Journal of Health and Rehabilitation Sciences electronic publication, published on June 11th, 2023

Alma Mater Europaea University – ECM, Slovenska 17, Maribor, Slovenia
Journal of Health and Rehabilitation Sciences 2023 June 11; 2(1):26-36
https://doi.org/10.33700/jhrs.2.1.67
eISSN: 2820-5480
Special Education Research

Review of Educators' Needs for Additional Knowledge About Autism in Slovenia

Irena MARINIČ
Elementary school Nova Gorica,
Nova Gorica, Slovenia
Email: irena.marinic@os-kozara.si

Received: 31-March-2023
Revised: 10-May-2023
Accepted: 26-May-2023
Online first: 28-May-2023

Original research paper

Absract

Aim: The project VIS A VIS "Support for professionals in education and employment in the field of autism" addresses deficits in systemic support for professionals educating individuals with autism in Slovenia. The research goal was to determine professionals' experiences with individuals with autism, their knowledge of autism, their assessment of the situation in the field of education for individuals with autism, their self-assessment of skills for teaching individuals with autism and their training needs.

Methods: Five online questionnaires were created to gain information from the educators' perspective. Employees in preschool education, basic education, music education, secondary, adult tertiary education participated in the survey.

Results: The data provides insight into the needs and challenges that respondents face in their daily practice with individuals with autism. Professionals at different levels of education want to acquire additional skills and support to work more successfully with individuals with autism.

Conclusion: The results form the basis for developing a model of assistance and support for educators in the field of autism.

Keywords: Education, Autism, Educators' needs, Project VIS A VIS

Citation: Marinič, I. (2023). Review of Educators' Needs for Additional Knowledge About Autism in Slovenia. *Journal of Health and Rehabilitation Sciences,* 2023 June 11; 2(1):26-36. https://doi.org/10.33700/jhrs.2.1.67

Corresponding address:
Irena MARINIČ
Elementary school Nova Gorica,
St. Kidričeva 35, 5000 Nova Gorica, Slovenia
Email: irena.marinic@os-kozara.si

1. Introduction

The increase in autism prevalence within recent years has led to parallel increase in the number of individuals with autism at all educational levels. There is a high probability that educational institutions will include an individual with autism (Cappe et al., 2017; Van Herwegen et al., 2019). The success of inclusion depends primarily on the attitudes, experiences, skills, and perceived self-efficacy of professionals and the availability of support resources (Leonard & Smyth, 2022; McDougal et al., 2020). Teachers who asses their own skills and knowledge about special educational needs (SEN) as higher, have been identified as fonder of inclusion (Štemberger, 2013). Head teachers also play an important role as central actors who contribute to the creation and promotion of an inclusion paradigm (Cohen, 2015; Cesar et al., 2019). Further on, all employees should be aware of the special needs of a student with SEN/autism, including administrative and technical staff (Cesar idr., 2019; European Agency for Special Needs and Inclusive Education, 2016).

1.1 Education for individuals with autism in Slovenia

Children with autism are identified within SEN group according to the Placement of Children with Special Needs Act (ZUOPP, art. 2). The Act follows a pedagogically oriented model of placement, which focuses on determining the most appropriate educational programme according to the student's SEN. The state provides officially recognised educational programmes from the preschool level to the end of upper secondary education (ZUOPP, art. 5). Since 2015, adapted programmes with equivalent educational standards for children with autism is also available (Rogič Ožek, 2016). Kocjančič (2017) states that the educational system in Slovenia is still not systematically organised and long-term planned for individuals with autism. Significant differences are hilighted between practices in educational institutions, shortcomings in qualified personnel and environmental conditions.

1.2 Educators' knowledge about autism

Educators need to obtain fundamental knowledge and skills for adapting teaching processes to students with SEN/autism. Teaching an individual with autism requires additional education, training, and intensive teamwork of all professionals (Cesar et al., 2019; Štemberger, 2013). Due to the diversity of individuals with autism, the individualisation of support is the key to realising the inclusive paradigm in education (Rogič Ožek, 2016). Teachers in a qualitative study (McDougal et al., 2020) pointed out that to provide appropriate support and adapt teaching to a student with autism, the teacher needs to know and understand both, the characteristics of autism and the individual characteristics of the student. Teachers' knowledge of autism has often been recognised as generally poor (Hatunšek, 2014; Sparapani, 2016; Gómez-Marí, 2021).

