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Teachers of students with intellectual disabilities' satisfaction with distance education in light of some demographic variables

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Abstract

The current research aims to identify the teachers of students with intellectual disabilities' satisfaction level with distance education and explore the differences between satisfaction levels due to gender and experience variables. The sample consisted of 84 teachers (male = 44, female = 40) who were chosen with the stratified random method where the percentage of the sample to the original population is 70%. The quantitative research method was used through a descriptive research approach by applying the teachers of students with intellectual disabilities' satisfaction with the distance education scale. Results demonstrated that teachers of students with intellectual disabilities had a high level of satisfaction with distance education in terms of the overall degree of the scale and its four axes. Besides, there were no statistically significant differences in the teachers' satisfaction levels with distance education due to gender (male and female) and years of experience. In light of the research results, recommendations were presented to increase the satisfaction level of teachers of students of students were presented.

Keywords: Distance education, satisfaction, intellectual disability.

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1. Introduction

The world faces the corona pandemic, which affects many sectors, especially education. It caused the interruption of more than 1.6 billion children and young people's education in 161 countries, or nearly 80% of the students around the world, and the closure of all educational institutions (Khamisi, 2020). These circumstances contributed to the discovery of new patterns of education, including distance education to achieve social distance and limit the spread of the virus.

The need for distance education has increased during this period all over the world to ensure the continuity of learning after the suspension of face-to-face education. Besides, distance education will be the dominant style of education in the future, as the current generation is distinguished by the attachment to smartphone devices and the use of various applications (Draissi & Yong, 2020). Therefore, the integration of technology in the educational process has become a global trend, and interaction with educational activities through mobile devices has become a catalyst for learning instead of being satisfied with traditional study. Distance education is an interactive system linked to the educational process. This system relies on the existence of a digital electronic environment that presents the learner with courses and activities through electronic networks and smart devices (Berg & Simonson, 2018).

The United States Distance Learning Association defines distance education as the delivery of teaching materials via an electronic educational transmission medium that may include satellite, video, audio, computer or multimedia technology that is available to transmit information (Amer, 2018). It is the educational and learning process that is built on employing modern technology, such as devices, networks and software, and allows the student to learn according to his circumstances, needs and abilities (Hanawy & Najm, 2019). Besides, Hussein (2021) defines it as presenting educational curricula according to a set of methods that rely on technological means such as computers, tablets, smartphones and the Internet synchronously or asynchronously under the supervision and guidance of the teacher to students while they are in their homes to implement the precautionary measures to prevent the spread of the coronavirus.

Distance education has multiple benefits, including the low cost of this type of education compared to traditional education, flexibility in place and time and providing student independence in organising curriculum topics and assessment methods according to the abilities of learners (Abu Aquel, 2012; Al Mohammadi, 2018; El-bitar, 2016; Sintema, 2020).

Despite the importance of using modern technologies to enhance the quality of education, the field studies and surveys that applied distance education in its various forms concluded that teachers may face many challenges in its application, especially for students with disabilities, including the teachers' lack of training and lack of technical support to address the problems (AI Gabr & AI Khudair, 2019). Within the context of special education, the use of modern technologies impacts improving the skills of students with disabilities, as it provides them with education in an easy, interesting and attractive way that allows e-learning to provide educational content through multimedia and thus allows students with disabilities to actively interact with educational content, which has an impact on improving learning outcomes and students' experiences and transcends the limits of time and space (Flanagan et al., 2013). It also allows interaction between the teacher and the learner to achieve specific educational goals at a time and place that suit the learner (Yulia, 2020).

Despite the advantages of distance education, some obstacles impede its use in the educational process. Distance education requires an intense effort to train teachers and students in preparation for this experiment, the link between distance education and e-learning, which is affected by other

technical factors such as the efficiency of communication networks, the availability of hardware and software, and the ability to produce content in a professional manner that suits the needs of students, weakening the role of the school as a social sphere that plays an important role in socialisation, the need for a solid infrastructure in terms of the availability of equipment and the ability of teachers to be familiar with the use of modern technologies (Al Shanaq & Domi, 2010; Atta, 2020).

