley-Maxwell (2000) examined inclusion in childcare settings by interviewing six childcare providers. All the participants

reported a willingness to include a child with special needs. They believed that every inclusive endeavour was a learning opportunity that would contribute to their professional development and strengthen their commitment to teaching. Through their experiences they learned to reach out for outside resources, be open to new ways of thinking, balance their resources with the needs of children they serve, cooperate with other staff, and develop mutually supportive relationship with parents.

However, other studies are not as positive. Vaughn, Schumm, Jallad, Slusher, and Saummer (1994) attempted to examine teachers' understanding and perceptions of inclusion by interviewing 74 teachers in small focus groups. Overall, teachers reported negative feelings about inclusion, scepticism about its possible success, and concerns about being forced to implement the practice by administrators and theorists who were viewed as out of touch with the nature of actual classrooms. A review of 28 survey reports with a total of 10,560 teachers (Scruggs & Mastropieri, 1996) revealed that although the majority of teachers stated a willingness to implement inclusive practices, a substantial minority reported that children with disabilities would be disruptive to their classes and would demand too much attention. Rouse and Florian (1996) interviewed different stakeholders (i.e., general education teachers, special educators, parents) in the United States and UK. Both American and British teachers shared a willingness to accept responsibility for the education of all children, but expressed concerns about the possibility that children with special needs might raise safety issues for others. Teachers and counsellors in Monahan, Marino, Miller, and Cronic's study (1997) perceived children with special needs as needing more attention than they were willing to provide, and thus these school personnel preferred that such children be in special education classes. However, at the same time, these teachers mostly agreed with the statement that children with special needs have a basic right to be taught in general

education classes and that these children would benefit from being in that setting. The results of this study also indicated that teachers received limited direct support from special educators and also lacked confidence in their own knowledge and skills related to teaching children with disabilities.

Studies conducted in various other countries have revealed similar results to those done in the United States and Britain. Spanish pre-service and in-service teachers both agreed that inclusion is a right of students with disabilities, and, that it could provide some benefits, especially social benefits (Cardona, 1999). However, these teachers also had concerns regarding the elimination of special education self-contained and resource placements as a result of the inclusion movement. They felt that reduced placement options would result in a loss of appropriate education for many students because of the lack of skills of regular education teachers and inadequate resources to serve these children's special needs in inclusive environments. Canadian teachers were reported to have positive beliefs about the effect of inclusion on both children with special needs and their classmates, but they too had concerns regarding the increased work-load of regular education teachers and the adequacy of professional development and administrative support (Bunch, Lupart, & Brown, 1997). In Italy, almost all students have been taught in general education classes for 20 years as the result of a law that abolished the widespread use of special programs in the late 1970s (Cornoldi, Terreni, Scruggs, & Mastropieri, 1998). It is important to mention that in Italy the case-load of children with disabilities assigned to a teacher cannot be more than two, and the number of total students in inclusive classrooms is limited to twenty. Although Italian teachers favoured inclusive education more than their American colleagues, after twenty years of inclusion experience, Italian teachers still found resources insufficient, and claimed that their skills to do inclusion well were still inadequate. Primary school teachers in the Great Britain reported similar concerns (Rose, 2001). They

identified classroom support, teacher training, and physical accessibility of school buildings as the crucial issues in development of effective inclusive programs. They raised the concern that the accommodation of children with special needs would take a significant amount of their time. They also knew that parents of typically developing children had anxieties about the time allocated to their own children and raised concern that children with disabilities might have a bad influence on and even physically harm other children in the class. Similarly, a recent study conducted in Bosnia and Herzegovina (Memisevic & Hodzic, 2011) showed that elementary school teachers were willing to teach students with intellectual disabilities. However, more than half of the teachers thought that they did not have sufficient time, resources, assistance, or training.