The research (Fennell and Dillenburger, 2018; Syriopoulou-Delli et al., 2012) states that teachers often have misconceptions about autism and do not feel competent enough to include students with the condition. At the same time, teachers refer to a lack of opportunities for professional development (Leonard & Smyth, 2020; Boujut et al. 2017).

1.3 Aim

The goal was to determine educators' experiences with individuals with autism; their knowledge about autism; review of education for individuals with autism in Slovenia; educators' self-assessment of skills for working with individuals with autism and their needs for additional knowledge.

Research questions:

- How experienced are employees in education regarding work with individuals with autism?
- Do employees in education obtain knowledge about autism? If yes, what knowledge and how did they acquire it?
- How do employees in education assess the situation in the field of education for individuals with autism in Slovenia?
- How do employees in education assess their own competences for working with individuals with autism?l
- Do employees in education have needs for additional knowledge about autism? If yes, in which areas?
- What are employee's messages to researchers?

2. Methods

2.1 Instruments, data collection and analysis

Quantitative research paradigm was used. We designed five questionnaires, adapted for educational levels: Preschool education (PE), Basic education (BE), Secondary education (SE) and adult education (AE), Tertiary education (TE), and Music education (ME).

The questionnaires included close-ended, semi-closed and open-ended questions. Pretesting of online questionnaires was conducted; the pre-test sample was selected by convenience sampling including respondents from each educational level. Purposive sampling was used. Invitations to participate in the survey were sent by email to all accessible contacts of educational institutions and head teachers' associations and shared on Facebook.

Data was collected using online questionnaires in September and October 2022. The following data processing methods were used: elimination of inadequate questionnaires due to errors in selection of the educational level; tabular, graphic or descriptive presentation of data; combining data from all five questionnaires due to the need for comparison, calculating the average value; coding; descriptive statistics and data interpretation.

Online tool "1ka" was used for collecting and processing data.

2.2 Sample group

The sample group includes 1516 participants, 523 from kindergartens, 607 from basic schools, 56 from music schools, 181 from secondary schools and adult learning programmes and 149 from upper vocational colleges and universities. Regarding statistical data (SURS, 2023), survey sample represents 3.7% of all PE professionals, 2.4% of all BE professionals, the same share of SE professionals and 2% of professors in TE in Slovenia. In terms of gender, 93% of respondents are women and 7% are men. The gender ratio is in line with statistics (SURS, 2023) on the educators. The sample group consists of participants from various age groups (34.5% 41-50 years old, 27.5% 31-40 years old, 21% 51-60 years old, 13.4% 21-30 years old, 3.6% over 61 years old and 0.1% under 21 years old) and different length of service in education (35.1% 16-30 years, 30% 6-15 years, 19.8% 0-5 years and 14.1% over 30 years). espondents are employed in all Slovenian regions, with employees in Slovenian institutions abroad also taking part in some questionnaires.There are mostly professionals (87.8%) and management staff (5.5%) and a small share of and technical and administrative staff (2%).

Table 1

Experience with individuals with autism during career in education

	PE	BE	ME	SE	TE	AE	Total
Yes	74%	91%	42%	72%	34%	50%	75 %
No	25%	8%	51%	23%	41%	46%	20.8%
I don't know	2%	1%	7%	5%	25%	4%	4.1%
Number							
1–2	50%	31%	74%	30%	57%	29%	29.7%
3–5	36%	37%	17%	33%	37%	50%	26.7%
6–10	10%	19%	4%	18%	6%	14%	11%
>10	4%	14%	4%	18%	0%	7%	6.7%

3. Results

3.1 Work experience with individuals with autism

Data presented in Table 1 shows that three quarters of respondents have already met individual(s) with autism in educational system. There are significant differences between different educational levels. On average, educators have worked with one to five individuals with autism during their career in education. Regarding only school year 2021/22, half of respondents (49.4%) responded affirmatively, 42% of respondents employed in PE, 58% in BE, 22% in ME, 52 % in SE, 12% in TE and 21% in AE. The majority (55%) worked with one or two individuals with autism.

