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Non-Verbal Communication of the Residents Living in Homes for the Older People in Slovenia

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A B S T R A C T

Aging of the population is a growing problem in all developed societies. The older people need more health and social services, and their life quality in there is getting more and more important. The study aimed at determining the characteristics of non-verbal communication of the older people living in old people's homes (OPH). The sample consisted of 267 residents of the OPH, aged 65–96 years, and 267 caregivers from randomly selected twenty-seven OPH. Three types of non-verbal communication were observed and analysed using univariate and multivariate statistical methods. In face expressions and head movements about 75% older people looked at the eyes of their caregivers, and about 60% were looking around, while laughing or pressing the lips together was rarely noticed. The differences between genders were not statistically significant while statistically significant differences among different age groups was observed in dropping the eyes (p=0.004) and smiling (0.008). In hand gestures and trunk movements, majority of older people most often moved forwards and clenched fingers, while most rarely they stroked and caressed their caregivers. The differences between genders were statistically significant in leaning on the table (p=0.001), and changing the position on the chair (0.013). Statistically significant differences among age groups were registered in leaning forwards (p=0.006) and pointing to the others (p=0.036). In different modes of speaking and paralinguistic signs almost 75% older people spoke normally, about 70% kept silent, while they rarely quarrelled. The differences between genders were not statistically significant while statistically significant differences among age groups was observed in persuasive speaking (p=0.007). The present study showed that older people in OPH in Slovenia communicated significantly less frequently with hand gestures and trunk movements than with face expressions and head movements or different modes of speaking and paralinguistic signs. The caregivers should be aware of this and pay a lot of attention to these two groups of non-verbal expressions. Their importance should be constantly emphasized during the educational process of all kinds of health-care professionals as well.

***Key words**: older people, non-verbal communication, caregivers, old people's homes*

Introduction

Human aging is a process which is getting more and more important in societies of developed countries of the world since the proportion of people aged over 60 years is growing faster than any other age group[1–5]. In the countries with the oldest populations the percent of population aged 65 years or older is already about 20%[2].

Although interest in aging goes back centuries the scientific study of aging and older adulthood is more recent[6]. Though scientific literature increasingly pays more attention to the older people, including the older people care, this field of research still has received insufficient attention[7,8]. In tackling a problem of ageing of the population two contemporary concepts, being a concept of active ageing[9], and a concept of healthy ageing are of enormous importance[10–12]. The later is defined as a process of optimising opportunities for physical, social and mental health to enable older people to take an active part in society without discrimination and to enjoy an independent and good quality of life[12]. One of cornerstones of active ageing is interdependence as well as intergenerational solidarity. This process can take place in the context of friends, work associates, neighbours and family members, as well as in

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the context of special social welfare institutions taking long-term care of older people[13].

The ability to communicate is an essential ingredient for social interaction, but because of a variety of intrinsic and extrinsic factors, older persons may face unique obstacles in their attempts to interact with others[14]. Social interaction is a critical factor affecting the quality of life of older adults. For the increasing numbers of old people requiring supportive care in nursing homes, opportunities for socialization rest primarily on interaction with staff[15]. According to Benthall and Polhemus, communication between older people and people caring for them (caregivers) is a crucial problem[16]. Even caregivers, who are professionally concerned with the older people, frequently do not pay enough attention to them and spend too little time with them. They particularly take care of their physical needs, while they neglect their emotional and social needs. A special attention should be paid to the interaction between older people and their caregivers in long-term care institutions, because a considerable number of older people stay there for the last period of their lives[17–19]. The communication could be verbal or non-verbal. Verbal communication is referring to the words that are actually spoken, while non-verbal to the way that the words are spoken, the expressions on the faces of two people in communication, tone of their voices, the posture of their bodies, and gestures that they use. Non-verbal communication or body language is more subtle form of communication, and can have significant impact on the success and fluency of overall communication[20]. As a matter of fact, the posture of the human body directly influence what and how things can be meaningful for us[21,22]. Therefore, non-verbal behaviour is a major medium of communication in everyday life[23].

Slovenia is not an exception in respect of ageing of the population. Even more, this small country is one of countries with the highest percentage of older people in the world[2]. According to Statistical Office of the Republic of Slovenia, in 2007 there were 323,562 of people aged 65 years or older in Slovenia what is 16.0% of population[24].

In Slovenia, institutions caring for older people are called old people's homes (OPH), and about 4% of older people aged 65 or older are residing in such institutions[24]. According to a definition these institutions provide institutional care for the aged, with which they substitute or supplement the functions of home or own family (organised nutrition, social care, and health care)[24]. In this respect they are very important in solving problems of older people, but from the other point of view they are limited. According to Mali[25] these institutions build a kind of a border between themselves and the outer world, which often leads to the isolation of the aged persons. As in all similar institutions, the care function is inevitably complemented by the control function – which is why they are sometimes known as »care and control« institutions[19]. So their functioning has to be regarded carefully. However, although they cannot replace the primary homes of older people, they can become similar to them[26]. They can provide old people with the feelings of security, warmth, respect, trust, and acceptance. Verbal and non-verbal communication plays a crucial role in the creation of a warm environment.

To our best knowledge the frequency and structure of older people's non-verbal communication in their interaction with their caregivers was not extensively studied yet before we started the present study. Aiming at improving the communication, especially non-verbal, between the older people and their caregivers in the OPH in Slovenia, we set the goal to investigate frequency of three types of non-verbal communication in: face expressions and head movements, hand gestures and trunk movements, and the tone of verbal expressions and paralinguistic signs. Especially we were interested in differences in different types of non-verbal communication in dependence of older people's gender and age.

Methods

Participants, measurement instrument and procedure

This study was performed on the context of wider research project on non-verbal communication in OPH between older people and their caregivers[27]. The data were collected in spring 2004. The sampling frame was the List of OPH in the Republic of Slovenia[28]. In 2004 there were 63 OPH in Slovenia. In these institutions 3,258 health care personnel was caring for 13,098 older people[29], 200 on average in each OPH. Twenty-seven OPH were randomly selected from this list. In every OPH about 10 observational units consisting of pair of an older person (whose verbal expression was severely restricted because of the old age degenerative processes) and a person caring for her/him were randomly selected. For older people, the only inclusion criterion was that they were dependent on their caregivers (they needed nursing and social care) in the time of observation. Consecutively, the residents from nursing departments of OPH (about 90% of residents[30]) were included. All of them were ill and some of them have got dementia. Altogether 267 pairs participated in the study, representing about 2% of residents from nursing departments of OPH.

