

MAJOR MEDICAL AND SOCIAL NEEDS OF DISABLED RURAL INHABITANTS

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Abstract: A considerable increase in the number of the disabled has been observed in Poland during the last two decades, especially in rural areas, and constitutes a serious social and economic problem. It is therefore necessary to continue work on the detailed definition of disability and to develop new disability qualification-classification methods (evaluation of the degree of invalidity). The all-Polish study of the state of health of rural population has considerably extended the knowledge of the problems experienced by this population group. The survey covered 1,491 people, including 779 females (52.2%) and 712 males (47.8%). The primary aim of the study was the qualitative and quantitative analysis of the medical and social situation of disabled adult rural inhabitants. The paper presents the basis on which respondents were classified as disabled, an analysis of their health and social situation, and analysis of their medical and social needs. The features were determined which distinguish subpopulations of those with legally ascribed categories of invalidity from those who have no legal decision concerning invalidity, and factors which distinguish farmers from non-farmers. The most frequent causes of disability were cardiovascular diseases, followed by diseases of the musculoskeletal system and connective tissue, diseases of the nervous system and sense organs, and respiratory diseases. As much as 93.7% of the total number of the disabled required diagnostic and treatment procedures. A great demand for specialist treatment was observed among the youngest disabled aged 20-34. It was noted that the provision of orthopaedic and rehabilitation equipment, as well as of auxiliary aids, was highly insufficient from the aspect of both quality and quantity. Only 17% of the total number of disabled who expressed needs (130 out of 765 persons) were provided with such equipment. Only 8 people had a full range of technical adjustments in their dwellings. The disabled mentioned the following problems which significantly disturbed their functioning in everyday life: material difficulties, need for providing care for another disabled member of the family, the lack of independent lodging and proper employment. The study shows that the health, social and economic situation of the disabled rural inhabitants is very difficult. Further studies of this problem are needed, as well as the organization of medical, rehabilitation and social aid in this micro-environment.

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INTRODUCTION

The specific character of farm work is conducive to the occurrence of selected diseases, injuries, accidents and poisonings, the majority of which may be associated with negative civilization effects [5, 12]. One of many

characteristic features of the occupation of a farmer is occupational exposure to biological hazards [3]. The degree of exposure of farmers to biological health risk factors (causing zoonoses and allergoses) is varied, mainly according to the type of animal breeding or crop cultivation.

The disabled who live in rural areas are a part of the local community. The quality of their lives is greatly determined by the culture of the environment, i.e. traditions, habits, and awareness of the value of own state of health. The capabilities and possibilities to perform all occupations useful in agriculture are the factors determining the usefulness of a person in the family and rural society. In rural areas the healthy are still valued for their contribution to work, whereas someone who is disabled is generally regarded as less valuable, less useful or useless on a farm, as a person who requires care and expenditure of financial means. Such an environmental conditioning essentially determines the way of life of these people, with the primary goal of obtaining the highest possible physical efficiency, which would ascertain usefulness and a place in a family hierarchy.

Problems of defining health, disease and disability.

Theoretical considerations on the accepted concept of complete health on the one hand, and the concept of a disease as opposed to health on the other, cover a wide sphere of intermediate states, where doubts are easily evoked. There are considerable differences between the medical-scientific concept of health, a healthy human body in the sense of anatomy, physiology and psychology, and actually observed health situations of a large number of people. Considering the present scope of knowledge, the determination of the state of a human body may be compared to the graduation from full health to fatal illness. Within this range there are various definitions of health, disability, invalidity, impairment, crippling disablement and other dysfunctions of the body [13].

Disability is both a biological and psychosocial fact, therefore giving an unequivocal definition is a task as difficult to define as the concept of health. According to United Nations experts [6], a disabled person is denoted as a man who is not capable on his own, partially or entirely, of providing for himself the possibilities of normal life, individual or social, due to congenital or acquired physical or mental deficiency.

World Health Organization experts suggest the application of the concept of three dysfunctions developed by the International Classification of Impairments, Disabilities and Handicaps (ICIDH) [10]. These are impairment, disability and invalidity. Work on definitions and classification has not yet been completed and is continuing. According to the WHO experts, while making definitions there is a need for taking into account the degree of impairment and the association with the environment [8].

Objective of the study. In Poland, the problem of the disabled, especially those living in rural areas, has not been recognized on the national scale. The attitudes in this matter were based on general estimations, published data of the 1978 and 1988 censuses [17], random studies which covered small groups of the disabled [14, 18], as well as on studies of a sociological type, and information from social security centres.

Table 1. Structure of the examined group of disabled by age and type of invalidity.

Age groups	OGI		BGI		Total	
	N	%	N	%	N	%
20-34	63	7.3	38	6.1	101	6.8
35-49	153	17.7	120	19.1	273	18.3
50-64	647	75.0	470	74.8	1,117	74.9
Total	863	57.9	628	42.1	1,491	100.0

OGI – disabled who had legal decision concerning invalidity group.

BGI – biological invalids with no legal decision concerning invalidity.

The aim of this study was the comprehensive quantitative and qualitative analysis of the medical, social and economic situation of the disabled rural inhabitants.

The following partial aims were considered: a basis on which respondents were classified as disabled; analysis of their health and social situation; analysis of their medical and social needs; the determination of factors which distinguish subpopulations of those with legally ascribed categories of invalidity from those who have no legal decision concerning invalidity, and factors which distinguish farmers from non-farmers.