3.2 Acquired knowledge about autism

Table 2 shows that share of knowledge about autism decreases as the educational level increases regardless of the source. There is a large group of respondents with no knowledge in music, adult, and tertiary education. Regarding formal education, the most knowledge about autism acquired respondents who completed study programme "Inclusive Pedagogy", "Special and Rehabilitation Pedagogy", followed by programmes of Early Childhood Education. Psychologists, primary teachers, and teachers of specific subjects acquired less knowledge about autism during their studies.

Table 2
Respondents' source of knowledge about autism

	PE	BE	ME	SE	TE	AE	Total
Studies	30%	36%	4%	22%	15%	11%	28.8%
Training organised by employer	34%	37%	2%	47%	7%	19%	30.1%
Training on own initiative	48%	56%	16%	27%	21%	22%	45.8%
Professional literature	60%	62%	16%	38%	26%	22%	53.6%
Internet	45%	49%	16%	44%	28%	26%	42.6%
Work experience	50%	58%	13%	34%	21%	15%	48.2%
Parents	13%	30%	20%	36%	8%	22%	23.9%
Colleagues	36%	41%	4%	27%	7%	15%	32.7%
Observation	19%	19%	11%	7%	4%	7%	16%
No knowledge	7%	5%	50%	17%	40%	44%	12.7%

Table 3
Attendance on lectures or training

	PE	BE	ME	SE	TE	AE	Total
Yes	59%	71%	18%	41%	19%	19%	50.7%
No	41%	29%	82%	59%	81%	81%	40.5%

Table 4
Acquired knowledge by areas

	PE	BE	ME	SE	TE	AE	Total
General characteristics	38%	27%	36%	78%	13%	65%	28.8%
Learning and teaching	10%	17%	14%	35%	17%	27%	14.2%
Social skills, group integration	17%	17%	8%	40%	15%	31%	14.4%
Communication skills	12%	14%	8%	31%	17%	23%	12.4%
Emotion, behaviour modification	15%	17%	11%	43%	17%	23%	15.2%
Working with parents	7%	6%	5%	20%	9%	15%	6.8%
Career guidance	/	3%	1%	6%	13%	0%	4.8%

Attendance was higher among those employed at educational levels in which respondents had more experiences with target group and vice versa (Table 3, Table 1). Educators' participation in additional training rises with increasing numbers of individuals with autism they have taught.Regarding the workplace, in PE attendance was the highest among providers of additional professional assistance and preschool teachers. In BE, also among providers of additional professional assistance, assistants of individuals with autism, caregivers, and assistant head teachers. In TE additional training was mainly attended by coordinators for students with SEN, teachers mostly did not attend lectures or trainings about autism. Half of assistants of pupils with autism in BE and a fifth of assistants of children with autism in PE have received training about general characteristics of autism. It is important to note that half of assistants employed in PE would like to attend training. In BE this was expressed by a third of the assistants. Two thirds of assistants in PE stated that they want to attend training for assistants for individuals with autism. BE assistants who have been trained; use acquired knowledge to a lesser degree.

On average, most educators acquired additional knowledge about general characteristic of autism (Table 4). Respondents who had experience of working with individuals with autism gained more knowledge in all areas compared to those who had no experience.

Table 5
Awareness about the rights of individuals with autism in legislation

	PE	BE	ME	SE	TE	AE	Total
Yes	27%	35%	10%	26%	19%	15%	28.3%
No	34%	22%	63%	29%	49%	52%	31.9%
Partly	39%	43%	27%	45%	31%	33%	39.8%

