Social support versus chosen health status indicators in primary care patients

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Summary

Aim. The purposes of our study were to determine the level of total social support, informational support, instrumental support, appraisal support and emotional support received by patients of primary care as well as factors related to this level with reference to health status and sociodemographic variables.

Method. The sample for current analysis included 516 patients of primary care clinics in Poland cooperating with medical universities. Questionnaires: STAI (State-Trait Anxiety Inventory), SCL-90 (Symptom Checklist-90), EPQ-R (Eysenck Personality Questionnaire

– Revised), GHQ (General Health Questionnaire)and SSS (Social Support Scale)were used in the study. Results from last two questionnaires are presented in the paper.

Results. The highest mean levels were obtained for instrumental support, while the lowest levels were observed for emotional support. The highest means were indicated in the GHQ-28 – social dysfunction, the lowest – GHQ-severe depression. Statistically significant relation was found between the level of social support and gender. Less subjectively evaluated total social support as well as instrumental and appraisal support were obtained by women. The highest Spearman score was found in the case of total GHQ-28 score, somatic symptoms, anxiety and insomnia, severe depression and total support. Taking into account the ANOVA findings, it was observed that an increasing GHQ score was associated with intensively increasing emotional support, informative support, appraisal support and the most – instrumental support.

Conclusions. The results display the underestimated role of emotional, informational and appraisal support and the overestimated role of instrumental support in primary care. The consequence may be a more frequent using health care accompanied by low level of patients' satisfaction, severity of social dysfunction disorders, particularly in patients with chronic diseases, who constitute an increasingly large group of primary health care.

Key words: social support, mental health

Introduction

Social support is understood in an intuitive sense, as assistance available from other people in a difficult life situation. One of the first definitions was put forward by Cobb who defined social support as 'the individual belief that one is cared for and loved, esteemed and valued, and belongs to a network of communication and mutual obligations' [1]. Further studies showed that the main providers of social support are: family (parents, siblings, spouse, children, and family relatives), friends, and neighbors, friends from work or schools, informal organizations (social groups, clubs, etc.), formal organizations (institutions of different kind and socio-political organizations etc.), and professionals (teachers, doctors, priests, etc.) [2-8]. Four types of support are distinguished in literature [2, 9] which an individual can receive from the groups mentioned above. Informational support includes advice, suggestions, or directives that assist the person in responding to personal or situational demands. Instrumental support is the most concrete, direct form of social support, encompassing provision of money, time, in-kind assistance, and other explicit interventions on the person's behalf. The types of instrumental support that are perceived as being most helpful in making the changes are those that made it easier and practical to engage in healthy behaviors, alleviated stressful situations, and facilitated the process of receiving medical care [10]. Appraisal support involves transmission of information in the form of affirmation, feedback and social comparison. This information is often evaluative and can come from family, friends, co-workers, or community sources. Emotional support (characterized by caring, love, respect, sympathy, empathy, understanding, listening, reassuring, comforting and trust) generally comes from family and close friends and is the most commonly recognized form of social support. In defining social support a distinction can be made between perceived support and provided social support. Most studies are based on the measurement of subjectively perceived support [11, 12].

The future of the primary care is associated with a growing incidence of chronic illness in general population and ageing societies. Bio-psycho-social model of the care in frames of general practice is supposed to face up expectations of patients with chronic illness or with a high risk of the disease and home caregivers (mainly family members). In the frame of this model support providers help the involved individual to mobilize psychological possibilities and capture emotional problems, as well as in regeneration [13, 14]. It was found that three months after the diagnosis of a chronic disease, lack of social support was strongly related to depressive symptoms. Emotional support seems to be particularly important for patients with chronic illness [15, 16]. Perceived availability and satisfaction with emotional support appear to benefit a person's psychological and clinical functioning of chronically ill [15, 16]. There were significant differences between the patient groups after myocardial infarction and controls in seeking emotional social support [17]. A sense of less family support for caregiving was associated with a higher New York Heart Association class of heart failure. Being a non-spousal caregiver provides less social support [6]. Social support from family and friends was the key facilitator of functioning for most stroke survivors [8]. Control of diabetes, as measured by the glycosylated hemoglobin assay, was significantly correlated with social support satisfaction (SSS) for women but negatively correlated with SSS for men [18]. The results of the studies show also the importance of supporting social ties and relationships between multiple sclerosis patients and others in clinical improvement of patients [15]. It was also shown that informational support and appraisal support of caregivers can minimize caregiver distress and improve the quality of life of patients with Alzheimer's disease [4,5].