Individuals with disabilities are among the most affected by the coronavirus disease. They cannot access information regarding the general health situation and health facilities if they suffer from coronavirus disease. As a result, many of them may end up with severe health conditions (Boyle et al., 2020; Qi & Hu, 2020). The effects of this pandemic extend to mental health and increase various problems in the educational sector.

Despite the tremendous development in the field of education, the tools and programmes provided by technology for students with disabilities, the researcher noted through field experience that the distance education system in emergencies revealed inequality in the provision of educational services among students in general or special education schools and deprived some students of distance education, such as students with intellectual disabilities. Appropriate plans were not developed for this stage, causing a lack of clarity of vision. In this regard, the issue of educating and rehabilitating students with disabilities is an issue that represents a civilised challenge that can impede the progress and development of nations. It also represents an educational loss that threatens the national and global economies unless they are taken care of like their peers.

Intellectual disability is a disability that begins during the developmental period and is characterised by limitations affecting both mental function and adaptive behaviour as expressed in the context of concepts, social skills and practical coping skills. Intellectual disability appears during the developmental stage before the age of 18 (APA, 2013).

The American Association on Intellectual and Developmental Disabilities (2021) defines it as a disability characterised by impairment in mental performance and adaptive behaviour, expressed in conceptual, social, and practical adaptive skills, that arises during the developmental period before the individual reaches the age of 22. Procedurally, they are the children who were diagnosed according to the diagnostic criteria with a simple intellectual disability and who can be taught, who were included in distance education in schools of intellectual education, and whose intelligence ranges between 55 and 70 degrees on the Binet Intelligence Scale – the fifth edition.

Intellectual disability represents one of the categories of the natural distribution curve of intelligence, and among all categories of special education, it has received great attention, due to the multiplicity of its types and its prevalence rate, which represents 3% of society (Abdul Rashid, 2014). One of the most prominent educational and mental characteristics of children with intellectual disabilities is a decrease in the rate of mental development, which ranges between half and three-quarters of the rate of mental development of a normal child. The mental development of the intellectually disabled child may be accompanied by a slowdown in the maturity of some mental processes, and the intellectually disabled child suffers from difficulty maintaining attention in a particular activity as it differs from the normal child, who can continue to pay attention for a longer period.

The child with intellectual disability shows a low ability to bear frustration and failure as a result of his previous experiences of failure and frustration on different occasions, and the child with intellectual disability agrees with ordinary children of the same mental age level in games, interests and tendencies (Mohamed, 2017).

Modern technology in educating children with disabilities has become a requirement to keep pace with technological development and establish programmes that benefit students with disabilities while considering parents as an essential part of the comprehensive plan so that they can help their children in programmes that are generated by the computer (Al Shammari, 2008). Several studies confirmed that the use of modern technologies has an effective role in improving the skills of students with disabilities (Al Basel, 2017; Burton et al., 2013; Flanagan et al., 2013).

Distance education has become a necessity and an indispensable part of the educational process for people with disabilities, especially nowadays. The Kingdom of Saudi Arabia makes every effort to develop education, prepare the teacher, raise the efficiency of his performance and activate modern support technologies in a school's stimulating and attractive environment for learning, linked to a system of supportive and integrated services to achieve the goals of the future vision (2030).

Satisfaction is a psychological or emotional state that the teacher reaches at a certain degree of saturation that occurs to him as a result of being exposed to a group of psychological, social, professional, and material factors, and obtaining a moral and material reward as a result of his efforts (El Reih, 2018). It is an emotional response to situations at work, and this response is not seen with the naked eye, but it is deduced through the outputs that the individual is expected to obtain by working in his job and it appears by working harder than others (Oginyi et al., 2016).

The level of teacher satisfaction with distance education is a factor that contributes to its productivity and effectiveness in the educational process. Teachers' high satisfaction leads to a high degree of enthusiasm and motivation for creating productive work. Besides, the school cannot achieve its mission unless the teachers are satisfied with their work (Nyamubi, 2017). Satisfaction is a psychological state that includes positive feelings that determine the extent of acceptance and approval of a particular thing (Jackson, 2018).