Table 6
Importance of information about needs before admission to institution

	PE		BE		ME		SE		TE		AE	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
Diet	4.5	0.55	4.4	0.67	3.5	1.16	3.7	0.90	3.3	1.05	3.8	0.94
Speech	4.6	0.55	4.6	0.56	4.3	0.48	4.4	0.57	4.5	0.57	4.5	0.51
Communication	4.8	0.44	4.7	0.46	4.5	0.51	4.7	0.48	4.8	0.51	4.7	0.46
Play	4.6	0.53	4.4	0.59	4.2	0.63	/	/	/	/	/	/
Group integration	4.6	0.57	4.7	0.51	4.3	0.74	4.6	0.59	4.7	0.51	4.6	0.57
Self-care	4.6	0.57	4.6	0.52	4.3	0.57	4.5	0.59	4.5	0.65	4.5	0.59
Orientation	4.4	0.73	4.4	0.63	4.3	0.57	4.5	0.56	4.5	0.66	4.6	0.51
Medication	4.3	0.77	4.4	0.74	3.7	0.80	4.1	0.76	3.7	1.01	4.2	0.69
Health condition	4.7	0.50	4.7	0.53	4.2	0.66	4.4	0.72	4.2	0.83	4.4	0.65
Special interests	4.7	0.51	4.5	0.57	4.2	0.65	4.2	0.66	3.9	0.88	4.3	0.75
Favourite (school) subject	4.7	0.52	4.5	0.60	4.1	0.70	4.1	0.67	4.2	0.81	4.3	0.80
Calming down	4.9	0.32	4.8	0.37	4.5	0.51	4.8	0.42	4.7	0.50	4.7	0.54
Upsetting	4.9	0.31	4.9	0.36	4.5	0.76	4.8	0.38	4.8	0.43	4.7	0.56
Strengths	4.7	0.51	4.7	0.47	4.4	0.54	4.6	0.52	4.5	0.66	4.6	0.57
Weaknesses	4.6	0.55	4.5	0.60	4.4	0.55	4.5	0.61	4.5	0.61	4.5	0.71
Sensory integration	4.7	0.50	4.7	0.51	4.4	0.55	4.5	0.57	4.5	0.62	4.4	0.58
Change acceptance	4.7	0.48	4.6	0.53	4.3	0.58	4.5	0.60	4.5	0.63	4.4	0.51

A concerning finding is that on average 70% of participants are not (well) informed about rights of individuals with autism in national legislation (Table 5).

3.3 Review of education for people with autism

Average ratings on the importance of being informed about needs of an individual with autism before admission to an institution, presented in Table 6 are very high (important or very important).

Professionals at all levels of education consider the most important information to be about the behavioural triggers and communication.

Individuals with autism and their parents are considered an important or very important source of information across whole educational system.

The importance of information from previous institution, pedagogical and medical documentation, and providers of additional professional support decreases with increasing levels of education. The biggest difference in ratings among educational levels is present in the category of physician.

Educators across all educational levels are assessed as an important part of the team.

The importance rating of cooperation with professionals of various profiles in education and health systems (speech therapist, special and rehabilitation pedagogue, social pedagogue, inclusive pedagogue, psychologist, social worker, physiotherapist, occupational therapist, physician, pedopsychiatrist) decreases with increasing levels of education.

A similar trend is observed with assistants of individuals with autism and guardians. The importance rating of teamwork with counselling service and management staff remains constant.

Table 7

Assessment of information transfer effectiveness

	PE		BE		ME		SE		TE		AE	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
Information transfer within staff exchanges	3.4	1.02	3.4	0.96	2.7	1.06	3.2	1.02	2.7	0.91	3.1	1.14
Information transfer within institutions	3.1	1.09	2.9	0.89	2.8	1.02	3.0	1.00	2.6	0.91	3.0	1.12
Information transfer within team	3.8	0.89	3.8	0.84	3.1	1.02	3.7	0.78	2.9	0.95	3.6	0.82

Respondents rate the effectiveness of information transfer as average at all three given levels. Table 7 shows the decline in effectiveness ratings as the level of education increases.

Of concern is the share of employees in TE (44%) who do not know if students with autism in their institution obtain an individual plan.

All educators in TE rated planning and usage of this document as important or very important.

3.4 Assessment of competences for working with an individual with autism

Table 8

Assessment of competences for working with an individual with autism

	PE		BE		ME		SE		TE		AE	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I identify strengths.	4.2	0.61	4.1	0.56	4.1	0.45	3.8	0.65	3.6	0.73	3.7	0.80
I identify weakness.	4.2	0.59	4.1	0.59	4.1	0.49	3.9	0.67	3.7	0.72	3.7	0.86
I identify sensory needs.	4.0	0.69	3.8	0.69	3.9	0.79	3.3	0.74	3.2	0.77	3.4	0.81
I communicate appropriately.	4.2	0.64	4.1	0.64	4.3	0.63	4.0	0.64	3.9	0.76	3.9	0.97
I provide adequate time for information processing.	4.2	0.68	4.1	0.64	4.2	0.68	4.0	0.67	3.8	0.78	3.9	0.88
I provide support for transition between activities.	4.3	0.63	4.1	0.66	4.2	0.51	3.8	0.77	3.6	0.75	3.6	0.94
I identify the need for a time-out.	4.3	0.62	4.2	0.65	4.1	0.64	3.9	0.72	3.7	0.75	3.7	0.88
I provide adequate time to complete activities.	4.2	0.70	4.1	0.66	4.1	0.66	3.9	0.73	3.9	0.76	3.7	0.88
I provide an appropriate environment.	3.9	0.91	3.8	0.83	4.1	0.65	3.5	0.90	3.4	0.84	3.4	0.94
I choose appropriate methods and forms of teaching.	4.0	0.72	4.0	0.69	4.2	0.53	3.8	0.75	3.7	0.81	3.5	0.94
I choose appropriate aids.	4.1	0.69	3.9	0.70	4.2	0.53	3.6	0.75	3.5	0.82	3.5	0.95
I provide visual support.	4.1	0.71	4.0	0.71	4.0	0.62	3.6	0.78	3.6	0.82	3.6	0.88