Mental health, family dysfunction and social support are all factors that could interact and overlap each other, and from a practical approach, the management of chronic illness may be more effective if we also attend to social support [19]. However, data are ambiguous – other studies did not reveal any significant differences between patients with a chronic illness and healthy people in association of social support and self--esteem with depressive symptoms [20].

The social support may shape also non-pharmacological therapy. Carlson et al. [21] found that positive changes in social support were associated with increased HRQOL, after adjusting for changes in weight and aerobic fitness [22]. Living in a supportive environment was also related to 30-59 more min/week of physical activity for participants with more positive psychosocial attributes and 0-28 more min/week for participants with less positive psychosocial attributes [21].

Low social support together with single-parent families, perception of family dysfunction and high levels of stress affect psychosocial problems [23]. The social support is therefore an integral part of the biopsychosocial model affecting not only the previously discussed somatic and mental health patients, but also social functioning.

Moreover, a significant role of personal and social resources and perceived social support was demonstrated in particular in reducing job stress and preventing negative health outcomes [24, 25].

It was found in the literature that healthcare professionals need to pay attention to the comorbidity of mental disorders and chronic medical conditions in order to identify

frequent attenders and to decrease the inappropriate use of healthcare services [26]. It was found that low level of social support is associated with increased utilization of health services [20, 27-29]. Lack of emotional social support was associated with poor level of satisfaction [30]. Patients' most commonly identified barriers to care included a lack of social support together with insurance concerns and problems communicating with health care providers [31].

The purpose of the study was: to assess the level of total social support, informational support, instrumental support, appraisal support and emotional support received by patients of primary care as well as factors related to this level with reference to the health status and independent variables of the patients.

Methods

The sample for current analysis included 516 patients of primary care clinics in Poland. To be eligible for this study, patients had to be at least 18 years of age. Participants ranged in age from 18 to 89 years (40±15.57; 95% confidence interval (CI) 41.03-43.72). Majority of the participants were female (75.80%, N=404). Majority of the sample were married (55.9%, N=298) and most of the participants (63.6%, N=339) had at least a high-school education. Chronic somatic disorders were diagnosed in 21.58% (N=115) of the patients, chronic psychiatric disorders in 2.25% (N=12). Patients were recruited from six primary care clinics cooperating with medical universities (from Warsaw, Białystok, Wrocław, Opole, Łódź and Szczecin). Project staff members subsequently asked patients to determine their interest in participating in the study. Patients who agreed to participate anonymously in the study signed an informed consent form. At this time, patients (N = 1000) were given a questionnaire to complete at home and return in a stamped envelope. The enrollment lasted from June 2009 through November 2010. The questionnaires return index amounted to 53.4%. Due to exclusion of questionnaires with missing data – finally we analyzed answers from 516 patients.

The STAI (State-Trait Anxiety Inventory), SCL-90 (Symptom Checklist-90), EPQ-R (Eysenck Personality Questionnaire – Revised), GHQ (General Health Questionnaire) and SSS (Social Support Scale) were used in our project. In the current paper results of last two questionnaires were presented. Other results were discussed in another publication [32].

An additional questionnaire included socio-demographic and clinical data. The survey included questions about gender, occupation, marital status, number of children, number of years of education, presence of chronic somatic disease (the request for the name of the individual disease was provided), the presence of chronic mental illness, the presence of mental disorders in the family together with the degree of kinship, tobacco smoking, alcohol consumption, use of psychoactive substances.

The subjects were screened also for psychological distress using the 28-item version of the General Health Questionnaire [33] in Polish adaptation by Makowska and Merecz (2001) (sensibility 59%, specificity 75%) [34]. It consists of 28 items, which allow to measure general health status and its four components (each consists of 7 questions): A – GHQ-somatic symptoms, B – GHQ-anxiety and insomnia, C –

GHQ-social dysfunction and D – GHQ-severe depression. The norm for the general Polish population is 0-16 points (1-4 sten): low score, 5-6 sten: average score, 7-10 sten: high score. Higher scores indicate a greater probability of a psychiatric distress [35]. *Likert scoring* procedure (1, 2, 3, 4 points), considered as more sensitive for psychological distress [36], was applied in our study.

Social Support Scale (developed by K. Kmiecik-Baran, 1995) (discriminant power: 0.20 – 0.71, content validity: 1.0-1.8) [37] was the tool for estimation of the kind and strength of social support which the patient received from groups of social support. SSS allows to measure strength of received (in the patient's self-assessment) informative support, instrumental support, appraisal support, emotional support. It consists of 24 statements – 3 positive and 3 negative for each kind of social support. The respondents estimate in a 1 to 5 scale how close the statements are to her/his current situation with reference to different groups of social support: family, neighbors, colleagues, formal groups, non-formal groups, professionals, etc. The total score allows determining the level of social support without diversifying to different kinds (range from 24 to 120). (0 points means a lack of social support). The respondent can get from 6 to 30 points in each subscale (informative support, instrumental support, appraisal support, emotional support) – what means receiving full support.