For the purposes of research on non-verbal communication in OPH between older people and caregivers the special instrument, the Kovačev Non-Verbal Expression Check List – KNVECL for unique way of recording the frequency of specific non-verbal expressions during observed period of interaction between older people and their caregivers, was developed[31,32]. This instrument included three groups of non-verbal expressions. The first group were facial expressions and head movements (rising the eyebrows, staring, normal eye-contact, looking around, dropping the eyes, frowning, making grimaces, smiling, laughing, pressing the lips together/biting them, nodding assent, and refusing by nodding). The second group were hand gestures and trunk movements (circular gestures, opening gestures, gestures directed towards oneself, holding one's head, supporting one's head with

the arm, leaning on the table, clenching fingers, pointing to oneself, pointing to the partner, pointing to the others, moving forwards the upper part of the body, moving backwards the upper part of the body, changing the position on the chair, touching the other person's hand/arm, caressing the partner, stroking the partner, touching the shoulder, playing with an object (a pencil, keys), shrugging the shoulders). The third group were modes of speaking and paralinguistic signs (general tone of verbal expressions, which was registered at the same time) (normal speaking, interruptions of the other person's speaking, simultaneous speaking, loud speaking, persuasive speaking, quarrelling, keeping quiet, moments of silence, whispering to the ear). The validity and reliability analysis of KNVECL tool showed good content validity with content validity index of 0.903 and good internal consistency with Cronbach's alpha of 0.803. Additionally, factor analysis showed that data were unidimensional and that all items seemed to measure the same latent construct[31].

Each pair was observed for 15 minutes by two observers. The observers were students of nursing care which have learned about the non-verbal communication between older people and their caregivers, and on its research, in the first year of their study in the context of practical work. They also conducted a pilot study. In the second year they performed a real observation according to the precise instructions. In order older people and their caregivers would become accustomed to their presence, they have been present for some time in OPH prior to the survey. In the period of observation non-verbal expressions of each pair older person-caregiver were registered by the observers every 30 seconds. The observation was done during their morning activities (bathing, dressing, toileting, feeding and other nursing interventions), the time of day, which is the most intense in terms of interaction between older people and their caregivers, and from this point of view the most appropriate for studying non-verbal communication used in the interaction.

In this study three groups of non-verbal expressions of older people were observed outcomes. The prevailing gestures and positions were interpreted in the context of the general tone of communication[33]. The observed outcomes were related to gender and age (age groups: 65–70 years, 71–80 years, 81 years or older) of older people.

The study was performed according to the guidelines of the Ethics Committee of the Republic of Slovenia. It was approved by the College of Health Studies in 2003 and by directors and head nurses of selected OPH.

Statistical methods

Each group of the observed outcomes was analyzed from two aspects. In the first part of analysis we considered only the number of expressions within a group irrespective what expression belonging to this group (element of a group) was used. For description parametric method (average±standard deviation) was used. Differences in overall frequency of use of different group of non-verbal expressions were analysed by repeated measures analysis of variance[34]. For univariate analysis within each group of non-verbal expressions t-test was used to determine the differences between the genders, while one-way analysis of variance was used to determine the differences among the age groups (paired comparisons were adjusted using the Bonferroni correction method)[34]. The differences adjusted for the effects of gender and profession of the caregivers in OPH, were assessed using multiple linear regression[34]. Caregivers were classified according to their profession in three groups: group 1: nurses (including nurse assistants), group 2: social helpers; and group 3: other personnel (physiotherapists, occupational therapists, and social workers) In the second part of analysis we considered every single expression within a group (element) as an observed outcome. At first the univariate analysis was made to determine, how many older people showed every single element. The description was made for the whole group of the older people and than for both genders and for all age groups. The differences were univariately tested with chi-square test. Afterwards, the differences adjusted for the effects of gender and profession of the caregivers in OPH were assessed using binary logistic regression[34,35]. The dummy variables were created for all independent variables considered in all multivariate models. The simple method was applied – one group was assigned as the reference group[35]. The p-value ≤ 0.05 was considered significant in all statistical tests. The SPSS 15.0 for Windows was used as a tool for analysis.

Results

Description of the sample

The group of 267 observed older people consisted of 82 (30.7%) men and 185 (69.3%) women. Their age varied from 65 to 96 years (65–70 years: 19.4%; 71–80 years: 33.0%; 81 years or older: 47.6%). The group of 267 caregivers consisted of 27 (10.1%) men and 240 (89.9%) women. Among them there were 154 (57.7%) nurses, 88 (33.0%) social helpers, and 25 (9.4%) other personnel.

Global analysis of groups of non-verbal expressions

In 15 minutes' interval of observation the older people manifested all different face expressions and head movements on the average 15.5±7.2 times, all different hand gestures and trunk movements on the average 12.3±7.0 times, and all different modes of speaking and paralinguistic signs on the average 15.0±6.2 times. The differences between observed groups of non-verbal communication was statistically highly significant ($p<0.001$).

Face expressions and head movements

Univariate analysis indicated that men (17.2±7.9 times) manifested significantly more face expressions and head movements than women (14.7±6.8 times) ($p=0.013$). The differences among different age groups were also statistically significant (65–70 years: 17.6±6.6, 71–80 years:

16.3±7.3, 81 years or older: 14.1±7.2) (p=0.005). It seemed that this type of non-verbal communication was the least frequent in the oldest group. Paired comparisons showed that the difference between the first and the third age group was particularly important (p=0.008). In depth multivariate analysis showed that, when taking into account also caregivers' gender and profession, age of older people still remained an important factor in frequency of this kind of non-verbal communication, although in opposite to univariate analysis the highest frequency of expressions was registered in the oldest group (p=0.018), while the importance of gender decreased (p=0.090). The details of a model that was a whole statistically significant (p_{Model}=0.014) are presented in Table 1.

The analysis of frequency of use of every single element of face expressions and head movements showed that majority of older people on general most often tried to establish normal eye-contact with their caregivers. Also majority was looking around. Laughing and pressing the lips together (or biting them) was the most rarely noticed. The situation was almost similar in both genders, as well as in the second and the third age-group, while the youngest older people expressed deviation from this general picture. They most frequently smiled and looked into the eyes of their caregivers, while pressing the lips together or biting them, and staring at other people was very rare in this age group (Table 2).Other results are presented in Table 2. Univariate analysis proved that the differences in face expressions and head movements between genders of older people were not statistically significant while statistically significant differences among the members of different age groups appeared in smiling (0.008) and dropping the eyes (p= 0.004). The first expression was most frequent in the youngest group, while the second was most often manifested by the members of the middle age group. The in-depth multivariate analysis of use of single element of face expressions and head movements showed that the

TABLE 1
RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS OF FREQUENCY OF ALL FACE EXPRESSIONS AND HEAD MOVEMENTS IN RESIDENTS LIVING IN HOMES FOR THE OLDER PEOPLE IN SLOVENIA

Characteristic	Observed category	Reference category	Regression coefficient	p
Older people's gender	women	men	–1.6	0.090
Older people's age	71–80 years	65–70 years	2.0	0.051
	81 years or older	65–70 years	2.9	0.018
Caregivers' gender	women	men	–0.5	0.759
Caregivers' profession	nurses	other personnel*	2.3	0.169
	social helpers	other personnel*	2.2	0.152
Constant			13.8	

* physiotherapists, occupational therapists, and social workers

TABLE 2
NUMBER AND PERCENT OF RESIDENTS LIVING IN HOMES FOR THE OLDER PEOPLE IN SLOVENIA USING FACE EXPRESSIONS AND HEAD MOVEMENTS