Table 8 continued

	PE		BE		ME		SE		TE		AE	
	x̄	SD	x̄	SD	x̄	SD	x̄	SD	x̄	SD	x̄	SD
I provide multisensory learning approach.	3.9	0.77	3.9	0.79	3.8	0.79	3.3	0.88	3.3	0.96	3.4	0.93
I provide cross-curricular connections.	4.1	0.71	3.8	0.78	4.1	0.58	3.5	0.88	3.4	0.85	3.6	0.90
I present special needs to peers appropriately.	4.0	0.79	3.9	0.80	3.8	0.92	3.6	0.84	3.2	1.20	3.5	1.00
I present special needs to peers' parents appropriately.	3.8	0.93	3.6	0.93	3.6	0.91	3.3	0.92	3.4	1.03	3.2	1.04
I provide support for integration in the group.	4.3	0.65	4.2	0.68	4.2	0.62	3.9	0.71	3.6	1.01	3.7	0.92
I provide support in communication with other employees.	4.3	0.69	4.2	0.63	3.9	0.84	4.0	0.76	2.5	1.10	3.8	0.91
I am well equipped to work with parents of an individual with autism.	3.2	1.07	3.2	1.01	3.3	1.36	3.0	1.07	3.4	0.96	2.8	1.24
I evaluate and adapt the forms and methods of work to the individual's needs.	4.0	0.78	3.8	0.79	3.7	0.96	3.6	0.93	3.4	0.92	3.5	1.00
I anticipate the onset of unwanted behaviour and redirect the individual.	3.8	0.79	4.1	0.69	3.9	0.85	3.7	0.88	3.1	1.02	3.4	0.99
I respond appropriately to the occurrence of unwanted behaviour.	3.9	0.74	3.8	0.76	3.6	1.09	3.4	0.83	3.3	0.91	3.3	1.07
I provide support in the development of alternative forms of behaviour.	3.9	0.75	3.8	0.72	3.9	0.88	3.6	0.74	3.1	1.04	3.4	0.88
I am aware of medication impact on the behaviour.	3.1	1.16	3.9	0.68	3.8	0.88	3.5	0.84	2.5	1.11	3.4	0.99
I am aware of dietary impact on the behaviour.	3.4	1.16	3.3	1.09	3.0	1.45	2.8	1.01	2.5	1.14	2.8	1.16
I coordinate needs of an individual with autism within the group.	3.9	0.83	3.3	1.05	3.0	1.27	2.7	1.03	3.1	1.09	2.7	1.23

Table 8 shows a trend of higher self-assessment rates among participants employed in PE and BE than in other educational levels.

Competences "I present special needs of an individual with autism to peers' parents appropriately", "I am aware of medication impact on the behaviour of an individual with autism" and "I am aware of dietary impact on the behaviour of an individual with autism" are assessed low at all levels of education.

3.5 Needs for additional training.

Most respondents at all levels of education expressed a need for further training about autism. Areas in which they would like additional knowledge are presented in Table 9.

Table 9

Needs for additional knowledge by areas

	PE	BE	ME	SE	TE	AE	Total
General characteristics	40%	26%	53%	41%	53%	55%	36.2%
Learning and teaching	57%	56%	94%	61%	71%	68%	59.5%
Social skills. group integration	76%	72%	65%	66%	61%	73%	71.3%
Communication skills	73%	69%	53%	57%	69%	64%	68.6%
Behaviour. emotion modification	87%	83%	59%	66%	70%	68%	80.8%
Working with parents	71%	60%	44%	35%	35%	50%	58.5%
Career orientation	/	46%	50%	43%	52%	41%	29.5%

4. Discussion

Data shows that individuals with autism are included in all **educational programmes** at all levels of education. Regardless of the level or programme educators work in. there is a high probability they will encounter an individual with autism during their career.