MATERIAL AND METHODS

A group of 1,491 people aged 20-64 with various degrees of dysfunctions were selected from among the general number of 6,511 rural inhabitants in the study, based on two-stage stratified sampling [2]. The respondents were qualified based on two evaluation criteria. According to these criteria, two types of the disabled were differentiated with various scopes of rights (Tab. 1).

The first criterion was the legal decision concerning disability by the Commission for Affairs of Disability and Employment (KIZ), with the I (highest), II (middle), or III (lowest) category of invalidity ascribed. The subpopulation designated as legal or formal invalids constituted 57.9% of the general number of the disabled (863 people).

The second criterion was ascribing a person in the study by a qualified physician to at least the VII degree, according to the XII degree arbitrary scale of health. This was a group of biological invalids (628 people) with no category of invalidity legally ascribed by KIZ, which made up 42.1% of the general number of the disabled in the study.

The scale of health (medical qualification) was developed by researchers from the Institute of Agricultural Medicine in Lublin [1, 21]. The scale consisted of 5 sections and I-XII degrees (from the best to worst) which determined the state of health and described the necessary scope of care, medical and social services. The proper degree of health ascribed to each person in the study was the synthesis of two areas, i.e. medical and social. The basic task was the evaluation of the state of health based

on detailed analysis of objective and subjective examinations, selected laboratory tests, standardized questionnaires, as well as diagnoses and prognoses concerning life span and work, plus therapeutic and prophylactic suggestions expressed by the physicians who carried out the examinations. The scheme of the sections and degrees of health, based on the general evaluation of the state of health and needs for medical and social care, is presented in the author's dissertation for the scientific degree of Dr. hab. [12].

Based on these data, information collected in the Chart for the Disabled and the medical knowledge, the categories of medical and social needs of individual disabled people were determined.

The needs were precisely equivalent to health situations resulting from the consequences of the diseases diagnosed. Disease entities were listed according to the groups of diseases determined by the International Commission for Diseases, Traumas and Causes of Death (IX Revision) [9]. The higher the degree of health, the more varied were the forms of medical care and scope of the rehabilitation procedure.

The research tools developed were strictly subordinated to the recognition of the state of health of the people examined:

1. Medical Examination Chart - served to evaluate the somatic aspect of health.
2. Chart for the Disabled - served to determine the needs concerning the provision the orthopaedic and rehabilitation equipment, supplementary aids and technical facilities at home and its nearest surrounding.
3. Environmental Study Chart - applied in order to measure the social aspect of health.

The following methods of statistical analyses were applied: χ^2 correlation test, V-Cramer test, t-Student test, variance of single and double classification, and actual regression analysis.

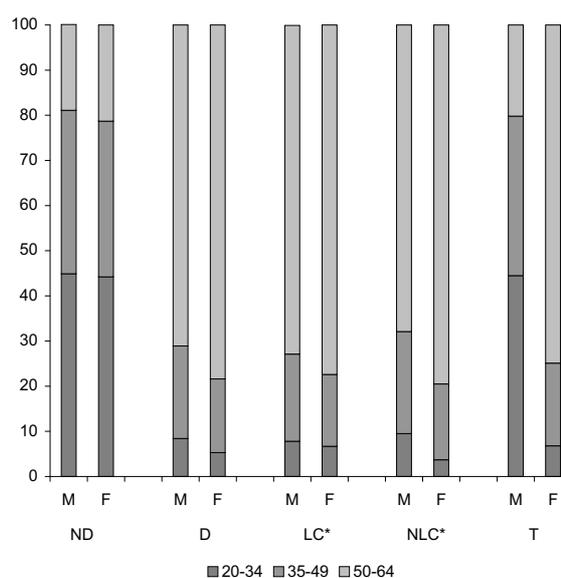
RESULTS

Characteristics of the examined group of disabled rural inhabitants. The general number of 6,511 rural inhabitants in the all-Polish study covered 1,491 disabled (22.9%), including 779 females (52.2%) and 712 males (47.8%).

In the disabled group, distribution according to age turned out to be characteristic, compared to the data concerning the non-disabled.

Figure 1 presents the following regularity: the higher the age category the greater the number of disabled. In the population examined, the most numerous group of the disabled were those aged 50-64 (74.9%), whereas the least numerous group were the disabled of the youngest age group, 20-34 (6.8%).

In the first and the second age groups the number of males was greater than that of females; however, the differences observed between the respondents of both genders and age turned out to be similar. Only in the



ND – total number of non-disabled; D – total number of disabled; LC – disabled with legally ascribed category of invalidity; NLC – disabled with no legally ascribed category of invalidity; T – total numbers of non-disabled and disabled (males and females together); * - subgroup of D.

Figure 1. Disabled and non-disabled according to gender and age.

oldest age group (50-64) was the number of females larger, compared to males, with the greatest difference noted in the percentages of males and females. Among the non-disabled - in comparison - a balance, or only a slight difference, was observed in the percentages of males and females in individual age groups.

As much as 55.7% of the total number of the disabled were farmers who had been or were employed on their farms (males - 45.2%, females - 54.8%). The remaining respondents performed various occupations, mainly as non-skilled workers at their places of residence.

The disabled had a considerably lower level of education, compared to the non-disabled. Nearly 79% of the disabled were people with elementary education, incomplete elementary education or with no qualifications at all.