Face expressions and head movements	Total		Gender				Age (years)					
			Men		Women		65–70		71–80		81+	
	N (%)	Rank	N (%)	Rank	N (%	Rank	N (%)	Rank	N (%)	Rank	N (%)	Rank
Normal eye-contact	199 (74.5)	1	61 (74.4)	1	138 (74.6)	1	38 (73.1)	2	68 (77.3)	1	93 (73.2)	1
Looking around	159 (59.6)	2	55 (67.1)	2	104 (56.2)	2	35 (67.3)	3	56 (63.6)	2	68 (53.5)	2.5
Smiling	153 (57.3)	3	51 (62.2)	4	102 (55.1)	3	39 (75.0)	1	51 (58.0)	3	63 (49.6)	4
Nodding assent	147 (55.1)	4	52 (63.4)	3	95 (51.4)	4	31 (59.6)	5	48 (54.5)	4	68 (53.5)	2.5
Rising the eyebrows	138 (51.7)	5	46 (56.1)	5	92 (49.7)	5	32 (61.5)	4	45 (51.1)	5	61 (48.0)	5
Frowning	90 (33.7)	6	26 (31.7)	6	64 (34.6)	6	12 (23.1)	7	29 (33.0)	7	49 (38.6)	6
Dropping the eyes	77 (28.8)	7	20 (24.4)	8	57 (30.8)	7	11 (21.2)	8	37 (42.0)	6	29 (22.8)	9
Staring	68 (25.5)	8	19 (23.2)	9	49 (26.5)	8	8 (15.4)	11	26 (29.5)	8	34 (26.8)	7
Refusing by nodding	65 (24.3)	9	22 (26.8)	7	43 (23.2)	9	17 (32.7)	6	18 (20.5)	11	30 (23.6)	8
Making grimaces	56 (21.0)	10	15 (18.3)	11	41 (22.2)	10	9 (17.3)	10	20 (22.7)	10	27 (21.3)	10
Pressing the lips together/biting them	52 (19.5)	11	16 (19.5)	10	36 (19.5)	11	5 (9.6)	12	21 (23.9)	9	26 (20.5)	11
Laughing	36 (13.5)	12	14 (17.1)	12	22 (11.9)	12	11 (21.2)	9	12 (13.6)	12	13 (10.2)	12

majority of elements were not statistically associated with older people gender or age, and caregivers' gender or profession, except in smiling (in older people aged 81 years or older the odds were 2.95-times higher than in older people aged 65–70 years; p=0.005) and dropping the eyes (in older people aged 71–80 years the odds were 2.60-times higher than in older people aged 65–70 years; p=0.003). In smiling, significant role also played the caregivers' gender – odds for evoking a smile in older people were in women caregivers only 0.31 of those of men caregivers (p=0.019). Other details of two models are presented in Table 3.

Hand gestures and trunk movements

Univariate analysis indicated that men (14.5±7.3 times) manifested significantly more hand gestures and trunk movements than women (11.3±6.6 times) (p=0.001). The differences among different age groups were also statistically significant (65–70 years: 13.1±5.9, 71–80 years: 13.8±7.8, 81 years or older: 10.9±6.6) (p=0.007). Paired comparisons showed that the difference between the second and the third age group was particularly important (p=0.007). In depth multivariate analysis showed that, when taking into account also caregivers' gender and profession, both, gender (women communicated less frequently; p=0.005), and age (p=0.017) of older people remained an important factor in frequency of this kind of non-verbal communication. The details of a model that was a whole statistically significant (p_{Model}=0.006) are presented in Table 4.

The analysis of frequency of use of every single element of hand gestures and trunk movements showed

TABLE 3
RESULTS OF MULTIPLE LOGISTIC REGRESSION ANALYSIS OF USE OF SELECTED SINGLE ELEMENTS OF FACE EXPRESSIONS AND HEAD MOVEMENTS IN RESIDENTS LIVING IN HOMES FOR THE OLDER PEOPLE IN SLOVENIA

Face expressions and head movements/ Characteristic	Observed category	Reference category	OR*	95% CI* for OR		p	p_{model}
				Lower limit	Upper limit		
Smiling							
Older people's gender	women	men	0.98	0.55	1.74	0.946	0.006
Older people's age	71–80 years	65–70 years	1.33	0.75	2.36	0.334	
	81 years or older	65–70 years	2.95	1.40	6.24	0.005	
Caregivers' gender	women	men	0.31	0.11	0.82	0.019	
Caregivers' profession	nurses	other personnel**	2.00	0.77	5.21	0.157	
	social helpers	other personnel**	2.07	0.83	5.16	0.118	
Dropping the eyes							
Older people's gender	women	men	1.59	0.84	3.01	0.155	0.015
Older people's age	71–80 years	65–70 years	2.60	1.40	4.84	0.003	
	81 years or older	65–70 years	1.07	0.47	2.41	0.874	
Caregivers' gender	women	men	0.69	0.29	1.65	0.410	
Caregivers' profession	nurses	other personnel**	0.55	0.21	1.44	0.225	
	social helpers	other personnel**	0.62	0.25	1.53	0.300	

*OR – odds ratio, CI – confidence interval; **physiotherapists, occupational therapists, and social workers

TABLE 4
RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS OF FREQUENCY OF ALL HAND GESTURES AND TRUNK MOVEMENTS IN RESIDENTS LIVING IN HOMES FOR THE OLDER PEOPLE IN SLOVENIA

Characteristic	Observed category	Reference category	Regression coefficient	p
Older people's gender	women	men	–2.7	0.005
Older people's age	71–80 years	65–70 years	2.4	0.017
	81 years or older	65–70 years	1.3	0.262
Caregivers' gender	women	men	0.6	0.673
Caregivers' profession	nurses	other personnel*	–1.0	0.516
	social helpers	other personnel*	–1.0	0.506
Constant			13.5	

*physiotherapists, occupational therapists, and social workers

TABLE 5
NUMBER AND PERCENT OF RESIDENTS LIVING IN HOMES FOR THE OLDER PEOPLE IN SLOVENIA USING HAND GESTURES AND TRUNK MOVEMENTS