It is surprising that a quarter of educators in TE do not know whether they have worked with a student with autism. One possible interpretation was given by a respondent, who stated that higher education teachers are not informed about diagnosis, but only about adaptations.

Less than a third of participants are informed about the rights of individuals with autism in **legislation**. Teacher training should therefore include content from education legislation that defines the rights of individuals with SEN, including individuals with autism. Focus should be also on educational programmes because of detected misconception about one(s) participants.

Most employees in PE (93%), BE (95%) and SE (80%) report having some **knowledge about working with individuals with autism** gained from a variety of sources. On the contrary, a high share of participants in ME (50%) and TE (40%) reports having no knowledge. A high proportion of educators acquired their knowledge directly from practical experience and online. Therefore, it would be necessary to check their background knowledge during training.

Less than one third of the respondents chose studies as a source of knowledge about autism. Low knowledge about SEN acquired during formal study programmes for educators was also reported in research by Štemberger (2013).

When renewal of study programmes will take place, it would be necessary to include more content about autism or SEN in general.

Educators who worked with more individuals with autism were more likely to attend **additional trainings or lectures**. This suggests that training about autism makes sense when educators encounter an individual with autism in practice. Guidance to work with each individual is needed, not just general training on autism.

There is a wide disconnection between number of those who have been trained in a particular method or approach and those who are implementing it. One possibility is that respondents are only practising elements of a particular method and are not properly licensed to do so. This is acceptable in some approaches if the educator has the appropriate background knowledge. It is also possible that a method has been introduced by a licensed practitioner and educator is using it under his guidance. Bezenšek (2019) notes that in the Slovenian school system implementation of foreign educational models is not realistic because of human resources, financial, organisational, and other causes.

"The guidelines for working with pupils with autism" (Cesar et al., 2019) define **head teacher's tasks** as ensuring appropriate material, organisational and human resources conditions. As part of the latter is his responsibility to provide training to educators. The data collected contradicts this, as the respondents are more likely to attend training courses on their own initiative rather than at the initiative of their employer. The results show a clear desire for more courses than the participants attended.

The data obtained suggests there is insufficient **information transfer** about an individual with autism when switching institution e.g., when re-schooling or advancing to the next educational level. Transition plans for pupils with SEN are often not part of the individual plan in Slovenian practice (Mrvčić, 2013).

In model development we will therefore include content on transition planning and preparing parents to consent for the transfer of information between institutions when in the best interest of the individual with autism. Research findings also suggest the need for cooperation between various sources of support already available in the Slovenian system.

Respondents rated individuals with autism and their **parents** as an important or very important source of information. This supports the provision to involve individuals with SEN (according to their abilities and maturity) and their parents into all steps of support. On the other hand, respondents' self-assessment of their competence to work with parents of individuals with autism is low across the whole educational system. Two thirds of respondents would like further training in how to work with parents. Among respondents, there were also individuals with an **individual experience** of autism in their family, providing motivation to participate in the research.

The respondents overwhelmingly agreed or strongly agreed to possess stated **competences for working with individuals with autism**. High self-assessments are partly contradicted by statements on acquired skills for working with these individuals.

The vast majority of participants expressed a need for **further training about autism**. Areas of behavioural and emotional management. social skills. group integration and communication skills stand out at all levels of education. The need for additional professional training on behavioural issues and social skills was also identified at teachers in the adapted BE programme with equivalent educational standards for children with autism (Vouk, 2022). Bezenšek (2019) also cites educators' wish for additional training on modification of unwanted behaviour (especially of children with autism) and summarises according to Macedoni-Lukšič (2009, in Bezenšek, 2019) that behavioural problems represent a challenging and stressful area of work for educators. The lack of knowledge about social skills development and group integration can be linked to Košnik's (2021) findings that the goals of counselling services are rarely oriented towards working with peers. Furthermore, strategies for the child's integration into the group are often not set in individual plan (Košnik. 2021).