Students with emotional and behavioural difficulties were seen as causing more concern than other disability types in the UK (Avramidis, et al., 1999; Hastings & Oakford, 2003). Studies conducted in the US (Cook, 2001; McHatton & McCray, 2007; Soodak, Podell, & Lehman, 1998), Poland (Krason & Jaszczyszyn, 2006), and Serbia (Kalyva, Gojkovic, & Tsakiris, 2007) showed that teachers had more negative attitudes towards children with severe disabilities and mental retardation who could pose additional responsibility on their part. Teachers' attitudes toward their students are closely related to the type and quality of teacher-student interactions (Cook, 2001). Whether teacher-student interaction is characterized by attachment, concern, indifference, or rejection has a direct and differentially impact on students' educational experiences and opportunities. Those students who are not welcomed by their teachers are criticized more for behaviour problems, receive less constructive and instructional feedback, and ignored more in class activities. Unfortunately, students with disabilities disproportionately find themselves as a target of teachers' rejective attitudes in inclusive settings (Cook, 2001; Purdue, Ballard, & MacArthur, 2001). Hence, this rejection

impedes with their chance to receive appropriate educational interactions and opportunities in inclusive placements (Cook, 2001).

Studies conducted in various countries have indicated that taking a course on special education/inclusion has a positive effect on pre-service teachers' attitudes towards inclusion (Forlin & Chambers, 2011; Killoran, Woronko, & Zaretsky, 2013; Kim, 2011; Sharma, 2012). For example, Australian pre-service teachers displayed higher levels of confidence at the end of the special education course and were more willing to teach students with disabilities (Sharma, 2012). Studies have also showed that ECE pre-service teachers comprised the group that showed the most significant changes in attitudes towards inclusion after completing a training on inclusion (Killoran, Woronko, & Zaretsky, 2013). Therefore, as Florian, Young, and Rouse (2010) rightly point out, it is essential that inclusive education courses be integrated into the core of teacher education programs.

Almost all of the above cited studies were conducted in North America and Western Europe where the standard of living is relatively high and hence educational funding also is mostly sufficient to provide comparatively good educational conditions. In contrast, Turkish schools are generally overcrowded with a large teacher-pupil ratio, material supplies are limited, and teacher preparation is less comprehensive. The budget allocated to Ministry of National Education (MNE) for investment purposes has stayed the same although recent educational reform movement has resulted in drastic increases in school enrolment rates, the number of inclusive, special education, and early childhood education programs (MNE, 2013; TUSIAD & KAGIDER, 2008). Schools are still mostly inaccessible for children with physical disabilities. In light of these conditions and cultural differences, it seems reasonable to predict even more reluctance to include children with disabilities and more negative beliefs about inclusion among Turkish teachers.

Because research findings summarized so far have been inconclusive and there are not many study reports that reveal what people from other cultures think about and how they implement inclusion, the aim of this study was to contribute to the growing body of research about people's attitudes towards inclusion by studying the beliefs of pre-service teachers toward inclusive education in Turkey. More specifically, the following research questions were addressed by this study:

What are the Turkish pre-service teachers':

a) perceptions of barriers to inclusive education?
b) preference of student inclusion based on the student's disability types?
c) differences in 'perspective on inclusion' based on their own background?

Method

Participants

Participants of the study included 300 pre-service teachers attending a public university in northern Turkey. Of the participants, 191 (63.7%) were female and 109 (36.3%) were male students. In terms of program type, 78 were in the math education, 38 were in the early childhood education, 126 were in the elementary education, and 58 were in the science education program. All students were in their final year of teacher education program. Gender and major breakdown of the participants can be seen in Table 1.