Hand gestures and trunk movements	Total		Gender				Age (years)					
			Men		Women		65–70		71–80		81+	
	N (%)	Rank	N (%)	Rank	N (%	Rank	N (%)	Rank	N (%)	Rank	N (%)	Rank
Clenching fingers	127 (47.6)	1	35 (42.7)	2	92 (49.7)	1	26 (50.0)	1	41 (46.6)	2	60 (47.2)	1
Moving forwards the upper part of the body	110 (41.2)	2	36 (43.9)	1	74 (40.0)	2	20 (38.5)	2	48 (54.5)	1	42 (33.1)	2
Gestures directed towards oneself	69 (25.8)	3	18 (22.0)	8.5	51 (27.6)	3	15 (28.8)	3.5	21 (23.9)	6.5	33 (26.0)	3.5
Touching the other person's hand/arm	66 (24.7)	4	18 (22.0)	8.5	48 (25.9)	4	15 (28.8)	3.5	18 (20.5)	10	33 (26.0)	3.5
Holding one's head	59 (22.1)	5	21 (25.6)	5.5	38 (20.5)	5.5	6 (11.5)	14	25 (28.4)	3	28 (22.0)	5.5
Pointing to the partner	57 (21.4)	6	19 (23.2)	7	38 (20.5)	5.5	14 (26.9)	5	15 (17.0)	13.5	28 (22.0)	5.5
Opening gestures	54 (20.2)	7	21 (25.6)	5.5	33 (17.8)	9	13 (25.0)	6	19 (21.6)	8	22 (17.3)	8
Circular gestures	51 (19.1)	9	16 (19.5)	10	35 (18.9)	8	10 (19.2)	9	22 (25.0)	5	19 (15.0)	9.5
Changing the position on the chair	51 (19.1)	9	23 (28.0)	4	28 (15.1)	12	11 (21.2)	7	23 (26.1)	4	17 (13.4)	14
Shrugging the shoulders	51 (19.1)	9	14 (17.1)	11	37 (20.0)	7	7 (13.5)	12	21 (23.9)	6.5	23 (18.1)	7
Leaning on the table	47 (17.6)	11	24 (29.3)	3	23 (12.4)	15	10 (19.2)	9	18 (20.5)	10	19 (15.0)	9.5
Pointing to oneself	44 (16.5)	12	12 (14.6)	13	32 (17.3)	10	10 (19.2)	9	16 (18.2)	12	18 (14.2)	12
Supporting one's head with the arm	43 (16.1)	13	12 (14.6)	13	31 (16.8)	11	7 (13.5)	12	18 (20.5)	10	18 (14.2)	12
Moving backwards the upper part of the body	36 (13.5)	14	12 (14.6)	13	24 (13.0)	14	5 (9.6)	16	15 (17.0)	13.5	16 (12.6)	15
Pointing to the others	33 (12.4)	15	8 (9.8)	17.5	25 (13.5)	13	1 (1.9)	20	14 (15.9)	15	18 (14.2)	12
Touching the legs	31 (11.6)	16	11 (13.4)	16.5	20 (10.8)	16.5	5 (9.6)	16	12 (13.6)	16.5	14 (11.0)	16.5
Touching the shoulder	28 (10.5)	17.5	11 (13.4)	16.5	17 (9.2)	18	7 (13.5)	12	11 (12.5)	18	10 (7.9)	18
Playing with an object (a pencil, keys, etc.)	28 (10.5)	17.5	8 (9.8)	17.5	20 (10.8)	16.5	2 (3.8)	19	12 (13.6)	16.5	14 (11.0)	16.5
Stroking the partner	18 (6.7)	19	6 (7.3)	19.5	12 (6.5)	19	4 (7.7)	18	7 (8.0)	19	7 (5.5)	19.5
Caressing the partner	17 (6.4)	20	6 (7.3)	19.5	11 (5.9)	20	5 (9.6)	16	5 (5.7)	20	7 (5.5)	19.5

that majority of older people irrespective of their gender and age most often clenched fingers and moved forwards the upper part of the body, while most rarely they caressed their caregivers and stroked them. In this respect, again, the youngest group of older people deviated from the average – most rarely they played with an object and were pointing to the others. Other results are presented in Table 5. Univariate analysis proved that the differences in hand gestures and trunk movements between genders of older people were statistically significant in leaning on the table ($p=0.001$), and changing the position on the chair ($p=0.013$). Both elements were more frequently used in men. Statistically significant differences between age groups appeared in moving forwards the upper part of the body and pointing to the others. In the first case the members of the middle age group were moving forwards the upper part of the body much more frequently then the youngest and the oldest older people ($p=0.006$). Pointing to the others was manifested most rarely by the youngest older people ($p=0.036$). The in-depth multivariate analysis of use of single element of hand gestures and trunk movements showed that the majority of elements were not statistically associated with older people gender or age, and caregivers' gender or profession, except in moving forwards the upper part of the body (in older people aged 71–80 years the odds were 2.45-times higher than in older people aged 65–70 years; $p=0.003$), changing the position on the chair (the odds in women were only 0.50 of those in men; $p=0.040$), and leaning on the table (the odds in women were only 0.35 of those in men; $p=0.003$). Other details of three models are presented in Table 6.

Modes of speaking and paralinguistic signs

Univariate analysis indicated that men (16.7±5.4 times) used different modes of speaking and paralinguistic signs in communication with their caregivers signifi-

TABLE 6
RESULTS OF MULTIPLE LOGISTIC REGRESSION ANALYSIS OF USE OF SELECTED SINGLE ELEMENTS OF HAND GESTURES AND TRUNK MOVEMENTS IN RESIDENTS LIVING IN HOMES FOR THE OLDER PEOPLE IN SLOVENIA

Face expressions and head movements/ Characteristic	Observed category	Reference category	OR*	95% CI* for OR		p	p_{model}
				Lower limit	Upper limit		
Moving forwards the upper part of the body							
Older people's gender	women	men	1.01	0.57	1.78	0.973	0.030
Older people's age	71–80 years	65–70 years	2.45	1.37	4.39	0.003	
	81 years or older	65–70 years	1.27	0.63	2.55	0.506	
Caregivers'gender	women	men	1.08	0.46	2.54	0.859	
Caregivers' profession	nurses	other personnel**	1.95	0.75	5.09	0.171	
	social helpers	other personnel**	1.20	0.48	3.00	0.692	
Changing the position on the chair							
Older people's gender	women	men	0.50	0.26	0.97	0.040	0.033
Older people's age	71–80 years	65–70 years	2.01	0.96	4.18	0.062	
	81 years or older	65–70 years	1.38	0.57	3.34	0.476	
Caregivers' gender	women	men	0.67	0.27	1.71	0.408	
Caregivers' profession	nurses	other personnel**	0.50	0.16	1.59	0.239	
	social helpers	other personnel**	0.94	0.33	2.67	0.902	
Leaning on the table							
Older people's gender	women	men	0.35	0.18	0.69	0.003	0.046
Older people's age	71–80 years	65–70 years	1.06	0.49	2.29	0.881	
	81 years or older	65–70 years	0.94	0.38	2.31	0.892	
Caregivers' gender	women	men	0.48	0.19	1.24	0.130	
Caregivers' profession	nurses	other personnel**	1.16	0.33	4.06	0.812	
	social helpers	other personnel**	1.09	0.33	3.61	0.888	

*OR – odds ratio, CI – confidence interval; **physiotherapists, occupational therapists, and social workers

cantly more frequently than women (14.2±6.3 times) (p=0.002). There existed significant differences in the tone of verbal expressions among the three age groups of the older people (65–70 years: 15.4±4.9, 71–80 years: 16.1±6.1, 81 years or older: 14.0±.6) (p=0.046). As shown by paired comparisons, this was mainly on account of the difference between the second and the third age group (p=0.048). In depth multivariate analysis showed that, when taking into account also caregivers' gender and profession, both, gender (p=0.009), and age of older people remained an important factor in frequency of this kind of non-verbal communication, although in opposite to univariate analysis the most important difference was registered between the second and the first age group (0.049). The details of a model that was a whole statistically significant (p_{Model}=0.003) are presented in Table 7.