Basic school employees also highlighted the need for knowledge about learning and teaching pupils with autism. Difficulties in meeting needs of pupils with autism and needs of other pupils in the class were frequently mentioned.

Educators in adapted and special programmes (for individuals with special needs) highlighted their wish for training in evidence-based approaches such as ABA, TEACCH, DIR Floortime, PECS, etc. This is often hindered by limited financial resources and the rarity of training options in Slovenia.

We will take the findings into account when planning courses and consultations for educators as part of VIS A VIS project. Based on the results of the survey, offered lectures will be carried out partly face-to-face and in part remotely.

The main **limitation** is unequal accessibility of the questionnaire to all employees in education. To get in touch with target groups, we mainly depended on management. administration and advisory staff to send the invitation to their employees. The data should be interpreted with caution because of participants' self-assessment, as there may be individual differences in self-perception. In the future, it would be advisable to explore examples of good practice that are already being implemented by educators in Slovenian educational system.

5. Conclusion

The results represent an overview of the current state of education for individuals with autism at all levels of education in Slovenia by educators' point of view. The survey provides insights into educators' needs to work more successfully with individuals with autism. An important finding is that most educators are willing to acquire additional skills and knowledge to improve their educational practice for individuals with autism.

We point out some challenges educators are facing. i.e., shortcomings in legislative framework, the insufficient inclusion of topics about autism and educational legislation in the formal education of professionals, the need for additional targeted training of employees working with individuals with autism, the problems of information transfer during transitions, cooperation, and teamwork between different sources of support, etc.

Findings will be used for the development of tailored support and assistance model in the field of autism, including trainings and counselling for educators and preparation of a manual.

Even though research focus was set only on individuals with autism, it is important to note that by learning

about individualisation educators could met everyone's educational needs to a greater extent.

Conflict of interests
Project VIS A VIS is funded by Norway through Norway Grants 2014 - 2021.

Acknowledgements
Research was conducted as a part of project VIS A VIS. Findings have been previously presented at the conference It's about people 2023 in March 2023.

6. References

Bezenšek, A. (2019). Model izobraževanja specialnih in rehabilitacijskih pedagogov o vedenjskem pristopu za delo z otroki z motnjami avtističnega spektra. [Doktorska disertacija. Univerza v Ljubljani. Pedagoška fakulteta]. Repozitorij Univerze v Ljubljani.https://repozitorij.uni-lj.si/IzpisGradiva.php?id=109953

Cappe, É., Poirier, N., Boujut, É., Nader-Grosbois, N., Dionne, C., & Boulard, A. (2017). Autism spectrum disorder and evaluation of perceived stress parents and professionals: Study of the psychometric properties of a French adaptation of the Appraisal of Life Event Scale (ALES-vf). *L'Encephale, 43*(4), 321–325. https://doi.org/10.1016/j.encep.2016.08.001

Cesar, M.,Turk Haskič. A., Roglič Ožek, S., Jekovec Prešern, E., Ponebšek, K. & Štefanec, M. (2019). *Dopolnitev navodil za izobraževalne programe s prilagojenim izvajanjem in dodatno strokovno pomočjo za devetletno osnovno šolo: navodila za delo z učenci z avtističnimi motnjami*. Ljubljana: Ministrstvo za izobraževanje. znanost in šport in Zavod Republike Slovenije za šolstvo. https://www.gov.si/assets/ministrstva/MVI/Dokumenti/Izobrazevanje-otrok-s-posebnimi-potrebami/OS/Dopolnitev-navodil-Navodila-za-delo-z-ucenci-z-avtisticnimi-motnjami-.pdf

Cohen, E. (2015). Principal leadership styles and teacher and principal attitudes: concerns and competencies regarding inclusion. Social and Behavioral Sciences, 186, 758–764. https://doi.org/10.1016/j.sbspro.2015.04.105

European Agency for Special Needs and Inclusive Education. (2016). *Country Policy Review and Analysis: Italy*. Odense. https://www.europeanagency.org/sites/default/files/agency-projects/CPRA/Phase1/CPRA%20Italy.pdf

Fennell, B. & Dillenburger, K. (2018). Applied behaviour analysis: What do teachers of students with autism spectrum disorder know. *International Journal of Educational Research, 87,* 110–118. https://doi.org/10.1016/j.ijer.2016.06.012