Table 1. Characteristics of the participants

	Gender		
Program Type	Female	Male	Total
Mathematics education	53	25	78
Early childhood education	38	-	38
Elementary education	70	56	126
Science education	30	28	58
Total	191	109	300

	Yes		No		Total
	n	%	*n*	%	

Has taken special education course	77	25.7	223	74.3	300
Believes that she/he has necessary skills to effectively work with children with disabilities	4	1.3	295	98.3	299
Satisfied with the education received at the university	70	23.3	227	75.7	297
Prefers to be teacher again	203	67.7	96	32.0	299
Has relative(s) with disabilities	77	25.7	223	74.3	300
Has work experience with people with disabilities	24	8.0	276	92.0	300

Only 23.3% of the participants were satisfied with the education they received at the university and 68% indicated that they would prefer to be teacher again. Almost a quarter of the participants (n=77) received a special education course during their education. An overwhelming majority of the participants (98.3%) expressed that they did not think they had the necessary skills to effectively work with children with disabilities. Of the participants, 25.7% had indicated that they had a relative with disabilities. A small number of participants (24) had work experience with individuals with disabilities in a professional and voluntary community service setting. More than half of the participants (56%) were satisfied with their field experience while 21% were undecided, and the rest (23%) were unsatisfied.

Measures

Four different measures were used to collect data in this study: 1) Participant Demographics Questionnaire, 2) My Thinking about Inclusion Scale, 3) Barriers to Inclusion Scale, and 4) Disability Acceptance Questionnaire.

Participant Demographics Questionnaire. Participants were asked to report on the following demographics and characteristics: special education courses taken, satisfaction with the college education, their acceptance of inclusion for different types of disability, having a relative with disabilities, and work experience with individuals with disabilities.

My Thinking about Inclusion Scale (MTAI). In order to investigate beliefs about inclusion, MTAI developed by Stoiber, et al. (1998), was translated into Turkish and used in this study. MTAI was designed to reveal three different aspects of inclusion because its designers were aware that a person could be satisfied with one domain of inclusion but she/he could have concerns about other domains. The first dimension of this scale (Core Practices, 12 items) contains items about the teachers' views on inclusion of children with disabilities and their rights to receive their education education in inclusive settings. The second dimension of the scale (Expected Outcomes, 11 items) focuses on the perceived outcomes of inclusion. The third dimension (Classroom Practices, 5 items) is about how inclusion affects classroom practices. The 28-item MTAI Total Scale was administered to the study participants.

MTAI was designed with a five-point Likert type scale ranging from (1) strongly accept to (5) strongly reject, and half of the items are in reversed form to avoid response set bias. Low scores represent negative beliefs and high scores represent positive beliefs towards inclusive education. Internal consistency coefficients for the current study were found as follows: $\alpha = .80$ for the total MTAI scale, $\alpha = .70$ for the Core Practices subscale, $\alpha = .65$ for the Expected Outcomes subscale, and $\alpha = .61$ for the Classroom Practices subscale.

Barriers to Inclusion Scale. In order to investigate perceived barriers to inclusion, a 12-item-scale was developed. Items were selected and adapted from previous studies investigating barriers to inclusion (Avramidis, et al., 1999; Stoiber, et al., 1998). Each item states a potential barrier to inclusion (e.g. overcrowded classrooms) and asks respondents to report on a five –point scale ranging from (5) strongly agree to (1) strongly disagree. High scores represent that these barriers are seen as important regarding inclusive education. The Cronbach alpha reliability coefficient for the questionnaire was $\alpha = .76$.

Disability Acceptance Questionnaire. A small questionnaire was developed to investigate the participants' acceptance of students with various disability types. Each item in the questionnaire lists a disability type and asks participants if they would approve inclusion of a children with special disability into their classrooms. To complete the questionnaire participants rated each item from 'would accept', 'not sure,' to 'reject.'

Procedure

Data collection was completed at a major public university located in northern Turkey. Prior to survey administration, the study was approved by the university's Human Subjects Committee. A convenient sampling method was used to select the study participants. The research instrument was administered to the final-year students in the mathematics education, early childhood education, elementary education, and science education programs. Participation to the study was voluntary and no participants received extra credit for their participation. Students were informed about the purpose of the study and asked to complete all of the items on the research instrument. At the time of the data collection, none of the students were taking courses from the authors. All of the students completed the research instrument. The research instrument took less than 30 minutes to complete.

