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WORK LOAD AMONG GERMAN AND UKRAINIAN KINDERGARTEN TEACHERS AND ITS EFFECTS ON WORK ABILITY AND MENTAL HEALTH

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Introduction. Kindergarten teachers are exposed to various stresses during their work, which can result in negative stress.

The aim of the research – was to survey the stress situation of kindergarten teachers from Germany (Magdeburg area) and Ukraine (Kharkiv city) and to compare the effects of the strain on the mental health and work ability of kindergarten teachers.

Materials and methods of the research. 185 German and 107 Ukrainian kindergarten teachers took part in the survey voluntarily. The load and subjective stress were assessed using the Rudow checklist. Mental health was recorded using the General Health Questionnaire (GHQ-12) and work ability using the Work Ability Index (WAI).

Results. Both random samples indicated factors from the categories «work tasks and organisation» and «children and group» as the most frequent strain factors; the stress level was high in both cases. German nursery school teachers felt a greater burden and stress overall compared to Ukrainian kindergarten teachers. Mental health was subjectively impaired in 25% of the German and 11.2% of the Ukrainian kindergarten teachers ($p < 0.01$). The GHQ score of (12.2 ± 5.5) points was higher for German kindergarten teachers than for their Ukrainian colleagues with (9.0 ± 4.5) points ($p < 0.001$). German educators reported significantly ($p < 0.001$) lower work ability (7.3 points \pm 1.7 points) than Ukrainian educators (8.0 points \pm 1.4 points). Both groups manage physical demands equally well, while Ukrainian educators manage mental demands better (3.7 points \pm 0.7 points vs. 3.4 points \pm 0.8 points; $p < 0.05$).

Conclusions. The mental health of the kindergarten teachers should be promoted through measures of behavioural prevention. Within the scope of occupational health care, the first signs of mental impairment among the child care workers could be recorded in order to be able to take intervention measures in good time.

Key words: kindergarten teachers, stress, mental health, work ability

Introduction

Educators are exposed to various strains in their daily work. These range from physical strain [1, 2], to physical strain such as noise [3–5] voice load [6], biological hazard due to infectious agents [7] up to mental stress [8–11]. These strains can trigger different physical and psychological stresses. For example, an increased risk of burnout has been described for kindergarten teachers [8, 12–14]. «Strain» describes working conditions while «stress» describes the effects of exposure to strain [15].

According to the Stress Report Germany 2019, it was shown that overall in the German population the proportion of those who perceive work influences as stressful and report recovery impairments has increased [16]. A lack of ability to recover is considered a possible risk factor for the development of a burnout syndrome [17].

In a survey of teachers, it was found that mental health was already impaired in almost 30% of them [18]. Employees in social interaction occupations,

which include the educator profession, showed a significantly higher level of emotional exhaustion than employees in other occupations [19].

Many educators find it difficult to continue in their work until they reach the regular retirement age [20, 21]. Earlier retirement or staff turnover exacerbates the current lack of staff shortage in German schools. In addition, according to the Barmer Health Report 2021, Saxon nursery school teachers are incapacitated for work more often and for longer than average [22].

As part of an international cooperation with the Medical University of Kharkiv, the study aimed to find out whether the strain situation in both countries is comparable, whether Ukrainian educators have fewer or different strain factors, whether their mental health and ability to work are better and which connections are made between the prevailing strain factors and mental health and ability to work.

The aim of the research – was to compare the effects of occupational strain factors on mental

health and subjective work ability of kindergarten teachers across countries in order to be able to develop prevention measures. Various theoretical models such as the demand-control model, the model of occupational gratification crises, the model of organisational injustice and the model of the demand-resource balance can provide a good knowledge base for stress prevention as part of workplace health promotion [23].

Materials and methods of the research

Study design

For the survey of the German sample, 24 larger public and private providers of day care centres in the city of Magdeburg and the surrounding area were initially contacted with the request to support the study. Eleven providers declared their willingness to participate, and a total of 28 institutions took part. The survey took place in the period 05/2017–04/2019.

Ukrainian educators were recruited in a similar way. The survey of this subsample was conducted in 10 institutions in Kharkiv city in the period 09/2021–12/2021.