The primary reason for ascribing invalidity by KIZ were diseases and their consequences (84.6%), followed by injuries (10.3%) and congenital defects (5.1%). In the group of people with no invalidity category ascribed, in almost every case, the disablement was caused by diseases (95.6%).

Nearly 30% of the general number of respondents underwent traumas of various types. Among the non-disabled this percentage was 18.8%. Males underwent injuries twice as often as females (66.9% and 33.1% respectively). Traumas were significantly more frequent among people with a legally ascribed invalidity category (64.9%), compared to those with no such legal decisions (39.1%). The following injuries were most often noted: injuries of the lower extremities and pelvis (32.2%), upper extremities (23.1%), head and neck (19.4%), multi-site and multi-organ traumas, general bruising (14.5%), and

injuries of the thorax (11.4%). As much as 3.7% of the general number of the disabled, mainly farmers, underwent injuries of the spine.

Based on the assessment of overweight, measured by body mass index (BMI) according to criteria recommended by the WHO, incorrect body mass was noted among the majority of the disabled. Overweight was observed in 37.0% of the disabled, whereas obesity - in 26.6%. In the group of the non-disabled this percentage was 34.8% and 11.7% respectively.

The following diseases were most frequently diagnosed by physicians among the disabled: cardiovascular diseases, diseases of the musculoskeletal system and connective tissue, diseases of nervous system and sense organs, as well as respiratory diseases.

The study showed that occupational diseases were diagnosed relatively rarely among the rural population. As much as 1.8% (27 people) of the general number of the disabled had legal decisions about an occupational disease, mainly males and non-farmers. The needs for treatment, as well as providing orthopaedic and rehabilitation equipment, turned out to be the most important health needs.

The need for treatment. According to the physicians who carried out the examinations, 93.7% of the total number of the disabled required a variety of diagnostic and treatment procedures. The greatest number of the disabled - 40.3% - qualified for specialist treatment, with the greater number being non-farmers, compared to farmers - 43.4% and 37.8% respectively - Fig. 2.

The great demand for specialist treatment among the youngest disabled, aged 20-34 (65%), and the disabled of the medium age group - 35-49 (47.6%), is conspicuous (Tab. 2). People of the oldest age group were prescribed a smaller range of specialist treatment compared to those of younger age groups.

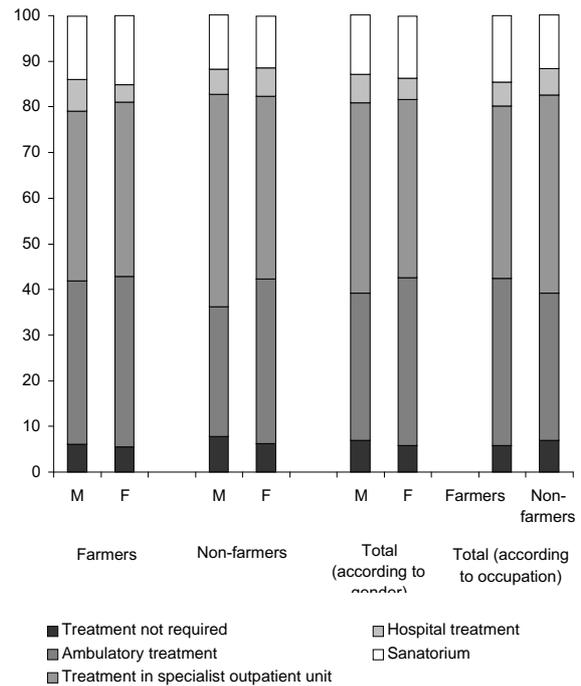


Figure 2. Medical qualification of the disabled for treatment according to type of occupation and gender.

Table 2 shows that among the disabled the need for specialist consultations decreased with age, whereas this need increased among the non-disabled. In every subsequent older age group the disabled were more often prescribed ambulatory treatment in village or community health centres. The percentages according to age groups were as follows: 8.0%, 27.8% and 38.7%. In general, 34.7% of the disabled required treatment in community and village health centres, with a slightly greater number

Table 2. Medical qualification of the disabled for treatment according to age, compared to the data concerning the non-disabled.

Treatment needs		Non-disabled			Disabled			Total	
		20-34	35-49	50-64	20-34	35-49	50-64	ND	D
Treatment not required	N	1,581	969	365	18	14	62	2,915	94
	% K	71.0	54.7	36.2	18.0	5.1	5.6	58.2	6.3
Ambulatory treatment	N	243	401	346	8	76	432	990	516
	% K	10.9	22.7	34.3	8.0	27.8	38.7	19.8	34.7
Treatment in specialist outpatient unit	N	365	326	225	65	130	405	916	600
	% K	16.4	18.4	22.3	65.0	47.6	36.3	18.3	40.3
Hospital treatment	N	17	21	23	2	17	62	61	81
	% K	0.8	1.2	2.3	2.0	6.3	5.6	1.2	5.4
Sanatorium	N	22	53	50	7	36	155	125	198
	% K	1.0	3.0	5.0	7.0	13.2	13.8	2.5	13.3
Total	N	2,228	1,770	1,009	100	273	1,116	5,007	1,489
	% K	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

% K – vertically; ND – non-disabled, D – disabled.