Results

Perceived Barriers to Inclusive Education

Among the barriers to inclusion, lack of experience and knowledge regarding inclusion, overcrowded classrooms, and lack of collaboration between teachers and specialists received the highest ratings. Job commitment, lack of a flexible educational plan, and parental attitudes received the lowest ratings. However, as it can be seen in Table 2, even the lowest rated factors were still seen as barriers to inclusive education.

Table 2. Perceived barriers to inclusive education

Barriers	Mean	*SD*
Lack of knowledge and experience regarding inclusive education	4.59	0.78
Overcrowded classrooms	4.54	0.76
Lack of collaboration between teachers and specialists	4.29	0.89
Limited resources	4.29	0.88
Supportive technology	4.20	1.03
Lack of support from administration	4.09	0.84
Teachers' limited time	4.09	1.08
Lack of collaboration opportunities	3.97	0.86
Teachers' attitudes	3.85	1.00
Job commitment	3.77	1.05
Lack of a flexible educational plan	3.75	1.04
Parental attitudes	3.60	1.03

(Rated on a 5-point scale, where 1 = Strongly disagree and 5 = Strongly agree)

Acceptance of Students with Various Disability Types

When participants were asked to rate students based on their disability type, majority of the participants indicated that they would accept students with physical disabilities (%89.3), speech disorder (%86.3), and ADHD (%66.2) in their classrooms. Only a small percentage of the participants indicated that they would accept students with autism, mental retardation, and conduct disorder. The association between acceptance of a student with a certain type of disability and student teachers' major was examined using a Chi-Square test. The relationship between acceptance of learning disability (χ^2 (6, n = 295) = 16.99, p < .01), mental retardation (χ^2 (6, n=297) = 14.38, p < .05), and autism (χ^2 (6, n = 299) = 12.77, p < .05) and student teachers' major was significant. The student teachers in Science Education program expressed the lowest acceptance ratios for children with learning disability (%40.4), mental retardation (%10.3) and autism (%15.5) whereas student teachers in early childhood education programs expressed the highest ratios for almost all types of disabilities (see Table 3).

Table 3. Percentages and chi-square analysis results for willingness to accept a student with disability.

Disability Type	Major				Total	χ^2	p
	Mat	ECE	El. Ed.	Sci.			

	h			Ed.			
Physical Disability							
Accept	19.2	27.8	27.0	34.5	89.3		
Not Sure	32.1	44.4	38.9	25.9	7.7	10.00	.12
Reject	48.7	27.8	34.1	39.7	3.0		
Speech Disorder							
Accept	84.6	91.9	84.9	87.9	86.3		
Not Sure	12.8	8.1	11.1	8.6	10.7	2.61	.86
Reject	2.6	0.0	4.0	3.4	3.0		
ADHD							
Accept	69.2	67.6	66.7	60.3	66.2		
Not Sure	21.8	24.3	24.6	29.3	24.7	1.35	.97
Reject	9.0	8.1	8.7	10.3	9.0		
Learning Disability							
Accept	51.3	70.6	65.1	40.4	57.3		
Not Sure	34.6	26.5	28.6	40.4	32.2	16.99	.01**
Reject	14.1	2.9	6.3	19.3	10.5		
Visual Impairment							
Accept	41.0	34.3	38.1	46.6	40.1		
Not Sure	30.8	28.6	29.4	19.0	27.6	3.79	.70
Reject	28.2	37.1	32.5	34.5	32.3		
Hearing Impairment							
Accept	30.8	42.9	33.3	34.5	34.0		
Not Sure	30.8	34.3	30.2	29.3	30.6	3.08	.80
Reject	38.5	22.9	36.5	36.2	35.4		
Conduct Disorder							
Accept	19.2	27.8	27.0	34.5	26.5		
Not Sure	32.1	44.4	38.9	25.9	35.2	9.85	.13
Reject	48.7	27.8	34.1	39.7	38.3		
Mental Retardation							
Accept	23.1	37.1	30.2	10.3	25.3		
Not Sure	32.1	40.0	30.2	37.9	33.3	14.38	.03*
Reject	44.9	22.9	39.7	51.7	41.4		
Autism							
Accept	19.2	37.8	13.5	15.5	18.4		
Not Sure	41.0	29.7	46.8	50.0	43.8	12.769	.047*
Reject	39.7	32.4	39.7	34.5	37.8		