A positive vote of the ethics committee is available for both samples (positive vote of the ethics committee of the Otto-von-Guericke University Magdeburg at the Medical Faculty with the registration number 40/17 and the positive vote of the Committee for Ethics and Bioethics of the Kharkiv National Medical University (extract from protocol no. 4 of 07/12/2022, addendum).

Participants

The German sample initially consisted of 216 male and female educators. In order to avoid gender influences, 7 male educators were excluded from the statistical evaluation due to the very strong imbalance in the gender distribution. Further female respondents were excluded from the evaluation for the following reasons: 18 female educators had only incompletely completed the questionnaire, 6 female educators had been employed for less than 1 year (exclusion criterion).

The Ukrainian educators submitted 116 fully completed questionnaires. Nine educators were excluded from the evaluation because of insufficient professional experience. In the end, the questionnaires of 185 German and 107 Ukrainian educators could be used.

Questionnaires

First, socio-demographic data were collected on age and gender, the type and duration of employment, and the number and age of children in care with a self-developed questionnaire. For reasons of data protection (especially in smaller facilities with few educators), the questionnaire did not ask for the educator's date of birth, but rather for membership of different age groups (≤ 35 years, 36–45 years, ≥ 46 years).

The work-related strain factors and the subjective stress caused by these individual strain factors were recorded using the Rudow-checklist [24]. This contains 36 items that are assigned to the following eight categories: «Children and group», «Team», «Management», «Provider», «Work tasks and organization», «Working environment», «Spatial-technical equipment», and «Physical demands». Participants were first asked regarding the occurrence of any strain factors in the institution at all («yes»/«no») and if so, the educators were asked to indicate to what extent they felt stressed by this factor («not», «hardly», «medium», «strong»).

In order to be able to assess the effects on health, the educators answered two further questionnaires. To assess mental health, the General Health Questionnaire (GHQ-12) by Goldberg in the German translation according to Linden et al. was used [25, 26]. 12 items aim at the current state of health compared to the usual state. The response were given on a four-point scale («better than usual» – «as usual» – «worse than usual» – «much worse than usual») with a 0-1-2-3 coding. For the assessment of the severity of impairment, a total sum (GHQ score) was formed (values between 0 and 36 points possible); a high score indicates impaired mental health. Secondly, a dichotomous scoring was used with a 0-0-1-1 coding. The cut-off value as an expression of impaired mental health, after calculation of the 75th percentile, is in agreement with results of other large surveys at ≥ 4 [18, 27].

Statistical Analyses

The statistical analyses of data were carried out using the SPSS software programme (version 28; IBM, Armonk, New York, USA). After checking for normal distribution with the Kolmogorov-Smirnov test, the descriptive description of the sample was carried out, indicating the mean values, standard deviations, medians with minimum and maximum. For group comparisons, the chi-square test or Fisher's exact test

and the Mann-Whitney U test were used. Correlations were tested by calculating the correlation coefficient according to Spearman, controlling for nationality as an influencing factor. All test decisions are based on a significance level of $p < 0.05$.

Results of the research and their discussion

The 185 German and 107 Ukrainian educators were divided into age groups as follows (Table 1).

The age groups in both countries tended to be different, but this difference was not significant. There were no differences in terms of the number of years in the profession – German and Ukrainian educators had been in the profession for around 25 years.

There were significant differences between the two countries with regard to the age of the children to be cared for (Table 2). More German educators cared for children under the age of 3 or between 0 and 6 years. In the Ukraine, significantly more children of kindergarten age between 4 and 6 years were cared for ($p < 0.001$).

There were also statistically significant differences with regard to the number of children in the groups: In

the German sample, 14.4% of the educators looked after fewer than 15 children, while only 7.5% of their Ukrainian colleagues did so. 47.0% of German and 39.3% of Ukrainian educators worked in groups with 15–20 children. Group sizes with more than 20 children were more common in Ukraine (53.3%) compared to Germany (38.7%).

Strain factors and subjective stress

The strain factors and the associated subjective stress are shown in the following Tables 3 and Tables 4. German educators often affirmed significantly more often that the respective stress was true (Table 3).