Gómez-Marí, I., Sanz-Cervera, P., & Tárraga-Mínguez, R. (2021). Teachers' Knowledge Regarding Autism Spectrum Disorder (ASD): A Systematic Review. Sustainability, 13(9), 5097. http://dx.doi.org/10.3390/su13095097

Kocjančič, N. F. (2017). Inkluzivna vzgoja in izobraževanje otrok in mladostnikov z avtističnimi motnjami. *Vzgoja in izobraževanje, 48*(1/2), 9–15. https://www.zrss.si/wp-content/uploads/2022/05/VIZ-st1-2_2017_NR.pdf

Košnik, P. (2021). *Analiza individualiziranih programov za otroke s posebnimi potrebami v programih devetletne osnovne šole s prilagojenim izvajanjem in dodatno strokovno pomočjo*. Ljubljana: Zavod Republike Slovenije za šolstvo. www.zrss.si/pdf/analiza_individualiziranih_programov.pdf

Leonard, N.M. & Smyth, S. (2022). Does training matter? Exploring teachers' attitudes towards the inclusion of children with autism spectrum disorder in mainstream education in Ireland. *International Journal of Inclusive Education, 26*(7), 737–751. https://doi.org/10.1080/13603116.2020.1718221

McDougal, E., Riby, D. M. & Hanley, M. (2020). Teacher insights into the barriers and facilitators of learning in autism. *Research in Autism Spectrum Disorders, 79*, 101674. https://doi.org/10.1016/j.rasd.2020.101674

Mrvčić, B. (2013). *Samozagovorništvo v procesu tranzicije za učence s primanjkljaji na posameznih področjih učenja: diplomsko delo* [Diplomsko delo, Univerza v Ljubljani]. Repozitorij Univerze v Ljubljani. http://pefprints.pef.uni-lj.si/1816/1/Diplomsko_delo%2D_Samozagovorni%C5%A1tvo_v_procesu_tranzicije._Barbara_M.pdf

Rogič Ožek, S. (2016). Umeščanje otrok z avtističnimi motnjami v slovenski šolski prostor. *Vzgoja in izobraževanje*, *47*(5/6), 5–10. https://www.dlib.si/details/URN:NBN:SI:DOC-97G6Q769?&language=eng

Sparapani, N., Morgan., L., Reinhardt, V.P., Schatschneider, C. & Wetherby, A.M. (2016). Evaluation of classroom active engagement in elementary students with autism spectrum disorder. *Journal of Autism and Developmental Disorder; 46*(3), 782–796. https://doi.org/10.1007/s10803-015-2615-2

Statistični urad Republike Slovenije [SURS]. (2023). https://pxweb.stat.si/SiStat/sl

Syriopoulou-Delli, C. K., Cassimos, D. C., Tripsianis, G. I., & Polychronopoulou, S. A. (2012).

Teachers' perceptions regarding the management of children with autism spectrum disorders. *Journal of autism and developmental disorders*, *42*(5), 755–768. https://doi.org/10.1007/s10803-011-1309-7

Zakon o usmerjanju otrok s posebnimi potrebami (ZUOPP-1). (2011). Uradni list RS, št. 58/11, 40/12 – ZUJF, 90/12 in 41/17 – ZOPOPP. http://pisrs.si/Pis.web/pregledPredpisa?id=ZAKO5896#

Van Herwegen, J., Ashworth, M., & Palikara, O. (2019). Views of professionals about the educational needs of children with neurodevelopmental disorders. *Research in developmental disabilities, 91*, 103422. https://doi.org/10.1016/j.ridd.2019.05.001

Vouk, A. (2022). *Drugo vmesno poročilo o uvajanju. spremljanju in evalvaciji prilagojenega izobraževalnega programa osnovne šole z enakovrednim izobrazbenim standardom za otroke z avtističnimi motnjami*: Četrto in peto leto izvajanje programa (4. in 5. razred) v šolskih letih 2018/2019 in 2019/2020. Ljubljana: Zavod Republike Slovenije za šolstvo. https://www.zrss.si/pdf/2vmesno-porocilo-avtisticne-motnje.pdf

Štemberger, T. (2013). Učiteljeva pripravljenost na inkluzijo. *Pedagoška obzorja, 28*(3/4), 3–16. https://www.dlib.si/details/URN:NBN:SI:doc-0933YDQT