Note: * $p < .05$; ** $p < .01$

Factors Effecting Pre-service Teachers' Beliefs about Inclusion

Program Type. One-way between subjects ANOVA was performed to determine if there was a significant difference between program types (mathematics education, early childhood education, elementary education, and science education) in terms of total MTAI scores and the subscales. Results showed a significant difference between the program types and beliefs about inclusion on MTAI Scale $F(3,296) = 17.14$, $p < .001$, Core Practices subscale $F(3,296) = 14.34$, $p < .001$, Expected Outcomes subscale $F(3,296) = 12.51$, $p < .001$,

and Classroom Practices subscale $F(3,296) = 5.27$, $p < .001$. Post-hoc comparisons indicated that pre-service teachers in early childhood education program expressed more positive beliefs on Total MTAI Scale ($M = 91.04$) and three subscales than their counterparts in the math, elementary, and science education programs on Total MTAI scale ($M = 77.90$, $M = 81.48$, $M = 79.72$, respectively) and three subscales.

Satisfaction with the field experience. Participants' satisfaction with the field experience was recoded into three categories as satisfied, not sure (neutral), and unsatisfied. Analysis of variance was used to examine the differences among different field experience satisfaction levels on total MTAI scores and subscale scores. Results revealed that there was a significant difference in Total MTAI Scale $F(2,297) = 4.77$, $p < .01$ and Core Practices subscale $F(2,297) = 5.07$. Post-hoc comparisons showed that the participants who report higher levels of satisfaction with the field experience had more positive beliefs on Total MTAI Scale ($M = 82.67$, $SD = 10.66$) and on Core Practices ($M = 36.00$, $SD = 5.82$) subscale compared to unsatisfied participants on Total MTAI Scale ($M = 78.23$, $SD = 10.17$) and on Core Practices ($M = 33.56$, $SD = 4.90$) subscale.

Taking special education course. To test whether there was a difference between pre-service teachers who had or had not taken a special education course, t-test for independent samples was performed. Results indicated that there was a significant difference between the two groups in Total MTAI Scale ($t(298) = 3.41$, $p < .001$), Core Practices subscale ($t(298) = 2.40$, $p < .05$), and Expected Outcomes subscale ($t(298) = 3.74$, $p < .001$). But there was no difference found in Classroom Practices subscale ($t(298) = 1.69$, $p > .05$). Participants who had taken a special education course had higher Total MTAI scores ($M = 84.79$, $SD = 10.13$) than the participants with no special education training ($M = 80.25$, $SD = 10.05$).

Satisfaction with the decision to become a teacher. Next, based on the survey results, participants were divided into two groups as those who were satisfied with their decision to become a teacher and those who were unsatisfied with their decisions. Then pre-service teachers' beliefs about inclusion were compared using t tests. Results indicated significant difference between the two groups in Total MTAI Scale ($t(297) = 3.90$, $p < .001$), Core Practices Subscale ($t(297) = 3.94$, $p < .001$), and Expected Outcomes Subscale ($t(297) = 3.19$, $p < .002$). However, there was no difference in Classroom Practices subscale ($t(297) = 1.34$, $p > .05$). The participants who expressed satisfaction with their decision to become a teacher expressed more positive beliefs than their unsatisfied colleagues in Total MTAI Scale ($M = 82.98$, $SD = 9.47$; $M = 78.12$, $SD = 11.14$, respectively), Core Practices subscale ($M = 36.19$, $SD = 5.08$; $M = 33.56$, $SD = 5.97$ respectively), and Expected Outcomes subscale ($M = 35.29$, $SD = 4.46$; $M = 33.44$, $SD = 5.13$ respectively).