The analysis of frequency of use of every single element of different modes of speaking and paralinguistic signs showed that irrespective their gender and their age the older people were using most frequently normal speaking, moments of silence or they were keeping quiet, while they most rarely quarrelled. Other results are presented in Table 8. Univariate analysis proved that the differences in different modes of speaking and paralinguistic signs between genders of older people were not statistically significant while statistically significant differences among the members of different age groups appeared in persuasive speaking (p=0.007). The most outstanding in attempting to persuade the caregivers into something else were the oldest aged people, while the members of the youngest and the middle age group did not manifest so obvious persuading intentions. The in-depth multivariate analysis of use of single element of different modes of speaking and paralinguistic signs showed that the majority of elements were not statistically associated with older people gender or age, and caregivers' gender or profession, except in keeping quiet (in older people aged 71–80 years the odds were 2.03-times higher than in older people aged 65–70 years; p=0.030) and persuasive speaking (in older people aged 71–80 years the odds were only 0.21 of odds in older people aged 65–70 years; p=0.002). It is important that odds in keeping quiet were 4.13 times higher when the caregiver was a nurse (p=0.004), and 2.88 times higher when the caregiver was a social helper than odds in other personnel

TABLE 7
RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS OF FREQUENCY OF ALL MODES OF SPEAKING AND PARALINGUISTIC SIGNS IN RESIDENTS LIVING IN HOMES FOR THE OLDER PEOPLE IN SLOVENIA

Characteristic	Observed category	Reference category	Regression coefficient	p
Older people's gender	women	men	–2.2	0.009
Older people's age	71–80 years	65–70 years	1.7	0.049
	81 years or older	65–70 years	0.7	0.481
Caregivers' gender	women	men	2.1	0.090
Caregivers' profession	nurses	other personnel*	1.4	0.331
	social helpers	other personnel*	0.0	0.989
Constant			13.7	

*physiotherapists, occupational therapists, and social workers

TABLE 8
NUMBER AND PERCENT OF RESIDENTS LIVING IN HOMES FOR THE OLDER PEOPLE IN SLOVENIA USING DIFFERENT MODES OF SPEAKING AND PARALINGUISTIC SIGNS

Modes of speaking and paralinguistic signs	Total		Gender				Age (years)					
	N (%)	Rank	Men		Women		65–70		71–80		81+	
			N (%)	Rank	N (%	Rank	N (%)	Rank	N (%)	Rank	N (%)	Rank
Normal speaking	198 (74.2)	1	56 (68.3)	3	142 (76.8)	1	43 (82.7)	1	66 (75.0)	2.5	89 (70.1)	2
Moments of silence	196 (73.4)	2	63 (76.8)	1	133 (71.9)	2	35 (67.3)	3	68 (77.3)	1	93 (73.2)	1
Keeping quiet	183 (68.5)	3	60 (73.2)	2	123 (66.5)	3	39 (75.0)	2	66 (75.0)	2.5	78 (61.4)	3
Simultaneous speaking	98 (36.7)	4	27 (32.9)	5	71 (38.4)	4	17 (32.7)	4	37 (42.0)	4	44 (34.6)	4
Loud speaking	81 (30.3)	5	29 (35.4)	4	52 (28.1)	5	14 (26.9)	5	27 (30.7)	5	40 (31.5)	5
Interruptions of the other person's speaking	55 (20.6)	6	21 (25.6)	6	34 (18.4)	6	6 (11.5)	7.5	19 (21.6)	6	30 (23.6)	6
Persuasive speaking	40 (15.0)	7	11 (13.4)	8	29 (15.7)	7	6 (11.5)	7.5	6 (6.8)	8	28 (22.0)	7
Whispering to the ear	32 (12.0)	8	14 (17.1)	7	18 (9.7)	8	7 (13.5)	6	12 (13.6)	7	13 (10.2)	8
Quarrelling	6 (2.3)	9	3 (3.7)	9	3 (1.6)	9	0 (0.0)	9	2 (2.3)	9	4 (3.1)	9

(p=0.020). Other details of two models are presented in Table 9.

Discussion

On general, the present study by which we tried to capture the frequency of different non-verbal expressions the older people used in communication with their caregivers in a comprehensive manner by considering selected characteristics of both actors, showed that older people in OPH in Slovenia communicated significantly less frequently with hand gestures and trunk movements than with face expressions and head movements or different modes of speaking and paralinguistic signs. This seems to be logical because the oldest group of older people prevailed – almost a half of our study group were older people aged 81 years or over. It is known that the age structure has important impact on communication interaction in institutions caring for older people[36]. Meaningful communication is influenced/impeded by various characteristics of older people being of medical, physical, emotional, or cognitive nature[37]. In continuation, detailed analysis of our data showed that our group of older people in communication with their caregivers, irrespective their gender or age, most frequently used normal eye contact, normal speaking, moments of silence, keeping quiet and looking around. It was similar in both genders, while in the youngest age group smiling, and in the oldest age group nodding assent were registered.

In more details, the results showed significantly higher frequency of the non-verbal communication in older men than in older women. This was obvious in hand gestures and trunk movements, and in modes of speaking and paralinguistic signs, while in face expressions and head movements the difference between older men and women after adjustment for gender and profession of caregivers weakened indicating that characteristics of both actors are important. Unfortunately, because of lack of studies addressing this issue in the way we addressed it, the comparison of the results of our study to the results of other studies was impaired. Additionally, although there exist a large amount of literature on non-verbal communication between the older people and their caregivers, the majority is focused on caregivers and not on

TABLE 9
RESULTS OF MULTIPLE LOGISTIC REGRESSION ANALYSIS OF USE OF SELECTED SINGLE ELEMENTS OF DIFFERENT MODES OF SPEAKING AND PARALINGUISTIC SIGNS IN RESIDENTS LIVING IN HOMES FOR THE OLDER PEOPLE IN SLOVENIA

Face expressions and head movements/ Characteristic	Observed category	Reference category	OR*	95% CI* for OR		p	p_{model}
				Lower limit	Upper limit		
Keeping quiet							
Older people's gender	women	men	0.92	0.50	1.71	0.803	0.019
Older people's age	71–80 years	65–70 years	2.03	1.07	3.85	0.030	
	81 years or older	65–70 years	1.77	0.83	3.78	0.139	
Caregivers' gender	women	men	1.20	0.50	2.89	0.689	
Caregivers' profession	nurses	other personnel**	4.13	1.57	10.86	0.004	
	social helpers	other personnel**	2.88	1.18	7.03	0.020	
Persuasive speaking							
Older people's gender	women	men	0.81	0.36	1.83	0.608	0.032
Older people's age	71–80 years	65–70 years	0.21	0.08	0.57	0.002	
	81 years or older	65–70 years	0.44	0.16	1.18	0.103	
Caregivers' gender	women	men	0.55	0.18	1.67	0.293	
Caregivers' profession	nurses	other personnel**	0.81	0.25	2.67	0.730	
	social helpers	other personnel**	0.51	0.16	1.60	0.248	

