



# COMPARATIVE RESEARCH OF AUTISM RELATED UNIVERSITY STUDIES AND FAMILY CARE PLANS OF HUNGARIAN HEALTH VISITOR STUDENTS

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## Summary

**Aim.** The number of autistic children has been increasing in the last few decades. The aims of our surveys were to examine the university studies about autism and explore future caring plans based on the acquired knowledge of the Hungarian health visitor students.

**Material and methods.** Full-time health visitor students were involved in our quantitative research in Hungary. The participants were students of BSc level medical education in Budapest, Miskolc and Szeged. 131 people gave valuable answers (total response rate: 74.8%).

**Results.** 63.8% of the health visitor students have received some information about autism during their training programme, but only 8% of them considered this information to be detailed. 24.2% of the students of Semmelweis University, 16.2% of the University of Szeged and none of the health visitor students from Miskolc – for that matter incorrectly- reckoned autism as developmental disorder ( $p = 0.003$ ). Only 20.0% of the respondents thought, they can get in adequate contact with autistic children according to their current knowledge, but 54.9% of them weren't sure about it.

**Conclusions.** We can conclude that the majority of health visitor students do not have sufficient knowledge of autism which may reduce the quality of their work in the future. Therefore (future) health visitors must be given the opportunity to get detailed information on this topic, during the training programmes of BSc and after graduation.

Key words: health visitor students, autism, knowledge, health care, Hungary

## INTRODUCTION

Autism Spectrum Disorder (ASD) is caused by a brain abnormality. It is a pervasive developmental disorder which leads to a lifelong impairment state. The term "spectrum" refers to a wide range of symptoms, which can vary from a quite severe disability associated with multiple disorders to a more or less well compensated state (1-3, 6, 10, 12-14). According to the survey of the Centers for Disease Control and Prevention (CDC), the prevalence of children with autism has increased by 78% in the last 6 years and by 600% in 20 years (7). Based on the latest data around 1 in 88 children has ASD (2, 6, 7, 10, 12). According to our knowledge there

is no proven cure for autism yet, but by the help of early diagnosis and developmental interventions, we can improve their capabilities and the quality of life (2, 10, 12). The increasing prevalence of autism and its multiple manifestation raise the chance that experts of the concerned areas (such as paediatrician, psychologist, dietician, physiotherapist, health visitor) meet children with autism during their work more frequently nowadays.

The Hungarian service of health visitors has a nearly 100 year-old history. Health visitors are highly qualified medical experts who work in the field of primary health care. Their work roles are based on the duties of the primary and secondary prevention (8, 11, 16).

Health visitors are able to detect the early signs of autism with the help of screening tests, this is how they contribute to the diagnosis of autism. It is important for the health visitors to have appropriate knowledge about autism in order to carry out their work with self-confidence and on a high professional level. As far as we know, there have been no studies to explore autism related university studies among health visitors in Hungary.

**AIM**

The aim of the presented study was to examine and compare the health visitor students' training programme and their knowledge about autism in the medical universities of Budapest, Miskolc and Szeged. We explored how well they consider themselves prepared for the care of children with autism and their families.

**RESEARCH METHOD AND SAMPLE**

Full-time third and fourth-year health visitor students were invited to our national, quantitative, questionnaire-based research. They participated in training programmes at Semmelweis University, the University of Szeged and the University of Miskolc. Our survey was carried out in Budapest 2011. The response rate was 74.8% (N = 131).

The self-filled questionnaire contained 31 closed and 9 opened questions. Questions included the socio-demographical characteristics of the respondents, items related to objective knowledge about disability and autism, and personal opinion about education related to autism in each university.

Data from the questionnaires were entered into the SPSS Data Entry. In addition to distribution tests, the Pearson's chi-squared test was applied to measure bivariate relationships between categorical variables ( $p < 0.05$ ).