Statistical analyses

The following descriptive characteristics: mean value, standard deviation, standard error, skewness, median, and +/-95% confidence interval were determined for variables, the results for which were based on statistical interval scales (e.g. raw scores and sten scores in individual questionnaires). The sten scores indicate an individual's approximate position (as a range of values) with respect to the population of values and, therefore, to other people in Polish population. The normality of distributions for these variables was evaluated be means of three different tests: the Kolmogorov-Smirnov test, the Lilliefors test, and the Shapiro-Wilk test at a confidence interval of $p=0.05$. Homogeneity of variance was evaluated by means of the Levene's and the Brown-Forsythe tests at a confidence interval of $p=0.05$. The statistical significance of differences between two mean values in the results which possessed features of interval variables, in view of lack of tests for normality of distribution, was evaluated by means of a parametric t test for independent samples, or parametric Cochran-Cox test for variances without homogeneity. In case of variables which did not fulfill the normality of distribution criteria, the difference between two means was estimated by means of non-parametric tests: the U Mann-Whitney test, the Wald-Wolfowitz test and the Kolmogorov-Smirnov two-sample test. In order to compare more than two means, depending on the results of tests evaluating the normality of distribution and homogeneity of variances, either algorithms of parametric variance analysis ANOVA, or its non-parametric equivalent, ANOVA Kruskal-Wallis with median test were used. In all the tests evaluating the statistical significance of differences between mean values, the confidence interval was assumed at $p=0.05$. In case the ANOVA analysis demonstrated statistically significant differences between mean values, three kinds of comparisons were made post-hoc: NIR,

Scheffe's and the RIR Tukey's for unequal numbers. Correlation between raw scores and sten scores in comparable scales and sub-scales was evaluated by linear correlation coefficients: Pearson r, R Spearman, Gamma, Tau Kendall and canonical analysis. Statistical significance of the determined correlation coefficients was evaluated by means of t test at the confidence interval p=0.05. The results which had statistical features of nominal or dichotomous variables were compared by means of the non-parametric chi^2 test. The internal consistency of compared scales was evaluated by determining the Cronbach alfa coefficient. Not all of the above mentioned findings were included in the present paper due to a large number of obtained results and editorial limitations.

Statistical analyses were performed with the use of STATISTICA PL® version 9.0 software.

Results

The results for the GHQ-28 and SSS are presented in Table 1. Analysis of general population of responders revealed the highest mean values for instrumental support, while the lowest score was observed for emotional support. Using the GHQ-28 scale, the highest mean scores were noted for social dysfunction, the lowest – for severe depression.

Table 1 – **GHQ-28 and SSS results (N=512)**

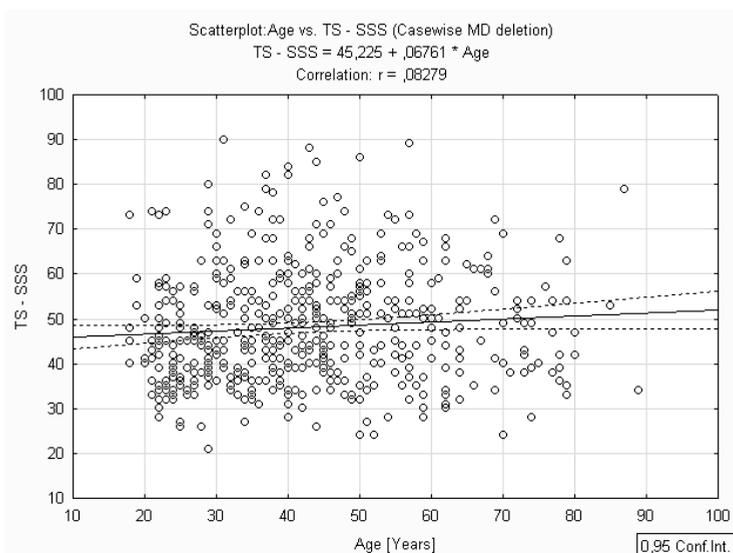| Variables	Median	SD	Median	Max	Min	Cronbach alpha
Cronbach alpha=0.826423. Standardized alpha=0.921311						
TS – SSS	48.11	20.51	45.50	90.00	21.00	0.859407
TS – SSS – Informational support	12.38	7.78	12.00	27.00	6.00	0.794462
TS – SSS – Instrumental support	12.96	5.66	13.00	28.00	6.00	0.783455
TS – SSS – Appraisal support	12.49	4.24	12.00	26.00	6.00	0.796064
TS – SSS – Emotional support	10.28	2.83	9.00	30.00	6.00	0.771339
Cronbach alpha=0.805355. Standardized alpha=0.874190						
TS – Likert score	23.14	2.83	21.00	71.00	0.00	0.769513
TS – A – Likert score	7.10	0.00	7.00	20.00	0.00	0.760807
TS – B – Likert score	6.72	2.12	6.00	21.00	0.00	0.719694
TS – C – Likert score	7.22	1.41	7.00	19.00	0.00	0.801331
TS – D – Likert score	2.15	0.71	1.00	18.00	0.00	0.779923