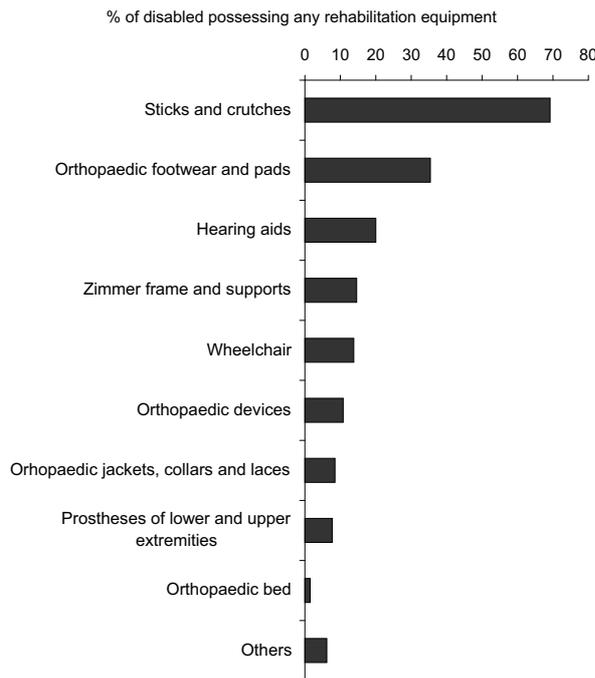


Figure 3. Type of orthopaedic and rehabilitation aids possessed by the disabled.

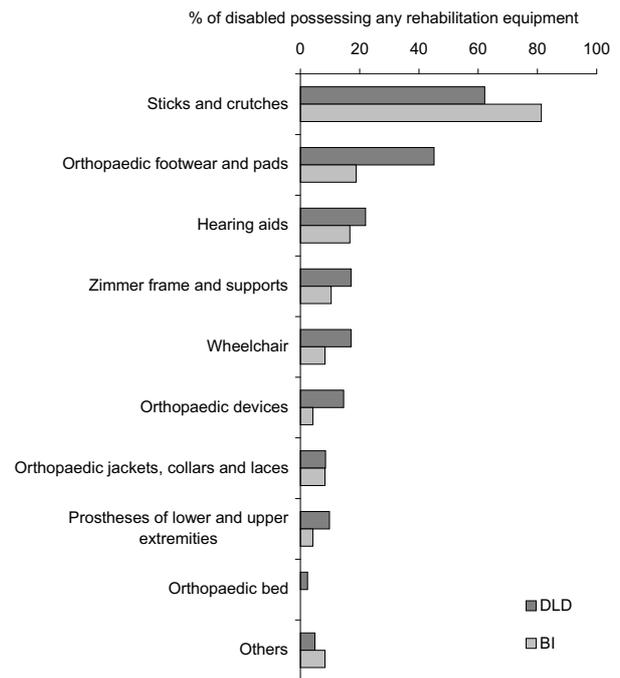


Figure 4. Orthopaedic – rehabilitation equipment and other auxiliary aids possessed by the disabled according to the legal status of invalidity. DLD – disabled with category of invalidity legally ascribed; BI – disabled with no legally ascribed category of invalidity.

of farmers and people with no legally ascribed category of invalidity. As much as 13.3% of the disabled were qualified for sanatorium treatment, while among the non-disabled this percentage was 1.2%. The need for sanatorium treatment was more frequently observed among farmers. This type of treatment was prescribed equally often in the group of people with legally ascribed category of invalidity and those with no decisions by KIZ.

Statistically significant differences were noted between people with individual categories of invalidity. The higher the category, the greater the number of disabled qualified for specialist treatment (I - 66.1%; II - 48.6%; and III - 33.1%), and for treatment in village and community health centres (I - 10.2%; II - 27.5%; III - 38.6%).

As much as 5.4% of the disabled required hospital treatment. Among the non-disabled this percentage was 1.2%. No significant differences were observed in referrals for hospital treatment between people with legally ascribed categories of invalidity and those with no such decisions, also between farmers and non-farmers.

Providing orthopaedic and rehabilitation equipment.

Needs for providing orthopaedic and rehabilitation equipment, as well as for auxiliary aids, were ascribed to three categories. The first category was fulfillment of elementary needs in this field by possessing any equipment; the second category were needs expressed by the disabled; and the third category was the evaluation of needs for equipment carried out by the physician who performed examination at the place of residence.

The need for use or application of various types of orthopaedic and rehabilitation equipment was mentioned by 51.3% of the general number of the disabled (765 people); non-farmers reported such a need slightly more often, compared to farmers (55.2% and 44.8% respectively). As much as 17.0% of respondents who expressed needs (8.8% of total disabled, 130 persons) stated that they possessed the indispensable orthopaedic and rehabilitation equipment, and the auxiliary aids adjusted to the type of their disability, which facilitated their everyday functioning.

Among people who had rehabilitation equipment at their disposal, the number of non-farmers was slightly greater, compared to that of farmers - 51.5% and 48.5% respectively. In this respect the situation of respondents who were ascribed one of the categories of invalidity was considerably more favourable, compared to those with no such legal decisions (63.1% and 36.9% respectively).

For the majority of the disabled, the amount of rehabilitation equipment possessed was limited to one basic type, while only a few respondents had two or three types of equipment.

Among the orthopaedic and rehabilitation equipment possessed by the disabled, the most often mentioned were sticks and crutches (palm, elbow and axillary), i.e. the simplest aids facilitating locomotor functions (69.2%) (Fig. 3). These aids were mentioned by 90.5% of farmers and 49.3% of non-farmers (Fig. 4). People with no legally ascribed category of invalidity mentioned this type of equipment more often, compared to those who had the decision by KIZ (81.3% and 62.2% respectively) (Fig. 5).