Smits and Voogt (2017) believe that satisfaction with distance education takes more than one direction, where learners achieve a high level of satisfaction whenever teachers' messages show their understanding of them, good listening to them, and a good understanding of their personality and social behaviour online. However, teachers also achieve high levels of satisfaction with distance education whenever they feel the learners' interest, follow-up, interaction with content and the development of their knowledge over time, as well as with some messages that indicate enjoyment of education. Al Shdeifat (2020) also explained that satisfaction with distance education determines the psychological state that includes positive feelings about the effectiveness of distance education.

Through the researcher's work on teacher training and supervising student teachers in field training, the researcher noticed that the teachers' points of view towards distance education are different. Some of them continue to teach it to distance learners with enthusiasm, while others state that only a small group of learners respond to distance education, in addition to their low confidence in the results of electronic tests sent to students. He also noted the low level of satisfaction of many teachers with intellectual disabilities with the use of distance education in the educational process, as they see that the traditional methods of education are satisfactory, either because of the weak technical skills they possess or because other obstacles prevent them from using it. Accordingly, teachers' satisfaction with distance education is very important to its success.

In addition, variations in the previous studies' results regarding the teachers of students with intellectual disabilities' satisfaction level with distance education were noticed. Some studies indicated that their level is high (Al Mohammadi, 2018; Filali, 2020; Hussein, 2021; Salem, 2004), while other studies indicated that their level is low (Al Antabli & Al Khattaf, 2016; Abu Riash, 2022; Hussein, 2021;

Melhem, 2020; Qoraan, 2012; Shehata, 2021). Furthermore, these studies were conducted in other countries, and the current study concentrates on Saudi Arabia, where there is a great interest in distance education and training special education teachers. Concerning that teachers' effective contribution to the success of distance education depends on their satisfaction level, which helps them to creatively solve problems they face in the distance education environment, the current study sought to identify the teachers of students with intellectual disabilities' satisfaction level with distance education and determine the differences between the research sample's satisfaction in light of gender and experience variables.

Hence, the problem of the study was represented in the following questions:

- 1. What is the satisfaction level of teachers of students with intellectual disabilities with distance education?
- 2. What are the differences between the mean scores of teachers participating in the research on the scale of satisfaction with distance education and its axes due to the gender variable?
- 3. What are the differences between the mean scores of teachers participating in the research on the scale of satisfaction with distance education and its axes due to experience of less than 10 years, from 10 to 20 years and from 21 years and above?

2. Method

2.1. Research Model

The quantitative research approach through descriptive research design was utilised due to its appropriateness to the current research objectives and questions. The quantitative research approach is the measurement of quantitative data and objective statistics with calculations derived from a sample of people who are surveyed with a scale to identify the frequency and percentage of their responses (Creswell, 2010).

2.2. Study group

The research population comprised all teachers of students with intellectual disabilities in the governorate of Wadi Al-Dawasir and Al Sulayel governorates in Saudi Arabia (males – females). The pilot research sample consisted of 47 male and female teachers who were selected from the research community to verify the research tool's psychometric properties. The basic research sample comprised 84 teachers of students with intellectual disabilities (44 male and 40 female) (26–49 years old) to verify the research hypotheses. They were chosen with the stratified random method where the percentage of the sample to the original population is 70%.

2.3. Data collection tools

2.3.1. The Teachers of Students with Intellectual Disabilities Satisfaction with Distance Education Scale

The satisfaction level of teachers with students with intellectual disabilities with a distance education scale was developed by the researcher. The scale consists of two sections. The first section includes basic data on gender and years of experience and the second section includes 20 scale items into 4 axes: institutional support, distance education characteristics, educational design and the learner's interaction with the educational process. Participants rate on a 5-point Likert scale (ranging from strongly agree to strongly disagree). A high score indicates a higher level of satisfaction. The scores on the scale range from 20 to 100.