Especially in the category «Physical demands», German educators reported a much higher level of strain. There were also clear differences in the other categories. For example, there are more tensions and conflicts in the team among German educators ($p < 0.001$), whereby in addition the management deals with the tensions less constructively than Ukrainian nursery managers ($p < 0.001$).

Ukrainian kindergarten teachers, on the other hand, stated significantly more often that relaxation or

Table 1

Distribution of nursery school teachers in the age groups

Age group	Age	Germany	Ukraine	p
		[N (%)]		
Age group I	< 35 years	66 (35.7)	25 (23.4)	0.051
Age group II	35 – 45 years	23 (12.4)	21 (19.6)	
Age group III	≥ 46 years	96 (51.9)	61 (57.0)	
Total number N (%)		185 (100)	107 (100)	

Table 2

Number and frequencies of age groups cared for by nursery school teachers and group size of children to be cared for in a country comparison

	Germany	Ukraine	p
<i>Age group of children to be cared for [N (%)]</i>			
0–3 years	60 (33.1)	16 (15.0)	< 0.001***
4–6 years	44 (24.3)	86 (80.4)	
0–6 years	74 (40.9)	5 (4.7)	
0–12 years	1 (0.6)	0 (0)	
4–14 years	2 (1.1)	0 (0)	
<i>Number of children to be cared for per group [N (%)]</i>			
< 15 children	26 (14.4)	8 (7.5)	0.032
15–20 children	85 (47.0)	42 (39.3)	
> 20 children	70 (38.7)	57 (53.3)	

Table 3

Selected strain factors in a German-Ukrainian comparison

Strain factor		Germany	Ukraine	p
		«applies» [N (%)]		
1	There are many children in the group	162 (90.0)	66 (61.7)	< 0.001
2	Working with individual children is hardly possible	156 (87.6)	82 (76.6)	0.021
3	There are discipline problems in the group	119 (66.9)	51 (47.7)	0.002
4	Children show behavioural problems	133 (74.7)	77 (72.0)	n. s.
<i>«Team»</i>				
5	If you have problems, you get support from colleagues [#]	20 (11.1)	6 (5.6)	n. s.
6	There is effective teamwork [#]	55 (31.3)	6 (5.6)	< 0.001
7	There are tensions or conflicts in the team	137 (77.0)	30 (28.0)	< 0.001
8	In the case of special problems, support is provided by internal/external specialists [#]	65 (36.5)	23 (21.5)	0.008
<i>«Management»</i>				
9	There is performance-related recognition and criticism [#]	58 (33.0)	3 (2.8)	< 0.001
10	The management supports the educators in case of problems [#]	41 (23.2)	1 (0.9)	< 0.001
11	The management organises the daily work well [#]	51 (29.5)	3 (2.8)	< 0.001
12	The leadership deals constructively with tensions and conflicts in the team [#]	71 (40.8)	6 (5.6)	< 0.001
13	The leadership deals constructively with tensions and conflicts with parents [#]	39 (22.7)	2 (1.9)	< 0.001
<i>«Provider»</i>				
14	There is sufficient staff available [#]	107 (59.4)	25 (23.4)	< 0.001
<i>«Work tasks and organization»</i>				
15	There are many work tasks to be done	173 (95.6)	102 (95.3)	n. s.
16	There is time pressure when performing tasks	142 (79.8)	65 (62.1)	< 0.001
17	There is time for preparation and follow-up of the pedagogical work [#]	137 (75.3)	41 (38.3)	< 0.001
18	It is difficult to fulfil the pedagogical, administrative and other tasks in a quality manner	125 (71.0)	53 (49.5)	< 0.001
19	The duty roster is fair to all educators [#]	45 (24.7)	21 (19.6)	n. s.
20	Relaxation and rest during a working day are hardly possible	124 (68.1)	91 (85.0)	< 0.002
<i>«Working environment»</i>				
21	The noise level in the group room and in the nursery is high	171 (95.0)	22 (20.6)	< 0.001
<i>«Spatial-technical equipment»</i>				
22	The noise protection measures for the rooms are good [#]	129 (72.9)	23 (21.5)	< 0.001
23	There are enough ergonomic changing tables as well as tables and chairs suitable for adults [#]	91 (51.1)	49 (45.8)	n. s.
24	A break room or corner is available to «switch off» [#]	56 (31.1)	99 (92.5)	< 0.001
<i>«Physical demands»</i>				
25	Vocal tension due to frequent loud speaking	157 (86.7)	34 (31.8)	< 0.001
26	Lifting, carrying, helping, or diapering children	146 (83.0)	16 (15.0)	< 0.001
27	Unfavorable posture when playing and doing handicrafts with children	152 (83.5)	35 (32.7)	< 0.001
28	Frequent standing and awkward sitting	148 (81.3)	32 (29.9)	< 0.001