TS – total scale

Figure 1 – **SSS vs Age**

A statistically significant relationship was found between the level of social support and gender (Table 2) in the categories of total support as well as the instrumental and appraisal support – women receive less support than men.

Table 2 – **SSS vs. gender**

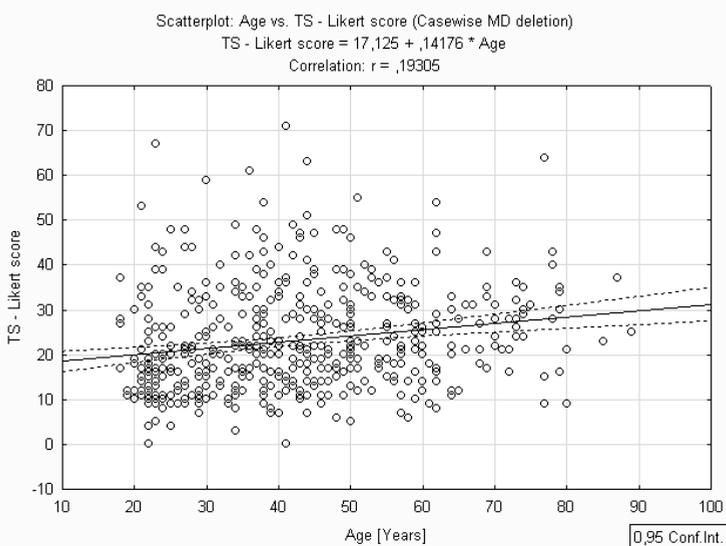| Variables	Rank Sum Women	Rank Sum Men	U	Z	p	Z adjusted	p
TS – SSS	97301.00	34027.00	20665.00	-2.10243	0.035516	-2.10332	0.035438
TS – SSS – Informational support	98556.50	32771.50	21920.50	-1.21962	0.222609	-1.22460	0.220725
TS – SSS – Instrumental support	97488.00	33840.00	20852.00	-1.97094	0.048731	-1.97694	0.048049
TS – SSS – Appraisal support	97350.50	33977.50	20714.50	-2.06763	0.038676	-2.07667	0.037833
TS – SSS – Emotional support	97592.00	33736.00	20956.00	-1.89781	0.057721	-1.91347	0.055688

TS – total score

Figure 2 – **GHQ-28 Likert vs Age**

No statistically significant differences were observed in case of social support received by patients with a chronic somatic disease (N=113) and those free from such a disease (N=399) at CI (confidence interval) 95%. However we asses relationship between the presence of a chronic somatic disease and social support for the CI adjusted to 90% and 85%. When the CI was adjusted to 95% in the group of patients suffering from a chronic disease (N=106) due to a small number of such patients, the difference between the presence of a chronic somatic disease and appraisal support reached the level of significance (U = 17981.0, p<0.05), and when the CI was adjusted to 90% (N=101) a significant relationship was found between the presence of a chronic somatic disease and emotional support (U= 16762.50, p<0.01).

A statistically significant relationship between the level of social support and age was observed in the category of total support and informational and instrumental support respectively: p<0.05; p<0.01 and p<0.001 (the older age, the higher level of received support – Figure 1).

Differences in the level of received total social support and its types were independent of social status or the level of education of the subjects at the level of statistical significance.

In case of the number of years of education, statistically significant differences concerned received total social support in patients from the 7-12 years group (they receive more support) and over 12 years of education (R=261.18, z=2.46, p=0.01), as well as instrumental support in patients from the group 0-6 years (more support) and over 12 years (R=293.73, z=2.63, p<0.001) as well as 7-12 years (more support) and over 12 years of education (R=269.14, z=3.17, p<0.001).

The relationships between the GHQ-28 scores and gender reveal statistically significant differences in the category of total social support as well as somatic symptoms (p=0.01) and social dysfunction (p<0.05). Statistically significantly higher values are observed in women (Table 2).