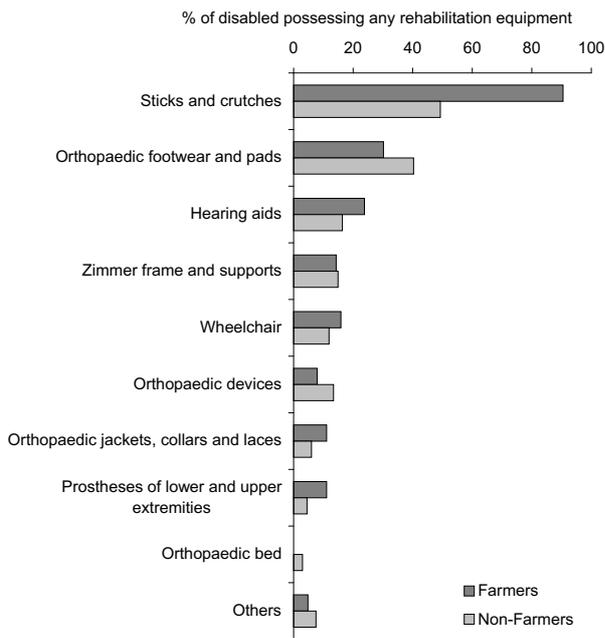


Figure 5. Orthopaedic – rehabilitation equipment and other auxiliary aids possessed by the disabled according to the type of employment.

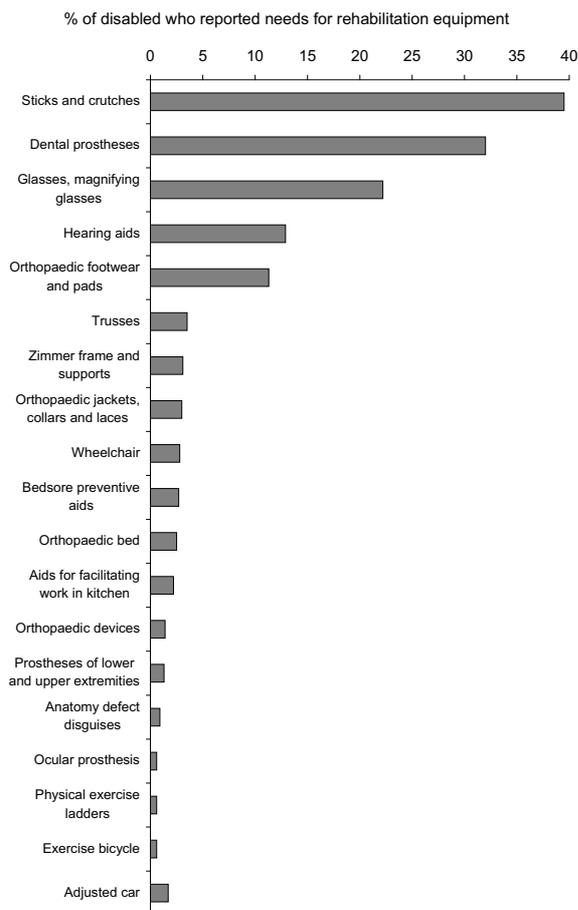


Figure 6. Needs to provide the disabled with orthopaedic and rehabilitation aids as expressed by the disabled.

The need for such aids was expressed by 39.5% of people who needed some kind of equipment, significantly more often by farmers and people without legally ascribed invalidity (Fig. 6). In the opinion of physicians who carried out examinations at the respondents' places of residence, these needs concerned 0.8% of the total number of the disabled (Fig. 7).

In the second position, orthopaedic footwear and pads were mentioned by those in the study (35.4%) (Fig. 3). People with legally ascribed invalidity possessed this equipment twice as frequently as those with no decision by KIZ (45.1% and 18.8% respectively) (Fig. 4). Non-farmers possessed orthopaedic footwear more frequently than farmers (40.3% and 30.2% respectively) (Fig. 5). The need for such equipment was expressed by 11.3% of the total number of people who reported needs (Fig. 6). According to the physicians who carried out examinations, only 0.7% of the total number of the disabled needed orthopaedic footwear and pads (Fig. 7), which made up only 1/8 of the needs expressed by the disabled themselves.

According to the frequency of possession aids by the disabled, hearing aids were mentioned in the third position (20.0%) (Fig. 3). People with a legally ascribed category of invalidity, as well as farmers, males and people of the oldest age group (50-64) possessed these aids more frequently than others (Fig. 4-5). The need for hearing aids was expressed by 12.9% of all those who reported needs - 5.5% of the total number of the disabled (Fig. 6). According to medical opinion, however, this need concerned 4.4% of the total number of the disabled (Fig. 7).

Zimmer frames and other types of supports which facilitate or even enable walking were mentioned in the fourth position, according to frequency of occurrence (14.6%) (Fig. 3). The need for such equipment was expressed by 3.1% of those who reported needs (Fig. 6). These were mainly respondents who had recently undergone surgical procedures, and those of the oldest age group with osteoarticular and cardiovascular diseases. According to the doctors, this type of equipment was necessary for only 4 people, i.e. 0.3% (Fig. 7).