The scale was applied to 47 male and female teachers of students with intellectual disabilities. The scale conjunctive validity was examined through an external criterion, which was the scale of satisfaction of teachers of students with intellectual disabilities in e-learning for Al Maliki and Shaban (2020). The correlation coefficient was calculated between two scales (0.754), which is a statistically significant value at the 0.001 level, indicating the scale validity.

Discriminant validity was also calculated through the peripheral comparison, where the external criterion scale of AI Maliki and Shaban (2020) was applied to determine the highest and lowest (27%) on the external test. Then the current scale was applied to the two groups (the highest 27% and the lowest 27%) of the pilot sample. Then, the Mann–Whitney non-parametric test was calculated to indicate the differences between the mean scores of the two groups. The calculated value of U was 21, which was a statistically significant value at the level 0.05, which is evidence of the discriminatory ability of the test between the two end groups and this is an indicator of discriminant validity.

The scale internal consistency was examined through calculating the correlation coefficient between the score of each item and the total score of the axis to which it belongs – after deleting the item's score from the total score of the component – on 47 male and female teachers and they were ranged from 0.758 to 0.846. The correlation was also calculated between the degrees of the four axes (institutional support axis, distance education characteristics axis, instructional design axis and learner interaction with the educational process axis) and the total score of the scale, and the values of the correlation coefficients were 0.788, 0.845, 0.731, 0.892, respectively, which were statistically significant value at the 0.001 level, confirming the internal consistency of the items with their components, and the axes with the overall degree of the scale. Moreover, Cronbach's alpha internal consistency coefficient was measured to define the scale reliability, where the values of the reliability coefficients in the total degree of the scale and dimensions ranged from 0.823 to 0.913 and with the Guttmann method for the half-segmentation of 0.855, which were more than 0.7, indicating the scale reliability.

2.4. Data Analysis

The researcher used the following statistical methods to obtain the study results: mean, standard deviations, t-test for differences between independent samples, one-sample t-test and one-way variance analysis.

3. Results

3.1. Results of Validating the First Hypothesis

'Teachers of students with intellectual disabilities have a low level of satisfaction with distance education'. To examine the validity of this hypothesis, a one-sample t-test was utilised, where a comparison between the hypothetical means and the means of the teachers' scores on the scale of the satisfaction of teachers of students with intellectual disabilities towards distance education and its four axes was conducted, as presented in Table 1.

Table 1. The Results of One-Sample t-Test to Reveal the Significance of Differences between the Hypothetical Mean and the Mean of Teachers' Scores on The Satisfaction of Teachers of Students with Intellectual Disabilities Towards Distance Education Scale

Teachers' satisfaction	Test value	Mean	Std. deviation	Mean difference	df	t	Sig.
Institutional support	15	18.79	3.81	3.79	83	9.125	< 0.001

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Distance education Characteristics	15	17.79	3.78	2.97	83	7.259	<0.001
educational design	15	17.82	3.93	2.82	83	6.564	<0.001
The learner's interaction with the educational process	15	20.01	3.45	5.01	83	13.294	<0.001
Total score	60	76.60	12.07	14.6	73	11.092	<0.001

Table 1 shows that there are statistically significant differences at the 0.001 level between the hypothetical man and the mean of teachers' scores on the four axes and the total score of the satisfaction of teachers of students with intellectual disabilities on the distance education scale. It is noticed that the teachers of the research sample mean scores on the four axes and the total score are greater than the hypothetical mean, indicating that there is a high level of satisfaction among teachers of students with intellectual disabilities towards distance education.

3.2. Results of Validating the Second Hypothesis

'There are no statistically significant differences between the mean scores of teachers participating in the research on the scale of satisfaction with distance education and its axes due to the gender variable'. To verify the validity of this hypothesis, a t-test for independent samples was utilised to reveal the significance of the differences between the mean scores of teachers participating in the research on the scale of satisfaction with distance education and its axes according to the gender variable, as presented in Table 2.