The relationship between the GHQ-28 score and age is statistically significant in the total level of social support as well as in all of its subscales. It was observed with the increasing of the patients age an increase in the severity of the symptoms in the category of total GHQ-28 score (Spearman n-R 0.243, p<0.0001) (Figure 2) and somatic symptoms (Spearman n-R 0.228, p<0.0001) as well as anxiety and insomnia (Spearman n-R 0.224, p<0.0001). Correlations were statistically significant in the category of social dysfunction (Spearman n-R 0.139, p<0.0001) and severe depression (Spearman n-R 0.100, p<0.0001).

Statistically significant differences were observed in the category of somatic symptoms in patients with primary education (higher GHQ-A scores) vs patients with secondary education (z=2.84, p=0.01) and in patients with primary education (higher GHQ-A scores) vs patients with higher education (z=3.12, p<0.01). It was also found statistically significant higher score in the category of severe depression in patients with secondary education vs patients with higher education (z=2.49, p<0.05).

GHQ-28 vs. SSS

Correlation between the GHQ-28 scores and SSS was analyzed in the range of total values and individual subscales. The highest spearman score was revealed in total GHQ-28 score and total support (Spearman n-R 0.302, p<0.0001), as well as appraisal (Spearman n-R 0.278, p<0.0001) and emotional support (Spearman n-R 0.263, p<0.0001); somatic symptoms and total support (Spearman n-R 0.180, p<0.0001) and also emotional (Spearman n-R 0.160, p<0.0001) and informational support (Spearman n-R 0.157, p<0.0001); anxiety and insomnia and total (Spearman n-R 0.290, p<0.0001), informational (Spearman n-R 0.270, p<0.0001) and emotional support (Spearman n-R 0.253, p<0.0001); social dysfunction and appraisal(Spearman n-R 0.167, p<0.0001), total (Spearman n-R 0.138, p=0.002) and emotional support (Spearman n-R 0.105, p=0.019); severe depression and total (Spearman n-R 0.349, p<0.0001), appraisal (Spearman n-R 0.330, p<0.0001) and emotional support (Spearman n-R 0.311, p<0.0001).

Table 3 – **GHQ 28 vs. gender**

Variables	Rank Sum Woman	Rank Sum Man	U	Z	p-value	Z adjusted	p-value
TS – Likert score	105233.50	28152.50	20649.50	2.35151	0.018698	2.35281	0.018633
TS – A – Likert score	105041.00	27829.00	20326.00	2.53960	0.011098	2.54830	0.010825
TS – B – Likert score	103700.50	29169.50	21666.50	1.60601	0.108272	1.61065	0.107257
TS – C – Likert score	104308.50	28561.50	21058.50	2.02945	0.042413	2.10066	0.035671
TS – D – Likert score	103131.50	29738.50	22235.50	1.20973	0.226382	1.28868	0.197511

TS – total score

Table 3 presents „p" values for every SSS and GHQ scales for multiple comparisons with the findings of the ANOVA Kruskal-Wallis test. In case of total social support, appraisal and emotional support, the ANOVA Kruskal-Wallis test revealed that at the level of significance the distributions in a given SSS scale differ statistically significantly between three groups of findings (low, medium, high) in a given GHQ scale. Correlation of findings in both scales was positive: in the group of low findings in the GHQ scale, distribution of findings in the SSS scale shifted towards low findings; similar relationship was observed in the group of medium and high findings. In informational social suport, the ANOVA Kruskal-Wallis test revealed a positive correlation of findings in both scales: in the group of low GHQ scores, the distribution of SSS findings was also shifted towards low values; however a similar relationship was not confirmed in the group of medium and high values. In instrumental social suport, the ANOVA Kruskal-Wallis test revealed a positive correlation of findings: in the group of high GHQ scores, distribution of the SSS findings was also shifted towards high values, while a similar relationship was absent in the group of medium and low values.

Table 4 – **GHQ vs. age**

Variables	N	Spearman – R	t(N-2)	p
Age & TS – Likert score	503	0.243002	5.607200	3.40E-08
Age & TS – A – Likert score	502	0.227608	5.226659	2.54E-07
Age & TS – B – Likert score	502	0.224147	5.142935	3.89E-07
Age & TS – C – Likert score	502	0.139198	3.143171	1.77E-03
Age & TS – D – Likert score	502	0.100713	2.263530	2.40E-02

TS – total score

Table 4 presents medians in four SSS subscales in three GHQ_Sten-Likert groups /Interpretation of low (L), mean (M), high (H) values. Low GHQ_Likert score is associated with lower emotional support in comparison to higher informational, instrumental and appraisal support, which are at the same level. Mean GHQ_Likert score is associated with lower emotional support in comparison to higher informational and appraisal support, which are at the same level, and instrumental support, which is still higher. High GHQ_Likert score is accompanied with lower emotional support in comparison to increased informational support and still higher instrumental and appraisal support, which are at the same level.