The following fifth group were the disabled equipped with wheelchairs, both those designed for use in and outside the home. People of this group made up 13.8% of the total number of the disabled who possessed rehabilitation equipment (Fig. 3). According to medical opinion, this should be a group of 12 people (0.9%) (Fig. 7). The disabled with legally confirmed invalidity, mainly male invalids of I category, possessed wheelchairs twice as often, compared to those with no such decisions, as the result of rehabilitation procedures which covered mainly people with extensive amputations of the lower extremities. The need for a wheelchair was expressed by 2.8% of the total number of those who reported need for rehabilitation equipment (Fig. 6), which made up 1.2% of the total number of the disabled.

The people who possessed orthopaedic aids designed for the locomotory function (10.8%) (Fig. 3) were mainly those with paresis of the lower extremities. People with

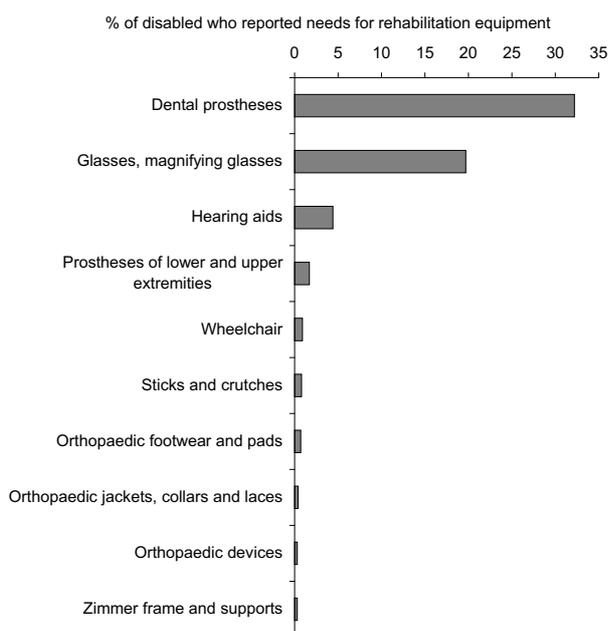


Figure 7. Needs for providing the disabled with orthopaedic and rehabilitation aids in opinions of examining physicians.

legally confirmed invalidity, mainly of I and II category, possessed this type of equipment four times more often compared to those with no such decisions. The number of farmers was greater than non-farmers, and the difference was 5.5% (Fig. 5). 1.4% of the total number of those who expressed needs, mentioned the need for orthopaedic equipment (Fig. 6). According to medical opinion, this was a small percentage – 0.3% (Fig. 7).

8.5% of the total number of those who possessed rehabilitation equipment (0.8% of the total number of the disabled), had orthopaedic jackets, collars, e.g. Schantz collars, laces, etc. (Fig. 3). People with an ascribed category of invalidity and biological invalids were both equally provided with this equipment - 8.5% and 8.3% respectively (Fig. 4). Farmers possessed them more often than non-farmers - 11.1% and 6.0% respectively (Fig. 5). These were mainly people with extensive spondylarthrosis and delayed consequences of traumas (mainly farmers). The need for this equipment was mentioned by 3.0% of the total number of those who expressed needs (Fig. 6), which constituted 1.2% of the total number of disabled in the study. According to medical opinion, this type of equipment was necessary for only 0.4% of the total number of disabled (Fig. 7).

As much as 7.7% of the total number of those who possessed rehabilitation equipment were provided with prostheses for the upper and lower extremities (Fig. 3). Males made up 90% of the total number of those who had prostheses. Prosthetic appliances were used by people with an ascribed category of invalidity twice as often, compared to those with no such decisions (9.8% and 4.2% respectively) (Fig. 4), and twice as often by farmers, compared to those who maintained themselves on non-

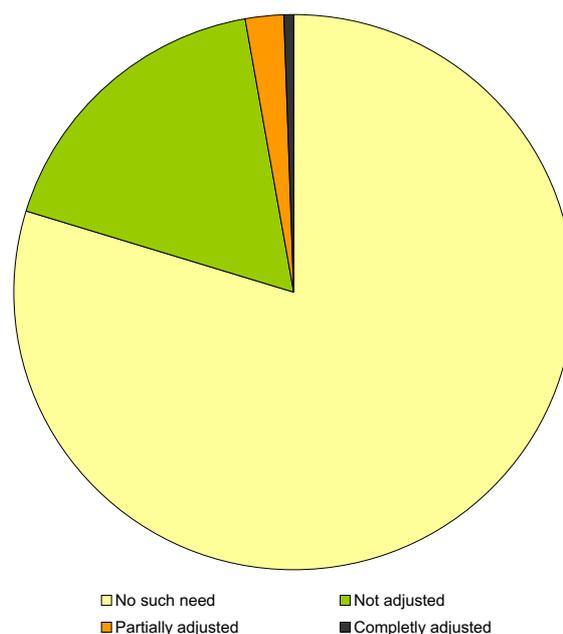


Figure 8. Scope of technical adjustment of dwelling in opinions of the disabled.

agricultural sources (11.1% and 4.5%) (Fig. 5). The need to obtain or exchange new prosthetic lower limbs was reported by 1.3% of those who expressed needs (Fig. 6). The physicians who carried out examinations evaluated that 1.7% of the total number of the disabled required prostheses (Fig. 7). It should be emphasized that both the disabled who had prosthetic lower limbs and those who required them, according to the doctors' observations, paid attention to the problem of exchanging the prosthesis for a new (subsequent) one, rather than to the problem of repairing the original one. This resulted primarily from the poor quality of rehabilitation equipment, causing difficulties in using this equipment. Due to the difficulties, or even the lack of possibilities for repairing prostheses, four people discontinued using them.