Table 2. The Results of the 't'-Test Revealing the Significance of the Differences between the Mean Scores of the
Teachers Participating in the Research on the Scale of Satisfaction with Distance Education and Its Axes
According to the Gender Variable

	• •		Std.	Std. error	df	t	Sig.
Gender	N	Mean	deviation	mean			-
Male	44	18.8409	4.25874	0.64203	82	0.108	N.S
Female	40	18.7500	3.31082	0.52349			
Male	44	18.0909	4.43463	0.66855	82	0.292	N.S
Female	40	17.8500	2.88720	0.45651			
Male	44	18.4318	3.99067	0.60162	82	1.500	N.S
Female	40	17.1500	3.81999	0.60399			
Male	44	20.1591	3.77226	0.56869	82	0.407	N.S
Female	40	19.8500	3.10954	0.49166			
Male Female	44 40	75.5227 73.6000	13.94756 9.67365	2.10267 1.52954	82	0.727	N.S
	Gender Male Female Male Female Male Female Male Female	GenderNMale44Female40Male44Female40Male44Female40Male44Female40Male44Female40Male44Female40Male44Female40Male44Female40Male44Female40	Gender N Mean Male 44 18.8409 Female 40 18.7500 Male 44 18.0909 Female 40 17.8500 Male 44 18.4318 Female 40 17.1500 Male 44 20.1591 Female 40 19.8500 Male 44 75.5227 Female 40 73.6000	Std. Gender N Mean deviation Male 44 18.8409 4.25874 Female 40 18.7500 3.31082 Male 44 18.0909 4.43463 Female 40 17.8500 2.88720 Male 44 18.4318 3.99067 Female 40 17.1500 3.81999 Male 44 20.1591 3.77226 Female 40 19.8500 3.10954 Male 44 75.5227 13.94756 Female 40 73.6000 9.67365	Std.Std. errorGenderNMeandeviationmeanMale4418.84094.258740.64203Female4018.75003.310820.52349Male4418.09094.434630.66855Female4017.85002.887200.45651Male4418.43183.990670.60162Female4017.15003.819990.60399Male4420.15913.772260.56869Female4019.85003.109540.49166Male4475.522713.947562.10267Female4073.60009.673651.52954	Std.Std. error mean df GenderNMeandeviationmean df Male4418.84094.258740.6420382Female4018.75003.310820.52349 $Nale$ Male4418.09094.434630.6685582Female4017.85002.887200.45651 $Nale$ Male4418.43183.990670.6016282Female4017.15003.819990.60399 $Nale$ Male4420.15913.772260.5686982Female4019.85003.109540.49166 $Nale$ Male4475.522713.947562.1026782Female4073.60009.673651.52954 $Nale$	Std.Std. error mean df t GenderNMeandeviationmean df t Male4418.84094.258740.64203820.108Female4018.75003.310820.52349 N N Male4418.09094.434630.66855820.292Female4017.85002.887200.45651 V V Male4418.43183.990670.60162821.500Female4017.15003.819990.60399 N V Male4420.15913.772260.56869820.407Female4019.85003.109540.49166 V V Male4475.522713.947562.10267820.727Female4073.60009.673651.52954 V V

Table 2 indicates that there are no statistically significant differences between the mean scores of teachers of students with intellectual disabilities towards distance education participating in the current research in the total score and the scale axes due to gender (male-female) variable.

3.3. Results of Validating the Third Hypothesis

'There are no statistically significant differences between the mean scores of teachers of students with intellectual disabilities with experience of less than 10 years, from 10 to 20 years and from 21

years to above on the scale of satisfaction with distance education with its four axes and the total score'. To test this hypothesis, one-way variance analysis was utilised, as presented in Table 3.

, 						
		Sum of	-	Mean	-	-
Axes		squares	df	square	F	Sig.
Institutional support	Between groups	2.924	2	1.462		
	Within groups	1,204.635	81	14.872	0.098	0.906
	Total	1,207.560	83			
Distance education characteristics	Between groups	55.817	2	27.908		
	Within groups	1,116.136	81	13.779	2.025	0.139
	Total	1,171.952	83			
Educational design	Between groups	7.149	2	3.575		
	Within groups	1,281.172	81	15.817	0.226	0.798
	Total	1,288.321	83			
The learner's interaction with the educational process	Between groups	20.984	2	10.492		
	Within groups	970.004	81	11.975	0.876	0.420
	Total	990.988	83			
Total score	Between groups	240.482	2	120.241		
	Within groups	11,851.554	81	146.315	0.822	0.443
	Total	12,092.036	83			