Generally, it may be concluded, taking also into account findings of the ANOVA analysis, that an increase in GHQ_Gender –Likert score is accompanied by the slowest increase in emotional support, slightly more rapid increase in informational and appraisal support and the quickest increase in instrumental support. We did perform Canonical Analysis – the results confirm above findings (Table 5).

Table 5 – **ANOVA p-values**

Kruskal-Wallis test: H (2, N= 496) =43.37915 p <0.00001			
Depend: TS – SSS	TS –Low R: 195.04	TS – Medium R: 301.15	TS –High R: 250.39
TS – Low	–	1.41E-10	1.14E-03
TS – Medium	1.41E-10	–	3.61E-03
TS – High	1.14E-03	3.61E-03	–
Kruskal-Wallis test: H (2, N= 496) =34.95479 p <0.00001			
Depend:TS – SSS – Informational support	TS –Low R: 198.12	TS – Medium R: 292.15	TS – High R: 255.45
TS – Low	–	1.65E-08	6.95E-04
TS – Medium	1.65E-08	–	5.77E-02
TS – High	6.95E-04	5.77E-02	–
Kruskal-Wallis test: H (2, N= 496) =22.75361 p <0.00001			
Depend:TS – SSS – Instrumental support	TS – Low R: 211.36	TS – Medium R: 288.01	TS – High R: 247.28
TS – Low	–	6.01E-06	6.32E-02
TS – Medium	6.01E-06	–	2.81E-02
TS – High	6.32E-02	2.81E-02	–
Kruskal-Wallis test: H (2, N= 496) =29.22590 p <0.00001			
Depend: TS – SSS – Appraisal support	TS – Low R: 205.61	TS – Medium R: 292.40	TS – High R: 248.58
TS – Low	–	2.21E-07	1.74E-02
TS – Medium	2.21E-07	–	1.56E-02
TS – High	1.74E-02	1.56E-02	–
Kruskal-Wallis test: H (2, N= 496) =30.65085 p <0.00001			
Depend: TS – SSS – Emotional support	TS –Low R: 203.74	TS – Medium R: 292.23	TS – High R: 250.39
TS – Low	–	1.23E-07	8.21E-03
TS – Medium	1.23E-07	–	2.29E-02
TS – High	8.21E-03	2.29E-02	–

TS – total scale, SSS – Social Support Scale

Table 6 – **Median of four SSS subscales and three ranges of GHQ Sten-Likert**

Variables	GHQ_Sten-Likerta/ Interpretation of the result		
	Low	Medium	High
TS – SSS	42.0	46.0	52.0
TS – SSS – Informational support	11.0	12.0	13.0
TS – SSS – Instrumental support	11.0	13.0	14.0

TS – SSS – Appraisal support	11.0	12.0	14.0
TS – SSS – Emotional support	8.5	9.0	11.0

TS – total score

Table 7 – **Canonic analysis summary**

Canonical R: .37709 Chi2(25)=99.438 p<0.0001		
	SSS	GHQ
Number of variables	5	5
Variance extracted	100.000%	100.000%
Total redundancy	10.0314%	7.52116%
Variables: 1	TS – SSS_sqrt	TS-Likert score_sqrt
2	TS – SSS – Informational support _sqrt	TS-A-Likert score_sqrt
3	TS – SSS – Instrumental support _sqrt	TS-B-Likert score_sqrt
4	TS – SSS – Appraisal support _sqrt	TS-C-Likert score_sqrt
5	TS – SSS – Emotional support _sqrt	TS-D-Likert score_sqrt