*OR – odds ratio, CI – confidence interval; **physiotherapists, occupational therapists, and social workers

older people[37–40]. However, we could compare our results to the results of studies of non-verbal communication of the younger adult people in Slovenia. In opposite to general findings of the present study that older men were significantly more expressive than older women, in younger adults women were much more expressive than men[41–43]. Burgoon and Dillman[44], quoting Henley (1977) and some other authors, forwarded the theory that men's non-verbal behaviour is characterized by dominance and women's behaviour by submissiveness. Among the behavioural differences offered in support of this theory have been that men display more visual dominance than women, whereas women maintain a high degree of attentive gaze toward others; women display more appeasement or submission gestures such as smiling and the head tilt; women claim less space, are touched more, and tolerate more spatial intrusions than men; women use more rising intonations and questioning vocal patterns rather than authoritative ones; women are silent (or silenced), talk less, and are interrupted more than men. In Slovenia, it is stereotypic way of thinking that women communicate more intensively than men. Accordingly we should expect that this is truth also for non-verbal communication in older people, but results of our study do not support this thesis. What does this mean? There are several possible answers. First could be that women maybe use more frequently verbal communication. Secondly, it could be the reflection of social/cultural norms[45]. The majority of residents in OPH in Slovenia are women, and majority of caregivers in OPH are women as well, and cultural norms in our society do not appreciate intensive non-verbal communication between persons of the same gender, especially in older population. Another answer could be that female residents of OPH are more pretentious than male residents and consecutively they raise negative feelings and responses in female caregivers. However, all these aspects were beyond the scope of our study.

In all three types of non-verbal communication significant differences were discovered between age groups as well. The multivariate analysis revealed that the youngest group used non-verbal communication less frequently than other two groups. Face expressions and head movements were more frequently used in the oldest age group, while hand gestures and trunk movements, as well as modes of speaking and paralinguistic signs, in the middle age group. Less frequent use of non-verbal communication in our youngest group of older people could be seen as normal if we assume that it use verbal communication more frequently since it has less hearing and speech problems than older groups of older people. Another explanation could be that this group was least represented in our sample. On the other hand it was expected that members of the oldest group less frequently used hand gestures and trunk movements since this group is most physically impeded (i.e. presence of degenerative disorders of locomotion apparatus and consecutively presence of pains).

The in-depth analysis of use of single element of face expressions and head movements showed that the majority of elements were not statistically associated with older people gender or age, and caregivers' gender or

profession with an exception in smiling and dropping the eyes. Both, the middle-age and the oldest groups of older people used smiling more frequently than the youngest group. In using smile, significant role played the caregivers' gender – smile was less frequently evoked by women-caregivers than by men-caregivers. The reason for this result may have been in the structure of the aged people sample. There prevailed women over men, and perhaps they looked for more attention from men caregivers. Dropping the eyes was most expressed in the middle-age group. Most probable explanation of this phenomenon could be that in this age group embarrassment that accompanies intimate personal hygiene is most expressed. Younger older people could still take this very delicate part of their body care by themselves and consecutively they are not so embarrassed in communication, while in the oldest group of older people less frequent use of dropping eyes is probably result of old-age mental changes. On the other hand also residents that need help with their intimate personal hygiene after a while became used to this fact.

The in-depth analysis of use of hand gestures and trunk movements showed that the youngest older people more often clenched fingers and very rarely pointed to the others. The members of the middle age group often moved forwards with the upper part of the body (which might indicate their hearing problems), while their caressing of the nursing staff was very rare. The members of the oldest group most often clenched fingers, while stroking and caressing the communication partners were their rarest non-verbal expressions. Besides, moving forwards the upper part of the body was also very frequent. It was most rarely expressed by the oldest older people. This expression was usually added to the verbal communication, for leaning forwards enlightened the communication with other people. It enabled better hearing and provided physical nearness with the partner. Since the communication with the oldest older people has already been more difficult because of their difficulties in hearing and seeing, determined by their age, one could expect that these older people would lean forward more often than the younger ones. Still, the results of the present research did not confirm this assumption. Perhaps the oldest people should be more encouraged by the caring staff, but perhaps this was not possible because of the physical changes, illnesses and other limitations.

The in-depth analysis of modes of speaking and paralinguistic signs revealed aged men more frequently communicated with the caregivers than women. Aged people of both genders most often spoke normally or kept silent, alone or together with the employees. Considering age differences it was found out that the members of the second (middle) age group significantly more frequent used verbal expressions as the youngest older people. Silence was the rarest in the group of the oldest aged people, which is understandable, because this group much more frequently interrupted other persons' speech and tried to persuade them about something. This might be the result of a stronger need for help and resignation at the same time. The aged people probably did not feel enough attention of the care providers, because of the staff shortage[46].

Communication needs of aged people usually don't significantly differ from the same needs in other periods of life[47]. Ebersole et al. underline that the need for communication, i.e. the need to hear and to be heard does not change because of the age or physical weakness[48]. Still, there appear a lot of changes in the old age that influence the older people's capacity to communicate and their ability for interaction with other persons, particularly with those, who care for them at home or in several institutions[19,49–51].

Several authors denote aging as a very complex process, which is the result of the interaction of biological, psychological, and social factors[52]. The biological aspect of aging includes above all the decline of physical capacities; psychological aspect includes the decline of perception, intellectual functions and the capability of adaptation, while the social aspect of aging implies the social and the economic dependence of the older people. In higher age the social problems are even more frequent. They can appear together with several illnesses at the same time, chronic diseases, and untypical symptoms. All these problems influence the ability of verbal and non verbal communication of the aged people.

It is important to recognize the significance of non-verbal communication in normal interpersonal communication. Facial expressions are for example direct clues to the speakers' immediate thoughts since they are difficult to control and express the speakers' thoughts. The way a person uses her/his hands also shows feelings. Eye contact and gaze are also direct clues to the speaker's immediate thoughts. The way a person moves, walks, sits and stands indicates the speaker's inner state of mind and how relaxed/not relaxed s/he is during the interaction. Tone and pitch of voice are clues to her/his inner state of mind, for example, whether the speaker is nervous, excited, contemptuous, subservient, angry or sad. Very important non-verbal expression is silence. A pause in speech can be for effect or to give an opportunity to the listener to respond or to ease tension. Silence can also be a sign of nervousness/shyness/reserved nature ignorance.

One of the key conclusions of the ethnographic study of frail older people performed by Tester et al.[53] was that the communication, verbal or non-verbal is essential for frail older people to express themselves, maintain a sense of self, form and maintain relationships, participate in interaction and activities, and make meaning of their experiences. In this context, every caregiver caring for older people should be aware that communication is much more than just words. Even more, verbal and non-verbal communications need to be consistent for effective communication between two persons. If verbal communication is positive while non-verbal is negative, body language usually is the stronger message[54,55].