It is noteworthy that considerable discrepancies were observed between the opinions expressed by the respondents and the physicians concerning the needs for rehabilitation and orthopaedic aids. The aids mentioned by the disabled were significantly more varied, from the aspect of quantity and quality, than those according to the doctor's opinion (Fig. 6, 7).

Needs to adjust the dwelling. Each person in the study was asked questions concerning the scope of technical adjustment of the dwelling (interior and exterior) indispensable for individual types of disability. The following categories of replies were considered: a) complete adjustment of the dwelling; b) partial adjustment; c) not adjusted; and d) adjustment not required.

In the opinion of the disabled, only 8 people of the youngest and the oldest age groups, i.e. 0.5% of the total number of the disabled (Fig. 5), had the full range of

Table 3. Scope of technical adjustment of the dwelling in opinions of the disabled according to type and category of invalidity.

Scope of adjustment of dwelling		Category of invalidity			Total		In general
		I	II	III	OGI	BGI	
Complete	N	-	55	2	7	1	8
	% W	-	71.4	28.6	87.5	12.5	
	% K	-	1.8	0.4	0.8	0.2	0.5
Partial	N	6	11	9	26	7	33
	% W	23.1	42.3	34.6	78.8	21.2	
	% K	10.2	4.0	1.8	3.1	1.1	2.2
Not adjusted	N	33	69	66	168	91	259
	% W	19.6	41.1	39.3	64.8	35.1	
	% K	55.9	24.9	12.9	19.8	14.5	17.6
No such need	N	20	192	436	648	52.7	1,175
	% W	3.1	29.6	67.3	55.1	44.9	
	% K	33.9	69.3	85.0	76.3	84.2	79.7
Total	N	59	277	513	849	626	1,475
	% W	6.9	32.6	60.4	57.6	42.4	
	% K	100.0	100.0	100.0	100.0	100.0	100.0

%W – horizontally; %K – vertically; OGI – disabled with category of invalidity legally ascribed; BI – disabled with no legally ascribed category of invalidity.

adjustments in their dwellings, which provided them with optimum conditions for locomotion and improved the degree of self-dependence. The needs were fulfilled mainly in the case of people with severe injuries of locomotor organs, with limited locomotory function (diseases of the central nervous system, amputations, the bedridden and chronically ill).

The disabled mentioned, among other things, adjustment of door width in some rooms to the size of wheelchair; removing doors and door-thresholds, installation of hand-grips in sanitary rooms, installation of sinks to a level accessible from the wheelchair; adjustment of the height of the edge of a bath to individual requirements, necessary accessories for the bath, installation of bars on the walls of rooms and outside the dwelling, as well as other elements of equipment for the needs of the disabled.

Only 2.2% of the respondents in the study had their dwellings equipped with selected elements of the facilities needed. These were single and the most simple facilities necessary for individual types of disability. Apart from the above-mentioned equipment, in individual cases the disabled had lowered bed height, non-slippery floor covering, and increased size of bathroom. Six people had specially built ramps which enabled access to the ground floor of the building. The youngest and oldest people (5.9% and 2.3% respectively) had some of the necessary, i.e. more than basic facilities.

Nearly 18% of the disabled claimed that despite their needs, they had no technical facilities at home. These were chronically ill people, mainly with dysfunctions of locomotory organs. The percentage of people dissatisfied by the lack of technical appliances at home increased with age.

It should be stressed that the most numerous group of the disabled (79.7%) reported no requirements concerning technical changes at home for decreasing locomotory discomfort, and improving independence and possibility to work.

Table 3 shows that none of the disabled with the highest category of invalidity ascribed (I category) had all the needs for technical adjustment of the place of residence fulfilled. Few of those with category II and III described their situation in this respect as satisfactory - 1.8% and 0.4% of the total number of individual subpopulations respectively. The disabled with I category ascribed, significantly more often evaluated the technical adjustment of their dwelling as partial, i.e. selected facilities not sufficient for own defined needs. More than half (55.9%) of the disabled with I category described their needs in this field as unfulfilled. The percentage of people who experienced the lack of facilities at home decreased with the categories of invalidity.

The evaluation of needs in this field showed that people who were legally ascribed a category of invalidity expressed

greater needs for technical facilities, compared to those who had no decisions by KIZ. No significant differences were observed in the evaluations of needs according to the type of occupation and gender.

Life problems of the disabled. Based on opinions expressed by the disabled, the most important and most frequent life problems were selected which, according to the respondents, significantly disturbed their functioning in the spheres of work, family, health, and leisure.

From among the problems defined, material difficulties were most often reported and concerned 27.6% of the total number of the disabled. Males mentioned these difficulties slightly more often than females (29.7% and 25.7% respectively). Similarly, this problem occurred among farmers and non-farmers alike (26.9% and 28.6% respectively). Considering age, material difficulties most often appeared in the medium age group, i.e. 35-49 (34%), whereas among the youngest and the oldest age groups the percentages of those who reported difficulties were similar (25.2% and 26.3% respectively).

It has been proved that the disabled with an invalidity category ascribed, more often lived in difficult conditions (31.0%), compared to those without the decision by KIZ (23.1%). The higher the category of invalidity, the higher the percentage of the disabled who reported material difficulties (category III - 29.9%; II - 32.0%; I - 35.1%).