Note. [#]For this item, the answer «Does not apply» was evaluated due to the positively formulated question.

recreation is not possible during a working day (85% vs. 68%, $p < 0.01$) and that there is no break room available (92% vs. 31%; $p < 0.001$).

Some strain factors are similarly in both samples: Many work tasks that have to be performed are a significant strain factor in both samples; more than 95% of the study participants confirmed the occurrence of this strain. Children with behavioural problems were present in both samples (approx. 74%). About half of the educators in both samples stated that ergonomic changing tables and tables and chairs suitable for adults were available.

German educators felt significantly more stressed by the respective strain factors (Table 4).

Especially in the categories «Work tasks and organisation», «Spatial-technical equipment» and «Physical demands» as well as noise in the facility, German educators felt medium to high stress, while Ukrainian colleagues were rather not stressed or hardly stressed at all.

Subjective work ability

The work ability subjectively assessed on a scale of 0–10 of the WAI questionnaire was lower in the German sample with a median of 8.0 (range 1–10) than in the Ukrainian sample 8.0 (3–10; Table 5).

Both samples manage to cope with physical demands equally well. However, the German educators find it more difficult to meet the psychological demands.

Mental health

First, the total sum of all complaints was calculated as a total score to evaluate the general state of health or to determine short-term changes in the state of health. The total score of (12.2 ± 5.5) points for German educators was worse than for the Ukrainian sample with (9.0 ± 4.5) points ($p < 0.001$; Table 5). In a dichotomous evaluation, taking into account the cut-off value of 4, 80.4% of the German educators were found to have normal mental health, compared to 90.7% of their Ukrainian colleagues. Accordingly, 19.6% of the German and 9.3% of the Ukrainian participants had impaired mental health ($p\text{Chi}^2 < 0.05$).

Correlation analyses

The mental health of the total sample correlates low with the ability to work ($r = -0.474$, $p < 0.001$). In the German sample, the correlation was similarly pronounced ($r = -0.435$, $p < 0.001$) as in the Ukrainian sample ($r = -0.441$; $p < 0.001$). In order to uncover

country-specific correlations between subjective strain and mental health or work ability, the correlation analyses according to Spearman were conducted separately for the two samples (Table 6).

Overall, only very small ($r < 0.5$), but significant correlations between the strain factors and mental health and work ability were recognizable. In the case of Ukrainians, there was a low correlation between children's disciplinary and behavioural problems and the work ability and the mental health of the kindergarten teachers.

For German educators, mental health and work ability correlated with a lack of support from both colleagues and management. There was also a slight correlation between the lack of relaxation during the day and mental health and work ability among German educators. Even if there were many work tasks to be done, which were difficult to perform in a quality manner, the work ability decreased and mental health was impaired.

Discussion

In this study, the numerous strain factors described in previous studies were reconfirmed [13, 28–30]. In particular, in the German sample it is the many work tasks, the many children in the group, the noise and the vocal stress due to loud speaking, while in the Ukrainian sample, in addition to the many work tasks, the lack of a break room and the lack of relaxation were stated as strain factors. The many work tasks are also indicated as a serious strain factor in other studies in an international comparison [31]. It is striking that despite similar workloads in both countries, such as the many work tasks, the German educators felt more stressed compared to their Ukrainian colleagues. Compared to German kindergarten teachers, Ukrainian day care workers could hardly relax during the working day; they did not have a break room at their disposal. However, these two strain factors in particular were related to mental health and work ability in the German sample, while no correlation could be detected among Ukrainian educators.