Table 3.Results of the One-Way Variance Analysis between the Mean Scores of the Sample Members in the Scale of Satisfaction with Distance Education and Its Axes According to the Years of Experience of Less Than 10 Years, From 10 to 20 Years and From 21 Years to Above

Table 3 shows that the f-value are not statistically significant, indicating that there are no statistically significant differences in the scale of satisfaction with distance education and its axes due to the experience variable of less than 10 years, from 10 to 20 years and from 21 years to above.

4. Discussion

In the current research, the level of satisfaction of teachers of students with intellectual disabilities towards distance education and the differences between the research samples in light of gender and experience variables were examined. The results of the first hypothesis indicated that teachers of students with intellectual disabilities towards distance education were high in the total score of the scale and its four axes: institutional support, characteristics of distance education, instructional design and learner interaction with the educational process.

The teachers' high level of satisfaction can be attributed to their responses which indicated the great efforts made by the Ministry of Education in Saudi Arabia in the field of distance education. The Saudi Ministry of Education has launched a wide range of distinguished educational platforms, such as the 'My School' platform and the 'Ain' channels. The Ministry of Education has also prepared several practical training courses to enable all teachers, parents and students to use distance education technologies effectively and thus benefit them in an integrated manner. Schools have witnessed also

great development in this aspect. Saudi Arabia's pioneering experience in distance education included the allocation of three 'Ain' channels to students of special education. All these factors contributed to the high level of teachers' satisfaction with distance education.

This result also can be explained in light of the benefits of distance education in various aspects. The 'Madrasati' educational platform has a set of unique features and advantages that make it a pioneer in the field of e-learning or distance education, including flexibility in providing academic content in proportion to the conditions of the student and teacher, using virtual classes that enable the distance education process and providing explanations and live classes or the video system used within the platform, enabling parents to follow up on their children, attend the explanations with them, view their points, results and evaluation and communicate with the competent teacher in case of any inquiry about the result. In addition, the Ministry of Education issued many guides supporting distance education processes for people with disabilities, such as the comprehensive guide for special education institutes, centres and programmes on the Madrasati platform and the work guide in the kindergarten stage for children with disabilities through the virtual kindergarten application (Abu Aquel, 2012; Al Mohammadi, 2018; Sintema, 2020; Yulia, 2020).

Distance education also provides good interaction between teachers and students, students and their colleagues and teachers and parents. It helps teachers to acquire different teaching and learning skills and saves their time and effort in performing many of their administrative and teaching tasks. It also assists their students in accomplishing the activities and helps them in accessing the latest information in all different fields of knowledge. In addition, teachers believe that distance education helps them develop their professional performance and facilitates their communication with their students and their parents, as well as the students' communication with each other. This type of education enhances the students feeling of enjoyment and being not bored during their learning, which has the greatest impact on increasing students' motivation and their desire to learn, especially with its rich learning environment. Distance education also enables teachers to different teaching methods to suit individual differences, as the scientific material can be presented in different ways to suit the multiplicity of learners' characteristics. All of these previous factors represented in institutional support and the advantages of distance education contributed to raising the level of satisfaction with distance education and its axes, according to the research sample.

This finding is consistent with the results of various previous studies (Abu Aquel, 2012; Al Mohammadi, 2018; Filali, 2020, Hussein, 2021; Salem, 2004; Sintema, 2020) that distance education saves time and costs for the teacher and student and that it is a necessity to transform from paper education to technology education via virtual platforms. While other studies illustrated that distance, education is a temporary solution with the need to introduce some modifications if possible, especially after delving into this experience. They stated that to benefit from it we have to interweave school education and distance education through employing modern technology in schools to meet the needs of students with intellectual disabilities. These studies differ from the current research results, where the level of teachers' satisfaction with distance education is between low and medium levels (Abu Riash, 2022; Al Antabli & Al Khattaf, 2016; Al Basel, 2017; Al Subaie, 2011; Flanagan et al., 2013; Hussein, 2021; Melhem, 2020; Shehata, 2021; Qoraan, 2021).