Today, care in long-term care institutions for older people in Slovenia is task-oriented, striving for bodily effects of care. Additionally, attitudes that »talking is not

working« and hastening with negligence of positive non--verbal communication, are still present. This orientation is potentially detrimental since the importance of communication as fundamental aspect of human relationships is underscored. Consecutively, caregivers may overlook or misinterpret various important verbal and – especially non-verbal signs of older people. However, they should be aware that social dimension of health is extremely important. Kiely et al. (2000), and Walk, Fleishman and Mandelson (2000), all cited by Williams et al.[15], support the idea that the power of communication is confirmed by evidence that residents respond to care and live longer when they are engaged in interpersonal relationships with staff. Kane underlined values expressed by older adults: autonomy, dignity, privacy, individuality, enjoyment, functional competence, and spiritual well--being[56].

Our study has some potential limitations. One could be in the sampling procedure since we did not randomize the older people residing in OPH but the institutions. Also, within each OPH we decided to observe only those older people being in more intensive care since in this group we expected more expressed problems in communication with their caregivers. Additional limitation is that we did not observed some characteristics that could have impact on non-verbal as well as on verbal communication (e.g. hearing loss, speech problems, cognitive disorders, etc., and presence of severe diseases like cancer)[36], but this was beyond the scope of this study since this kind of in-depth analysis could be only the continuation of the study we performed. On the other hand our study has a very important strength being the first of a kind in Slovenia or even wider, and being a comprehensive analysis using multivariate statistical methods in which we considered characteristics of both actors in communication, older people and their caregivers. Additional strength is development of the KNVECL instrument that was successfully used also in other communication research than only in OPH between older people and caregivers[32]. Finally, the results of the study could be interesting for countries with a similar problem of ageing of population as Slovenia[57].

In conclusion we can say that despite of old age and pathological changes that increase communication barriers for older people, social interaction and support from nursing and other staff, and also from relatives, is still very important and exert prevention from physical and mental decline. The present study confirmed that there exist important differences in non-verbal communication of both genders and different age groups of older people. Caregivers in OPH in Slovenia, though mostly educated as health professionals, should be aware of these differences and should considered in their communication to older people. On the other hand the findings pointed out that the residents have good interaction with the staff in OPH. The present study showed that older people in OPH in Slovenia communicated significantly less frequently with hand gestures and trunk movements than with face expressions and head movements or different modes of speaking and paralinguistic signs. The caregivers should be aware of this and pay a lot of attention to these two groups of non-verbal expressions. Their importance should be constantly emphasized during the educational process of all kinds of health-care professionals as well.

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REFERENCES

1. WORLD HEALTH ORGANIZATION, Our ageing world, accessed 25.08.2010. Available from: URL: http://www.who.int/ageing/en/index.html. — 2. KINSELLA K, PHILLIPS DR, Popul Bull, 60 (2005) 5. — 3. BÖRSCH-SUPAN A, BRUGIAVINI A, JÜRGES H, MACKENBACH J, SIEGRIST J, WEBER G, Health, ageing and retirement in Europe: first results from the survey of health, ageing and retirement in Europe (Mannheim Research Institute for the Economics of Aging, Mannheim, 2005). — 4. EUROPEAN COMMISSION, Demographic trends, socio-economic impacts and policy implications in the European Union (European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities, Luxembourg, 2006). — 5. EUROPEAN COMMISSION, Europe's demographic future: facts and figures on challenges and opportunities (European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities, Luxembourg, 2007). — 6. ERBER JT, Aging and older adulthood. 2nd ed (Wiley Blackwell, Chichester, 2009). — 7. PAHOR M, DOMAJNKO B, Ageing Int, 32 (2008) 312. — 8. SUHONEN R, STOLT M, LAUNIS V, LEINO-KILPI H, Nurs Ethics, 17 (2010) 337. — 9. WORLD HEALTH ORGANIZATION, Active ageing: a policy framework (World Health Organization, Geneva, 2002). — 10. THE SWEDISH NATIONAL INSTITUTE OF PUBLIC HEALTH, Healthy ageing: a challenge for Europe (The Swedish National Institute of Public Health, Huskvarna, 2007). — 11. EUROPEAN COMMISSION, Healthy ageing: Keystone for a sustainable Europe – EU health policy in the context of demographic change (European Commission, Directorate-General for Health and Consumer Protection, Luxembourg, 2007). — 12. THE EUROPEAN OLDER PEOPLE'S PLATFORM, Healthy ageing: Good practice examples, recommendations, policy actions (The European Older People's Platform, Bruxelles, 2007). — 13. DAY T (Ed) Guide to long term care planning (National Care Planning Council, Centerville, 2007), accessed 25.08.2010. Available from: URL: http://www.longtermcarelink.net/eldercare.htm. — 14. ELIOPOULOS C, Gerontological nursing. 5th ed (Lippincott Williams & Wilkins, Philadelphia, 2001). — 15. WILLIAMS K, KEMPER S, HUMMERT ML, Gerontologist, 43 (2003) 242. — 16. BENTHALL J, POLHEMUS T, The body as a medium of expression: essays based on a course of lectures given at the Institute of Contemporary Arts, London (Allen Lane, London, 1975). — 17. OECD, Society at a glance 2006. HE5. Long-term care recipients, accessed 25.08.2010. Available from: URL: http://masetto.sourceoecd.org/vl=459743/cl=11/nw=1/rpsv/society_glance/28.htm. — 18. CREUTZBERG M, GONÇALVES LHT, SOBOTTKA EA, OJEDA BS, Rev Lat Am Enfermagem, 15 (2007) 1144. — 19. WILLIAMS KN, WARREN CAB, J Aging Stud, 23 (2009) 24. — 20. JOKINEN K, Lect Notes Comput Sc, 5615 (2009) 537. — 21. GRAMMER K, FINK B, OBERZAUCHER E, ATZMÜLLER M, BLANTAR I, MITTEROECKER P, Coll Antropol, 28 Suppl.