German educators felt more stressed by the strain factors, and they subjectively perceived their mental health and subjective work ability as more impaired. In the Ukrainian sample, the social factors (e.g. less tension in the team, helpful colleagues as well as dealing with conflicts on the part of the management) were more pronounced, which is possibly why the mental health and ability to work were less impaired among the Ukrainian educators. The importance of social factors

Table 4

Subjective stress caused by the respective stress factors in a country comparison (figures in %)

Item [§]	Not		Hardly		Medium		Strong		P
	G	U	G	U	G	U	G	U	
<i>«Children and group»</i>									
1	4.0	47.7	13.0	9.3	52.0	32.7	31.1	10.3	< 0.001***
2	7.3	26.2	9.5	12.1	46.9	41.1	36.3	20.6	< 0.001***
3	22.1	55.1	12.2	12.1	43.6	22.4	22.1	10.3	< 0.001***
4	18.6	33.6	11.6	17.8	44.2	39.3	25.6	9.3	< 0.001***
<i>«Team»</i>									
5	49.0	33.6	19.7	10.3	21.8	45.8	9.5	10.3	< 0.001***
6	36.6	35.5	18.3	7.5	30.1	43.9	15.0	13.1	0.031*
7	16.9	73.8	15.1	14.0	38.4	10.3	29.7	1.9	< 0.001***
8	29.2	39.3	22.9	13.1	32.6	40.2	15.3	7.5	0.027*
<i>«Management»</i>									
9	36.2	28.0	26.2	10.3	22.1	47.7	15.4	14.0	< 0.001***
10	44.8	27.1	18.2	13.1	23.1	44.9	14.0	15.0	0.002**
11	39.4	33.6	20.4	8.4	31.4	44.9	8.8	13.1	0.016*
12	24.7	35.5	22.6	11.2	30.1	42.1	22.6	11.2	0.003**
13	32.9	29.0	29.3	13.1	26.4	46.7	11.4	11.2	0.002**
<i>«Provider»</i>									
14	16.9	44.9	17.5	9.3	35.6	34.6	30.0	11.2	< 0.001***
<i>«Work tasks and organization»</i>									
15	5.3	12.1	18.7	10.3	51.5	61.7	24.6	15.9	0.014*
16	10.5	43.0	19.8	12.1	39.0	35.5	30.8	9.3	< 0.001***
17	7.6	48.6	16.9	10.3	32.0	37.4	43.6	3.7	< 0.001***
18	13.9	57.0	14.5	13.1	45.5	26.2	26.1	3.7	< 0.001***
19	37.9	35.5	30.1	9.3	21.6	45.8	10.5	9.3	< 0.001***
20	16.3	7.5	22.9	53.3	38.0	16.8	22.9	22.4	< 0.001***
<i>«Working environment»</i>									
21	3.4	81.3	7.5	4.7	37.9	13.1	51.1	0.9	< 0.001***
<i>«Spatial-technical equipment»</i>									
22	13.5	38.3	14.7	29.9	35.0	28.0	36.8	3.7	< 0.001***
23	28.3	55.1	19.5	23.4	34.0	19.6	18.2	1.9	< 0.001***
24	46.7	93.5	23.0	1.9	17.1	2.8	13.2	1.9	< 0.001***
<i>«Physical demands»</i>									
25	8.7	68.2	22.0	8.4	47.4	20.6	22.0	2.8	< 0.001***
26	17.5	86.9	21.6	2.8	35.7	10.3	25.1	0.0	< 0.001***
27	11.4	66.4	20.6	11.2	41.7	21.5	26.3	0.9	< 0.001***
28	13.6	68.2	18.2	8.4	43.2	20.6	25.0	2.8	< 0.001***

Note. [§]Description of the items see Table 3.

Table 5

Data on subjective work ability and mental health in a country comparison

Parameter	Germany	Ukraine	p
	Mean ± standard deviation Median (min-max) [95% CI]		
Present ability to work (WAI 1)	7.3 ± 1.7 8.0 (1–10) [7.05–7.55]	8.0 ± 1.4 8.0 (3–10) [7.73–8.27]	< 0.001
Coping with physical demands (WAI 2a)	3.8 ± 0.7 4.0 (2–5) [3.68–3.89]	3.8 ± 0.7 4.0 (2–5) [3.69–3.96]	n. s.
Coping with mental demands (WAI 2b)	3.4 ± 0.8 3.0 (1–5) [3.3–3.5]	3.6 ± 0.7 4.0 (2–5) [3.51 – 3.79]	< 0.05
Mental health (GHQ – total score)	12.2 ± 5.5 11.0 (4–33) [11.37–12.98]	9.0 ± 4.5 7.0 (3–25) [8.15–9.88]	< 0.001

for the prevention of mental illness has also been demonstrated by other authors [32–34]. Siegrist describes that certain psychosocial stresses contribute to a significant work-related sickness burden [23].