Comparisons based on demographic factors and personal characteristics. To examine how pre-service teachers' beliefs differ based on their demographics a series of t-tests were performed (see Table 4). First, we compared participants based on their gender. Results indicated that there was no difference between the female and male pre-service teachers in terms of their beliefs towards inclusive education. Similarly, there was no statistical difference between groups in terms of having a relative with disability, work experience with individuals with disabilities, and satisfaction with the pre-service teacher training.

Table 4. Total MTAI scores and t-test results comparing demographic factors and personal characteristics.

	Yes		No		Total MTAI Scale		
	M	*SD*	*M*	*SD*	*t*	*df*	*p*
Has taken SPED course	84.79	10.13	80.25	10.05	3.41	298	.001
Happy w / decision / teacher	82.98	9.47	78.12	11.14	3.90	297	.001

again							
Has necessary skills to work with students with disabilities	96.75	6.75	81.22	10.16	3.05	297	.003
Satisfied with the pre-service teacher training	82.32	11.75	81.29	9.62	0.75	295	.457
Has relative with disabilities	81.91	9.28	81.25	10.58	0.49	298	.625
Has work experience with people with disabilities	81.06	11.07	81.44	10.19	-0.18	298	.858

The pre-service teachers who were happy with their decision to become a teacher have expressed higher pro-inclusion beliefs (M = 82.98, SD = 9.47) than the participants who were not happy with their decisions (M = 78.12, SD = 11.14). Similarly, the pre-service teachers who thought that they had necessary skills to teach expressed higher pro-inclusion beliefs (M = 96.75, SD = 6.75) than the participants who did not think that they had necessary skills to teach (M = 81.22, SD = 10.16).

Discussion

In this article, we explored Turkish pre-service teachers' beliefs towards inclusion of children with disabilities. The participants, in general, seemed to hold pro-inclusive beliefs. However, pre-service teachers in early childhood education program expressed more positive beliefs than their counterparts in math, elementary, and science education programs. The participants who reported higher levels of satisfaction with the field experience had more positive beliefs on the Total MTAI Scale and on the Core Practices subscale. In addition, those who had taken a special education course had more positive attitudes toward inclusion than participants who had not. The participants who expressed their satisfaction with being a teacher expressed more positive beliefs in Total MTAI, Core Practices Subscale, and Expected Outcomes Subscale. According to different statistical comparisons Classroom Practices subscale did not differ in most of the groups. This may be due to the fact that participants in this study have limited in-class experience.

Previous research report on gender effect was mixed. Studies conducted in the UK by Avramidis et al. (1999) and in Nigeria by Fakolade, Adeniyi, and Tella (2009) showed that female pre-service teachers held more positive attitudes towards inclusion while Hastings and Oakford (2003) did not find such difference among their British participants. However, in the current study no such difference was found between female and male students. There was also no statistical difference between groups in terms of having a relative with disability, work experience with individuals with disabilities, and satisfaction with the education received in college.

Even though study participants expressed pro-inclusive beliefs this overall positive stand toward inclusion still did not guarantee the participants' acceptance of all children with special needs. Majority of the participants indicated that they would be willing to accept students with physical disabilities, speech disorder, and ADHD. On the other hand, only a small percentage of the participants indicated that they would accept students with autism, mental retardation, and conduct disorder. Teachers' differential attitudes toward different disability categories were also reported in the studies carried out in other countries (Cook, 2001; Memisovic, & Hodzic, 2011; Rakap, & Kaczmarek, 2010).