The results of the second hypothesis illustrated that there were no statistically significant differences between the mean scores of the teachers who participated in the research on the scale of satisfaction with distance education and its axed due to the gender variable (male and female). The results of this hypothesis can be attributed to the nature of the institutional and technical support which is presented to male and female teachers equally. They are also subject to technical training and

guidance programmes to develop their technical skills in the distance education process, which has earned all of them an equal level of satisfaction with distance education without distinction between them. Besides, their job burdens are equal and they are supervised according to common standards and controls in which male teachers are equal to female teachers.

This result can be explained in light of the equal interest of all teachers in employing technology and the continuity of education through distance education. They share the same experiences of successes or obstacles of a similar nature, as well as they are aware of the nature of that work, and the importance of appropriate educational means that meet the needs of students with intellectual disabilities, especially in unusual circumstances such as the corona pandemic. Also, both males and females are located in the same geographical and social environment and receive their education in schools with similar equipment and financial capabilities. Both genders receive the same training on the use of e-learning and therefore possess the same skills necessary to use it in their learning process. The result of this hypothesis concerning gender agrees with several studies, indicating that there were no significant differences in students' attitudes towards e-learning due to gender (Egbo et al., 2011; Gopal & Anandan, 2013) and inconsistent with other study results illustrating that there were no statistically significant differences between the mean scores of special education teachers on the scale of satisfaction with distance education due to the gender variable (Hawamdeh, 2010; Tuwaijri, 2014; Qoraan, 2021; Zain Al-Din, 2020), while as it differs from the results of Hussein (2021) that there are differences between the male and female teachers in their satisfaction with e-learning in favour of females.

The result of the third hypothesis pointed out that there were no statistically significant differences between the mean scores of teachers of students with intellectual disabilities with experience of less than 10 years, from 10 to 20 years and from 21 years to above on the distance education satisfaction scale, its axes and total score; as all teachers with different levels of experience were trained in better technology equally without regard to the factor of experience, especially during the corona pandemic, which imposed on the educational process the inevitability of distance education. This prompted them to employ what they learned in the academic preparation stage and keep them informed about technology. The availability of technical support also facilitated dealing with distance education for all categories of old and new teachers. The Ministry of Education also provided visual content to explain the mechanism of dealing with distance education techniques and the availability of technology and the Internet, which has become easily available to all. These results are in line with various study results (AI dhoon, 2008; AI Gabr & AI Khudair, 2019; Balmeo et al., 2014; Hawamdeh, 2010; Mohamed, 2018; Tuwaijri, 2014) and differ from the results of other studies indicating that there were statistically significant differences in the teachers' satisfaction level with e-learning due to the experience variable in favour of teachers with fewer years of experience (Hussein, 2021; Zain Al-Din, 2020).

5. Recommendations

According to the above-mentioned results, some recommendations are presented to increase the teachers' satisfaction levels with intellectual disabilities. The Ministry of Education should prepare educational plans and prior preparations that can be applied to various crises and disasters based on the needs of the target group. Stakeholders should design a distance education programme that matches the nature of the intellectual disability and meets the needs of students with intellectual disabilities. The researcher also recommends paying attention to the suggestions regarding distance education. Besides, there is a need to intensify continuous training courses and workshops for teachers of special education in general and teachers of students with intellectual disabilities in

particular on the use of modern technologies in the distance education process. Conducting further research on the obstacles of distance education with different categories of disabilities should be considered.

6. Limitations

The results of this research were limited to its population, which was the teachers of students with intellectual disabilities in the Wadi Al-Dawasir and Al Sulayel governorates in Saudi Arabia. Further research is recommended to validate the presented research hypotheses. The study also does not identify the effect of some mediating variables, such as the teachers' educational and socio-economic status. Consequently, further research is recommended to examine the level of satisfaction among teachers of different educational stages and its relationship to other variables.

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Conflicts of interest

The author declares no conflicts of interest

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