**RESULTS**

**Socio-demographic characteristics of the respondents**

The respondents of our research included health visitor students (N = 131) of the Semmelweis University (S-student) – 48.9%, the University of Szeged (SZ-student) – 28.2%, and the University of Miskolc (M-student) – 22.9%. 58% of the respondents were third-year students and 42% of them were fourth-year students. The students' average age was 22.9 years.

The majority came from a two-child family (average number of siblings: 1.28).

Only 1.6% of the health visitor students indicated that there was a person with autism in their milieu, 14.3% of them had a family member with ASD. Among those students 4.7% lived in the same household with this person (N = 31).

23.8% of the health visitor students meet a person with autism regularly, 57.1% sometimes, and 61.9% of them have not had an opportunity to come into contact with him/her. None of the students concerned answered that they did not want to contact with an autistic person.

**Evaluations of subjects related to autism by the undergraduates**

The majority of health visitor students (63.8%) received some kind of information about autism within the compulsory courses in the university. 5.1% of them got detailed information, 30.8% have learnt it at elementary level and 27.9% of the students received only a few lectures on the topic. Slightly more than 1/3 of the undergraduates have not heard about autism yet, not even at the level of it being mentioned during the courses. In this respect, a statistically significant difference occurred between the universities ( $p < 0.001$ ).

When filling the questionnaire, the students had to make a subjective evaluation of the main subject groups (clinical, psychological, professional subjects) related to education about autism, which cover the health visitor's training programme. The evaluation was based on Hungarian school classification standards – where 1 = never studied about autism, it was not even mentioned, 5 = got comprehensive knowledge. According to the answers given by the students, it is interesting that the grades never reached good and excellent, typical marks were 2 and 3. In all of the cases, the differences were statistically significant between the universities ( $p < 0.001$  and  $p = 0.003$ ) (tab. 1).

Taking their studies into account, 43.4% of the health visitor students think that they have received partial, and only two in ten students believe that they have received adequate information about autism. Nevertheless more than one-third of the respondents (37.2%) did not receive sufficient knowledge on this topic during their courses.

**The comparison of students' knowledge on autism at different universities**

In our survey we examined the factual knowledge on autism according to the students' personal opin-

Table 1. Subjective assessments related to higher education about autism (N= 131).

Subjects possibly relating to autism	University of Miskolc	University of Szeged	Semmelweis University	Correlations between the faculties
	Evaluation 1-5			
Clinical subjects	3	1.6	1.8	$p < 0.001$
Psychological subjects	3.7	2.3	2.6	$p < 0.001$
Professional subjects	3.4	2.3	2.6	$p = 0.003$

ion about the health visitor training program. We got the fewest correct answers in our questionnaire when the students were asked to define autism itself. 24.2% of the S-students, 16.2% of the Sz-students and none of the health visitor students from Miskolc grouped autism as a developmental disorder (1, 3, 6, 13, 14). The majority of students chose wrong answers, such as intellectual disability (34.4%) and personality disorder (27.9%). A statistically significant difference occurred between the universities ( $p = 0.003$ ) (fig. 1).

Surprisingly, most respondents of the three universities mistakenly believed that only one in 500 children has ASD, the correct answer (one in one-hundred children living with autism) was the least chosen (2, 6, 10, 12). Less than 10% of the M-students and the Sz-students and more than 20% of the S-students gave correct answers. More than two-thirds of the students knew that boys are more frequently affected by autism than girls. (2, 10, 12, 15) The highest number of accurate answers was given by the Sz-students (89.2%), followed by S-students (85.9%) and then M-students (63.3%).

There was no statistically significant difference between the students' answers regarding the earliest age of autism diagnosing: M-students gave the fewest correct answers (58.3%). 58.6% of the Sz-students and more than half of the S-students (61.9%) knew that autism could be diagnosed at the age of two (1, 4, 5, 9, 12). However approximately one-third of the students incorrectly believed that autism can be diagnosed at the age of six months or as late as at the age of five years.