TS – total scale

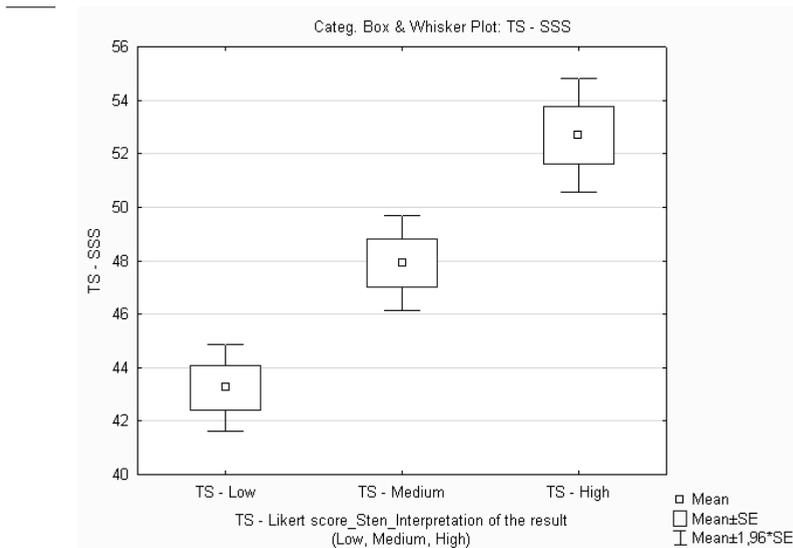
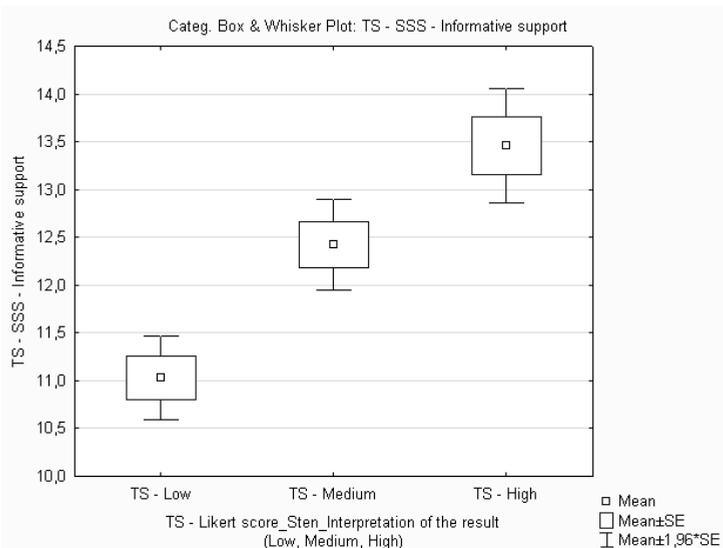Figure 3 – **Means of four SSS subscales and three GHQ-28 ranges.**

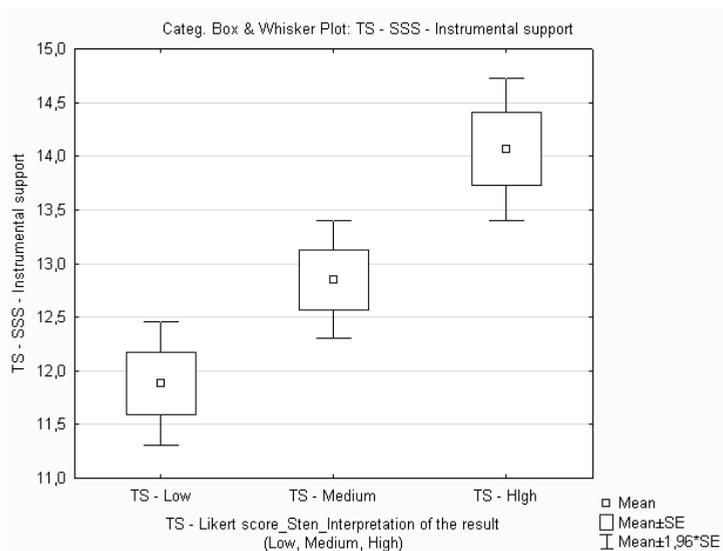Figure 4 – **Means of four SSS subscales and three GHQ-28 ranges.**

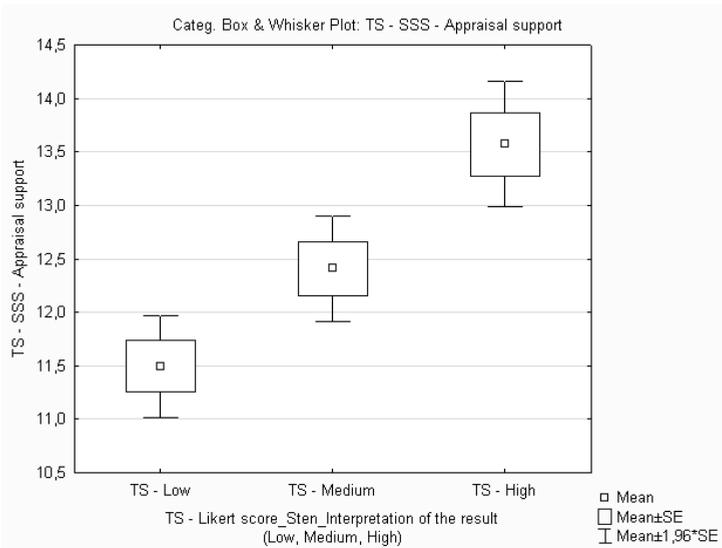Figure 5 – **Means of four SSS subscales and three GHQ-28 ranges.**