Ukrainian educators felt less stressed overall by children's disciplinary problems than German educators, but when disciplinary problems occurred, mental health and subjective work ability were impaired. Perhaps this is a cultural phenomenon, Ukrainian children tend to be more disciplined and respectful in their interactions with adults. According to the Education Law of Ukraine, education in respect for the family and the country, traditions and customs, the national and native language, the national values of the Ukrainian people and the values of other nations and peoples, as well as the conscious attitude to love and protect the environment are among the most important tasks of an educator [35].

German educators reported more physical strain than Ukrainian educators, and they also felt more stressed by it. This difference may be due to the fact that in Germany childcare for children under 3 years of age has become common, whereas in Ukraine, care for small children is more often provided by (older) family members. Ukrainian children tend to come to an institution later than German children, provided that the care work can be taken over within the family network [36].

The subjective work ability is lower among German kindergarten teachers compared to their Ukrainian colleagues. In the case of teachers [37] only found a tendency towards a difference with a slightly lower

work ability among German teachers. However, the comparison is difficult to make because in our study only the first three items of the Work Ability Index questionnaire were used.

In Ukraine, the job profile is academic. It is possible that Ukrainian educators feel more valued as a result, and that their social position is recognised. This results in resources that strengthen the job satisfaction and thus also the mental health of the educators.

Limitation

The questionnaire survey took place before the war in Ukraine. It is therefore difficult to draw conclusions today.

The questionnaire survey was locally limited. It is therefore not possible to draw conclusions about the population of German or Ukrainian educators.

For reasons of data protection, the specific age of the educators was not asked. The survey was to be anonymous. In order to avoid inferring the respective educator from the date of birth (especially in smaller institutions, there would be a great danger here), age groups were formed into which educators could classify themselves. However, this means that information is lost.

Conclusions

Preventive measures must be taken to maintain the ability to work as well as mental health.

In particular, social support (team cohesion, positive leadership) must be strengthened.

Table 6

Relationships between subjective strain and health factors in both samples

Stress due to the strain factor...	Mental health		Work ability	
	r^{Spearman}			
	G	U	G	U
<i>«Children and group»</i>				
There are many children in the group	0.196**	0.268**	-0.324***	-0.162
Working with individual children is hardly possible	0.152*	0.264**	-0.196**	-0.204*
There are discipline problems in the group	0.270***	0.431***	-0.289***	-0.424***
Children show behavioural problems	0.255***	0.284**	-0.224**	-0.407***
<i>«Team»</i>				
If you have problems, you get support from colleagues [#]	0.369***	0.025	-0.356***	-0.092
There is effective teamwork [#]	0.361***	-0.072	-0.340***	-0.022
There are tensions or conflicts in the team	0.267***	0.170	-0.157*	-0.253**
In the case of special problems, support is provided by internal/external specialists [#]	0.269**	-0.079	-0.261**	0.039
<i>«Management»</i>				
There is performance-related recognition and criticism [#]	0.231**	0.041	-0.239**	-0.115
The management supports the educators in case of problems [#]	0.258**	0.037	-0.239**	0.014
The management organises the daily work well [#]	0.274**	-0.055	-0.326***	-0.031
The leadership deals constructively with tensions and conflicts in the team [#]	0.372***	-0.099	-0.243**	0.046
The leadership deals constructively with tensions and conflicts with parents [#]	0.275**	-0.008	-0.134	0.043
<i>«Provider»</i>				
There is sufficient staff available [#]	0.249**	-0.020	-0.256**	0.107
<i>«Work tasks and organization»</i>				
There are many work tasks to be done	0.252***	0.216*	-0.301***	-0.292**
There is time pressure when performing tasks	0.182*	0.175	-0.226**	-0.309**
There is time for preparation and follow-up of the pedagogical work [#]	0.199**	-0.050	-0.287***	0.031
It is difficult to fulfil the pedagogical, administrative and other tasks in a quality manner	0.261***	0.268**	-0.360***	-0.291**
The duty roster is fair to all educators [#]	0.083	0.006	-0.127	-0.006
Relaxation and rest during a working day are hardly possible	0.304***	-0.099	-0.435***	0.068
<i>«Working environment»</i>				
The noise level in the group room and in the nursery is high	0.144	0.180	-0.261***	-0.046
<i>«Spatial-technical equipment»</i>				
The noise protection measures for the rooms are good [#]	0.207**	0.038	-0.202**	0.035
There are enough ergonomic changing tables as well as tables and chairs suitable for adults [#]	0.084	0.085	-0.112	0.050
A break room or corner is available to «switch off» [#]	0.087	0.056	-0.167	0.076
<i>«Physical demands»</i>				
Vocal tension due to frequent loud speaking	0.173*	0.265**	-0.283***	-0.253**
Lifting, carrying, helping, or diapering children	0.149	0.272**	-0.146	-0.186
Unfavorable posture when playing and doing handicrafts with children	0.221**	0.189	-0.217**	-0.073
Frequent standing and awkward sitting	0.190*	0.253**	-0.218**	-0.210*