An open question was asked about the earliest observable symptoms of autism where the students could list more than one answer (10, 12). The lack of eye contact (52 students), and delayed or stalled development of speech (51 students) were most frequently regarded the earliest signs of autism. Although making only a little eye

contact is often a symptom of autism, it does not necessarily occur among all autistic children. Social impairment (31 students) and inappropriate activities (17 students) were also common answers, but slow development of movement, not grabbing toys, behavioural problems and the delay of mental development were less common responses.

#### Attitudes related to the issue of autism

Health visitor students also ranked their future caring tasks with families parenting children with autism. They had to rank the given caring components on the basis of Hungarian school classification standards (1 = not a care duty, 5 = high priority duty), none of the listed caring components got worse than mark three. Students' answers marked the detection of early symptoms and the indication of them towards a paediatrician (4.5), giving advice about further childbearing (4.4), consultation about child care and child-raising (4.4) as the most important components of their future work. These are followed by the importance of keeping in touch with professionals (4.2), promoting health (4.1), and mental health counselling (4). At the end of the ranking there are the tasks to facilitate the development of good marital relationship (3.7), giving advice about social and legal issues (3.6). More than half of the respondents (56.2%) are not sure if they are able to build a good relationship with children suffering from ASD. On average, only two in ten students feel prepared to this kind of interaction, in spite of the fact that it is an essential component of their caring work (fig. 2).

Unexpectedly, the M-students who gave the fewest correct answers on the subject of autism, felt the most confident about being prepared to an interaction with an autistic child (37.9%). While the Sz-students and the S-students, with better knowledge, were less self-confident about their skills (positive response rates were 8.1% and 18.8%).

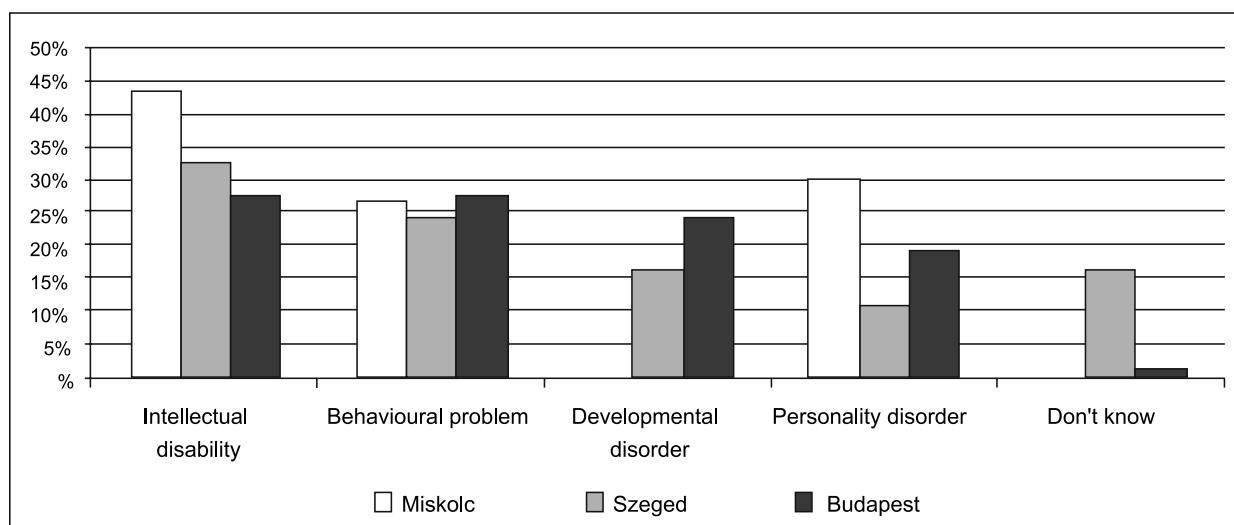


Fig. 1. Definition of Autism Spectrum Disorder (N = 129).