2 (2004) 159. — 22. ŠKARA D, Coll Antropol, 28 Suppl. 1 (2004) 183. — 23. HENLEY NM, Body politics revisited: What do we know today? In: KALBFLEISCH PJ, CODY MJ (Eds) Gender, power, and communication in human relationships (Lawrence Erlbaum Associates Inc., Hillsdale, 1995). — 24. STATISTIČNI URAD REPUBLIKE SLOVENIJE, Statistical yearbook 2008 (Statistični urad RS, Ljubljana, 2008). — 25. MALI J, Soc Delo, 41 (2002) 317. — 26. HOJNIK-ZUPANC I, Let's add life to years: some insights and advices on reasonable and healthy preparation on old age, and so live it well. In Slovenian (Gerontološko društvo Slovenije, Ljubljana, 1997). — 27. ZALETEL M, Social determinants of the elders' identity and the communication with them. PhD Thesis. In Slovenian (Filozofska fakulteta Univerze v Ljubljani, Ljubljana, 2007). — 28. SKUPNOST SOCIALNIH ZAVODOV SLOVENIJE, List of old people's homes and special social institutions. In Slovenian, accessed 25.08.2010. Available from: URL: http://www.ssz-slo.si/slo/main.asp?id=3329E1FF. — 29. STATISTIČNI URAD REPUBLIKE SLOVENIJE, Statistical yearbook 2005 (Statistični urad RS, Ljubljana, 2005). — 30. CIZELJ M, HABJAN M, KOPRIVNIKAR B, NOVAK J, ŠLENC ZVER M, ŠVAJNCER M, Strategic developmental program of organized care for the elderly of Association of Social Institutions of Slovenia. In Slovenian (Skupnost socialnih zavodov Slovenije, Ljubljana, 1999). — 31. KOVAČEV AN, ZALETEL M, Kovačev non-verbal communication check list (KNVE-CL) – an instrument for observing non-verbal communication between elderly and their caregivers. In Slovenian (Visoka šola za zdravstvo, Ljubljana, 2007). — 32. KOVAČEV AN, Straniero, 39 (2008) 28. — 33. MACKAY DM, Formal analysis of communicative processes. In: HINDE RA (Ed) Nonverbal communication (Cambridge University Press, Cambridge, 1972). — 34. ALTMAN DG, Practical statistics for medical research (Chapman & Hall, London, 1993). — 35. HOSMER DW, LEMESHOW S, Applied logistic regression. 2nd ed (John Wiley & Sons; New York, 2000). — 36. LUBINSKI R, Top Lang Disord, 15 (1995) 1. — 37. CARIS-VERHALLEN WMCM, KERKSTRA A, BENSING JM, J Adv Nurs, 29 (1999) 808. — 38. AMBADY N, JASOOK K, ROSENTHAL R, WINOGRAD CH, Psychol Aging, 17 (2002) 443. — 39. GLEESON M, TIMMINS F, J Psychiatr Ment Health Nurs, 11 (2004) 541. — 40. WILLIAMS KN, BUCHHORN ILTEN T, BOWER H, J Psychosoc Nurs Ment Health Serv, 43 (2005) 39. — 41. KOVAČEV AN, Gesture as an act of communication and as a means of self-expression. PhD thesis. In Slovenian (Filozofska fakulteta Univerze v Ljubljani, Ljubljana, 1993). — 42. KOVAČEV AN, Psihol Obzor, 3 (1994) 73. — 43. KOVAČEV AN, Psihol Obzor, 3 (1994) 37. — 44. BURGOON JK, DILLMAN L, Gender, immediacy, and nonverbal communication. In: KALBFLEISCH PJ, CODY MJ (Eds) Gender, power, and communication in human relationships (Lawrence Erlbaum Associates Inc. Publishers, New Jersey, 1995). — 45. SHIN K, Coll Antropol, 28 Suppl. 1 (2004) 123. — 46. RUNGAPADIACHY DM, Interpersonal communication and psychology for health care professionals (Butterworth-Heinemann, Oxford, 1999). — 47. BEATTIE GW, Linguistics, 19 (1981) 1165. — 48. EBERSOLE P, HESS P, TOUHY T, JETT K, Gerontological nursing and healthy aging (Elsevier, Philadelphia, 2005). — 49. GILBERT DA, HAYES E, Nurs Res, 58 (2009) 283. — 50. SUNDIN K, BRUCE E, BARREMO AS, Int J Qual Stud Health Well-being, 5 (2010) 5064. — 51. ROUSSEAUX M, DAVELUY W, KOZLOWSKI O, J Neurol, 257 (2010) 1099. — 52. KENDON A, SEBEOK TA, UMIKER-SEBEOK J, Nonverbal communication, interaction, and gesture. Selection from semiotica (Mouton Publishers, The Hague, 1981). — 53. TESTER S, HUBBARD G, DOWNS M, MACDONALD C, MURPHY J, Exploring perceptions of quality of life of frail older people during and after their transition to institutional care (ESRC Growing Older Programme, Sheffield, 2003). — 54. SCHMALL VL, BOWMAN S, CLELAND M, Helping memory-impaired elders: a guide for caregivers (Pacific Northwest Extension, Corvallis, 2000). — 55. KERR B, GORDON J, MACDONALD C, STALKER K, Effective social work with older people (The Scottish Executive, Edinburgh, 2005). — 56. KANE R, Gerontologist, 41 (2001) 293. — 57. MURGIĆ J, JUKIĆ T, TOMEK-ROKSANDIĆ S, LJUBIČIĆ M, KUSIĆ Z, Coll Antropol, 33 (2009) 701.

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NEVERBALNA KOMUNIKACIJA ŠTIĆENIKA DOMOVA ZA STARIJE OSOBE U SLOVENIJI

S A Ž E T A K

Starenje stanovništva je rastući problem u svim razvijenim društvima. Starijem stanovništvu potrebno je više usluga zdravstvenog i socijalnog sektora, a sve je važnija njihova kvaliteta života. Cilj studije je odrediti karakteristike neverbalne komunikacije starijeg stanovništva koje živi u Domovima za starije osobe. Uzorak čine 267 štićenika Domova za starije osobe, starosti 65-96 godina, i 267 njegovatelja iz slučajno izabranih 27 Domova. Proučena su i analizirana 3 tipa neverbalne komunikacije, koristeći univarijatne i multivarijatne statističke metode. Kod izraza lica i pokreta glave oko 75% starijih stanovnika gledalo je njegovatelje u oči, oko 60% je gledalo uokolo, dok je smiješenje i pritiskanje usni rijetko uočeno. Razlike između spolova nisu bile statistički značajne dok su statistički značajne razlike između dobnih skupina uočene u spuštanju pogleda ($p=0.004$) i smiješenju (0.008). Kod pokreta ruku i trupa, većina starijih ljudi se najčešće nagnula naprijed i stisnula prste, dok su vrlo rijetko pomilovali njegovatelja. Razlike između spolova bile su statistički značajne kod naslanjanja na stol ($p=0.001$) i mijenjanja položaja na stolici (0.013). Statistički značajne razlike između dobnih skupina uočene su kod naginjanja prema naprijed ($p=0.006$) te pokazivanja prema drugima ($p=0.036$). Kod različitih načina govora i parajezičnih znakova gotovo 75% starijih ljudi govorilo je normalno, oko 70% je šutilo, a svađanje je bilo rijetko. Razlike između spolova nisu bile statistički značajne dok su statistički značajne razlike između dobnih skupina uočene kod uvjeravanja ($p=0.007$). Ova studija pokazala je da su štićenici Domova za starije osobe u Sloveniji komunicirali značajno rjeđe pokretima ruku i trupa nego izrazima lica i pokretima glave ili različitim načinima govora i parajezičnim znakovima. Njegovatelji bi trebali biti svjesni te činjenice i obratiti posebnu pozornost na ove dvije grupe neverbalnih izraza. Također, njihova važnost bi trebala biti stalno naglašavana tijekom obrazovanja svih vrsta radnika u zdravstvenom sustavu.