Note. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Correlations with $r > 0.3$ are printed in bold. [#]For this item, the answer «Does not apply» was evaluated due to the positively formulated question.

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РОБОЧЕ НАВАНТАЖЕННЯ НІМЕЦЬКИХ ТА УКРАЇНСЬКИХ ВИХОВАТЕЛІВ ДИТЯЧИХ САДКІВ ТА ЙОГО ВПЛИВ НА ПРАЦЕЗДАТНІСТЬ І ПСИХІЧНЕ ЗДОРОВ'Я

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Вступ. Вихователі закладів дошкільної освіти під час своєї роботи піддаються різним стресам, які можуть призвести до негативного стресу.

Мета дослідження – дослідити стресову ситуацію вихователів закладів дошкільної освіти з Німеччини (Магдебурзький регіон) та України (м. Харків) і порівняти вплив стресу на психічне здоров'я та працездатність вихователів закладів дошкільної освіти.

Матеріали та методи дослідження. 185 німецьких і 107 українських вихователів закладів дошкільної освіти взяли участь в опитуванні добровільно. Навантаження та суб'єктивний стрес оцінювали за допомогою опитувальника Rudow. Психічне здоров'я фіксували за допомогою опитувальника загального здоров'я (GHQ-12), а працездатність – за допомогою індексу працездатності (WAI).

Результати. Обидві випадкові вибірки вказали на фактори з категорій «робочі завдання та організація» і «діти та група» як на найчастіші фактори стресу; рівень стресу був високим в обох випадках. Німецькі вихователі закладів дошкільної освіти відчували більше навантаження та стрес у цілому порівняно з українськими вихователями закладів дошкільної освіти. Психічне здоров'я було суб'єктивно погіршене в 25,0 % німецьких і 11,2 % українських вихователів ($p < 0,01$). Показник GHQ у ($12,2 \pm 5,5$) бала був вищим у німецьких вихователів, ніж у їхніх українських колег, які отримали ($9,0 \pm 4,5$) бала ($p < 0,001$). Німецькі вихователі повідомили про значно ($p < 0,001$) нижчу працездатність ($7,3$ бала $\pm 1,7$ бала), ніж українські вихователі ($8,0$ бала $\pm 1,4$ бала). Обидві групи однаково добре справляються з фізичними навантаженнями, тоді як українські педагоги краще справляються з розумовими навантаженнями ($3,7$ бала $\pm 0,7$ бала проти $3,4$ бала $\pm 0,8$ бала; $p < 0,05$).

Висновки. Психічне здоров'я вихователів закладів дошкільної освіти слід підтримувати за допомогою заходів поведінкової профілактики. У рамках охорони здоров'я на робочому місці можна фіксувати перші ознаки психічних розладів у працівників закладів дошкільної освіти, щоб мати можливість вчасно вжити заходів втручання.

Ключові слова: вихователі закладів дошкільної освіти, стрес, психічне здоров'я, працездатність

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