The second position (18.9%) occupied problems concerning providing permanent or temporary care for other family members who shared the dwelling, according to capabilities of the examined disabled. These family members were mainly the elderly, physically unfit due to age. Females mentioned the need for providing care slightly more frequently than males (20.7% and 17.0%); similarly, between farmers and non-farmers there were no important differences (18.2% and 19.8%). Problems connected with overpopulation of the dwelling were reported in the third position by 16.9% of the total number of the disabled. The younger was the age group, the higher the percentage of respondents reporting these kinds of problems. The percentages of respondents who mentioned such problems were similar for both genders (17.0% of males and 16.9% of females), non-farmers reported them slightly more often than farmers (18.8% and 15.4%).

The lack of independent lodging was mentioned by 11.5% of the total number of the disabled. The youngest people reported this problem four times more frequently, compared to respondents of the medium and oldest age groups (38.3%; 10.0% and 9.4% respectively). Among people with legally ascribed category of invalidity, the lack of independent lodging was reported by the smallest percentage of category I invalids, compared to those of categories II and III (7.0%; 12.2%; 14.4% respectively). This resulted from the need to exercise care over people with the most severe disabilities (category I). Only slight differences were observed between males and females in reporting this problem (12.5% and 10.6% respectively).

The disabled non-farmers mentioned the lack of independent lodging twice as frequently as farmers.

Among other problems mentioned by the disabled, subsequent positions were occupied by: presence in a family of an awkward person (10.7%), lack of proper employment (7.1%), obnoxious neighbours (6.3%), presence of a person abusing alcohol (4.6%) and others.

DISCUSSION

According to the estimated data by the Main Statistical Agency concerning the 1978 and 1988 censuses, the percentage of the disabled in Poland was 14-16% of the total population [17]. In the above-presented studies these values are higher and reach as much as 22.9% of the rural population. Until today, recognition of the size of the phenomenon of disability, as well as the needs of the disabled, has been confined to small geographic regions or selected types of disability groups [1, 14]. The problems of the disabled were divided into two groups: medical and sociomedical problems, the latter being very difficult to separate from the former.

The problem of providing sufficient orthopaedic and rehabilitation equipment proved to be of prime importance. In this respect, the opinions of the disabled frequently differed from those expressed by the physicians who evaluated the needs for possessing and usage of orthopaedic and rehabilitation aids. The doctors evaluated the necessity to use these aids as being lower, compared to the needs expressed by the disabled in the study. Wąsiewicz *et al.* [22] obtained similar results concerning medical opinions. The discrepancies between the evaluations of needs may be explained by the inclination of the disabled to secure themselves, as well as by the traditional approach to their demands by the part of physicians and nurses, resulting in an underestimation of the needs of disabled persons.

Many people who possessed orthopaedic and rehabilitation aids, mainly the prostheses for lower extremities and wheelchairs, discontinued to use them due to technical difficulties. The study of the problems of those who underwent amputations by Jakliński showed that the discontinuation by invalids to walk with prostheses was due not only to medical causes, but also to technical faults [11]. Similar results were obtained by Szczygielska-Majewska [20] and Kaźmierak [16]. The abandonment of improving efficiency in the living environment leads to secondary disability.

Insufficient attention is still being paid to the determination of occupational capabilities of the rural disabled inhabitants. The studies discussed, as well as other studies [16, 18] proved that a considerable number of these people feel underestimated because of the lack of employment. Occupational efficiency is the final stage of the rehabilitation process - the task of this process being the achievement by the disabled person of the highest possible psycho-physical abilities. In Poland, as in other countries [15], it is necessary to start the production of

specific rehabilitation aids, tools and machines, which would enable the invalids to perform selected occupations on farms.

The general evaluation of the social situation and health problems of the disabled rural population shows that the organization of care and its accessibility do not come up to expectations. It is necessary to introduce the rehabilitation process into the life environment, which would considerably facilitate the provision of medical and social aid for the disabled. Although this form of care is being occasionally criticized [7], for the majority of the rural disabled inhabitants it may be the only aid available.

CONCLUSIONS

Based on the all-Polish representative survey of the state of health of rural population, the size of the problem of disability among adult rural inhabitants was determined for the first time on such a large scale. The causes of disability, as well as medical and social needs associated with individual types of dysfunctions, constitute a basis for the recognition of the situation of the disabled in their environment, and for undertaking actions aimed at improving organization of care and rehabilitation for the disabled rural inhabitants.

The study has revealed the following facts:

1. Among the disabled the number of females was greater than males.
2. As much as 75% of the total number of respondents were aged 50-64.
3. The most frequent reasons for disability were cardiovascular diseases, diseases of the musculoskeletal system and connective tissue.
4. According to the doctors who carried out examinations in the respondents' environment, 93.7% of the total number of disabled required various kinds of treatment. Treatment in specialist outpatient units was most often recommended (40.3%).
5. A discrepancy appeared between opinions reported by the respondents and the doctors concerning the needs for rehabilitation and orthopaedic aids. The doctors evaluated these needs as being considerably lower than the needs actually expressed by the people requiring them.
6. Only 17% of the disabled who mentioned needs for orthopaedic and rehabilitation aids possessed such equipment; however, these were only basic aids.
7. Only a few people (8 respondents, e.g. 0.5%) had their needs fulfilled concerning technical facilities in the home and its surroundings.
8. The following life problems were most often mentioned by the disabled: material difficulties, the presence - among family members - of another person

who required care, overpopulating of the dwelling and lack of independent lodging.

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