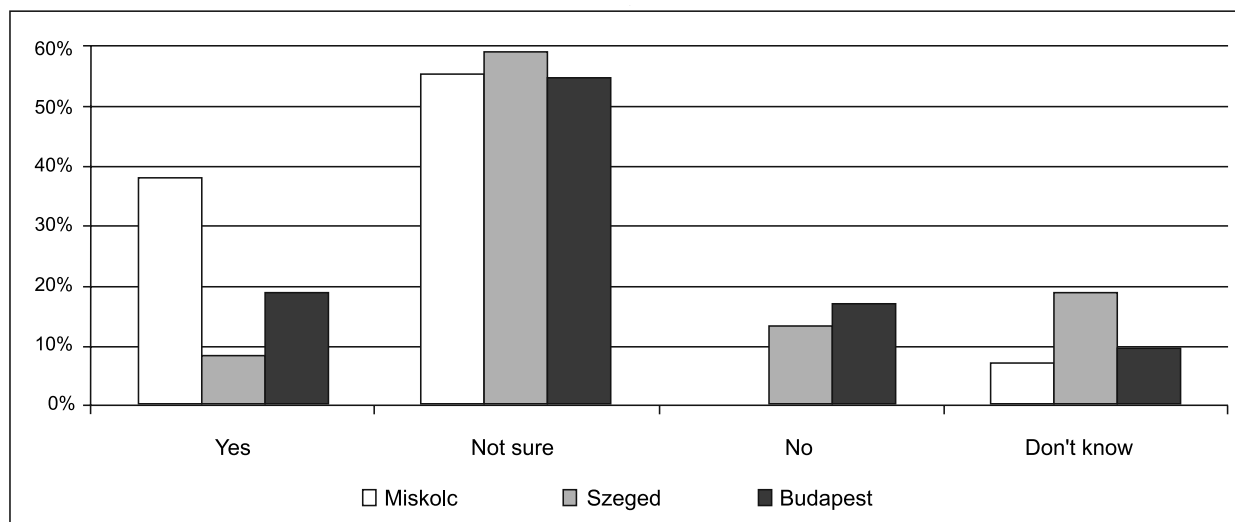


Fig. 2. Communicational skills with person living with autism (N = 130).

In another open question we asked the students about what sort of knowledge is needed to get sufficient level of confidence during their training programme. More than two-third of the respondents believe that more theoretical information should be given about autism, such aspects as main symptoms, types of therapies, caring advice. 48 of them stressed the importance of experimental knowledge like observing children with ASD, getting to know affected families, situational practise. Finally, one-third of the students considered empathy and tolerance as the most important skills.

## DISCUSSION

The results show that according to the majority of the health visitor students they received little knowledge about autism and most of them were not satisfied with the amount of information provided during their studies.

Basing on the answers to the open question on the earliest observable symptoms of autism we can conclude that health visitor students often enter university with a stereotype on autism and that does not change over the years of university studies due to the lack of education.

According to the comparative results, the students of Semmelweis University are the most discontent ones with their studies about autism and they feel that more detailed knowledge should be acquired. However their level of knowledge was the highest on the topic. It is surprising that the students of the University of Miskolc, who have the lowest level of knowledge, were the most confident ones about being able to make an appropriate contact with an autistic person.

To sum up the results, the health visitor students are not given sufficient knowledge about autism during their BSc education, which can reduce the quality of their future work.

## CONCLUSIONS

One of the most important utilization areas of the conclusions is education. We consider it an essential task to expand the theoretical and experimental knowledge of health visitor students.

1. It is important to know the definition and the prevalence of autism.
2. They need to be able to detect the early symptoms of autism.
3. They need to be able to make contact to build a relationship with children suffering from ASD and support the affected families.

Provided with this knowledge, health visitors will have a reason to be confident and will be able to be effective in their work. This would raise quality indicators and the complacency of the families bringing up children with autism. □

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