The high percentage of the participants who opposed the idea of having children with mental retardation or autism in their classrooms signals deeply embedded presence of anti-inclusion beliefs, "beliefs that likely to obstruct or diminish the implementation of inclusive practices in schools" (Brantlinger, 1996, p. 19). Use of norm referenced achievement standards by chronological age, labelling those perform below or above the norm, a linear conceptualization of achievement, over emphasis on individualized instruction, ability-grouping, blaming those students who fail in school, and ignoring structures of educational institutions are the practices resulted from anti-inclusion beliefs. Those who hold inclusive beliefs, on the other hand, approach diversity as something positive for both

classroom and community; value every member of the classroom; appreciate individual ability levels and progress; and create a collaborative learning environment. It is not uncommon to find these inclusive beliefs listed as instructional principals in teacher education textbooks in Turkey. Therefore, textbooks in teacher education programs should reflect these principles from a social justice and human rights perspective (Miles & Singal, 2010). Further research is needed to innovate new strategies that teacher training programs could employ in order to have a real impact on teachers' attitudes (Avramidis & Layva, 2007; Hastings & Oakford, 2003).

Another important finding of this study is that pre-service teachers in the mathematics and science education programs expressed relatively less positive attitudes compared to their counterparts in the early childhood education and elementary education programs. This result is also in accordance with the findings of the previous studies (Avramidis et al., 1999; Killoran, Woronko, & Zaretsky, 2013; Scruggs and Mastropieri, 1996) that reported less positive attitudes towards inclusion by students majoring in secondary education. Heavy emphasis on content knowledge and academic performance, independent study skills, high-stakes testing, university entrance exams, the overall pace of instruction, and assuming sufficient prerequisite knowledge and skills can all be speculated to have an effect on secondary teachers' resistance towards inclusion (Avramidis et al., 1999; Scruggs & Mastropieri, 1996).

The results of the present study also revealed that pre-service teachers rated lack of experience and knowledge regarding inclusion, overcrowded classrooms, and lack of collaboration between teachers and specialists, and limited resources as the most significant barriers to inclusion. Job commitment, lack of a flexible educational plan, and parental attitudes received the lowest ratings. Similar findings reported in other studies (Avramidis et al., 1999; Buell, Hallam, Gamel-Mccormick, & Scheer, 1999; Lowenthall, 1999; Mulvihill,

Shearer, & Van Hornc, 2002; Naraian, 2010; Nutbrown, & Clough, 2004; Purdue, et al., 2001; Smith & Smith, 2000) pointing the need for ongoing in-service and pre-service training that help teachers acquire the foundational knowledge, teaching skills, and dispositions necessary for effective inclusion as well as skills to work in teams, locate community resources, collaborate and cooperate with other professionals, community advocacy groups, non-profit organizations, and governmental agencies.

A closer look at the participants' ratings unravels their tendency to give more significance to the factors that they probably consider beyond their control. Hence, teacher education programs, Ministry of Education, and other professionals are blamed for not providing teachers with necessary training, support, and conditions for successful inclusion. This tendency to relieve themselves of such responsibilities as locating societal resources, commitment to professional and life-long learning, and making adaptations in their teaching may cause these future teachers to engage in discriminatory practices against children with special needs (Purdue, et al., 2001).

Conclusion

School restructuring efforts to meet the needs of all children might take decades, which may render teachers and parents to favour segregated education. Therefore, our responsibility as teacher educators is to not only prepare teachers for diverse populations considering the heterogeneity of our culture and diverse needs of children, but also find ways to cultivate self-efficacy of teachers (Avramidis et al., 1999; Soodak, et al., 1998; Weisel & Dror, 2006), place pre-service teachers in successful inclusion programs and provide good role models during student teaching (Brantlinger, 1996), encourage collaboration among parents, school, and community to create and effectively use resources in an effort to accelerate school reform.

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