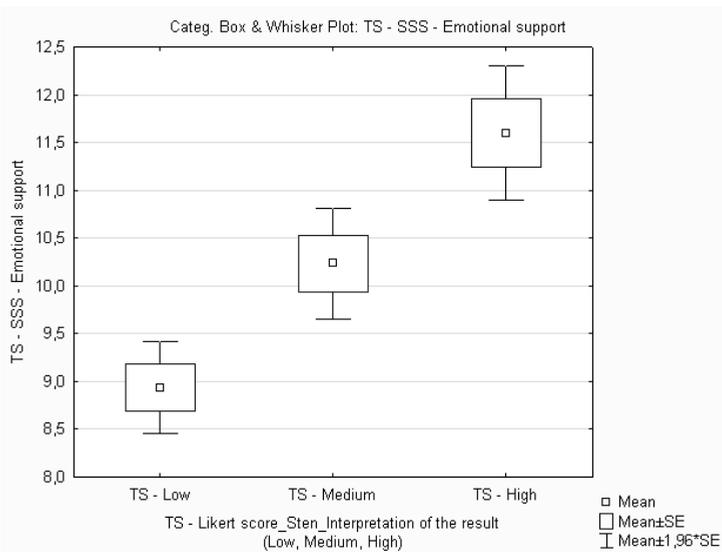Figure 6 – **Means of four SSS subscales and three GHQ-28 ranges.**

Figure 7 – **Means of four SSS subscales and three GHQ-28 ranges.**

Discussion

Professional support and counseling should be provided prior to treatment and professional support should equally be extended during, and following treatment,

whether it was successful or not [38]. In areas dealing with somatic aspects, the group intervened by nurses were more satisfied with an individual psychosocial support intervention than the one by psychologists [39], however a doctor is the main source of informational and emotional support. The patients who are looking for these kinds of support are those who are responsible for the most frequent utilization of health services [40].

As demonstrated in our study, general population of primary health care patients receive the most subjectively evaluated instrumental support, and the least – emotional support, which is of special significance in patients suffering from somatic diseases, especially of chronic character, what may point to an increased need for emotional support among patients suffering from chronic somatic diseases [15,17,19]. At the same time the most pronounced symptoms observed in the investigated group belonged to the social dysfunction category, in which emotional support plays the most significant role not only as a triggering factor, but also as a factor which intensifies symptoms [11, 12, 15]. Observed low level of informational support with aggravated somatic symptoms indicates an underestimated role of secondary and tertiary prophylaxis [21, 22].

Our study demonstrated that women receive significantly less total support as well as instrumental and appraisal support than men. However at the same time it was women who demonstrated statistically significantly elevated scores in the category of somatic symptoms and social dysfunction. It should be emphasized that in women diagnosed with depressive disorders and a control group significant differences were found with respect to social support with higher level of received social support in the group without depression [41]. Relationship between the level of social support and gender requires further analysis. Low level of social support in women could result from a higher level of needs expression in women as well as more objectively higher level of support provided for men.

The significance of social support is stressed especially in elderly patients [42, 43]. In our analysis we demonstrated that the older the patient, the higher received total support as well as informational and instrumental support, what was accompanied by increased severity of symptoms, especially in the range of total GHQ-28 score and somatic symptoms, as well as anxiety and insomnia. It could be associated with higher lever of unmet needs. Additionally higher score of GHQ-28 is potentially associated with low levels of received emotional and appraisal support. Moreover elderly patients are among those who potentially most often use health service resources. It is worth emphasizing that the older the patients, the higher expectations for support from home caregivers [26].

No significant statistical differences were found in social support received by patients suffering from chronic somatic disease vs patients free from such diseases. In consequence this may lead to more often use of primary care services by chronically ill patients, who require higher levels of support in every investigated category [3,27-29].

Moreover, social support in our study was independent of the civil status, or the level of education of the investigated individuals. At the same time, statistically more total social support was received by patients with education lasting from 7 to

12 years (vs. patients with longer education), and in case of instrumental support – statistically significantly more support was received by patients, whose education lasted less than 12 years. This corresponds to statistically higher scores for somatic symptoms in the GHQ-28 scale, observed in patients with primary education. It may potentially result in ignoring the somatic symptoms [44]. This also reveals an underestimated role of emotional, appraisal and informational support in patients with low number of years of education in history.

In correlation analysis of the GHQ-28 score and SSS, the highest values of the Spearman correlation coefficient were observed in case of total GHQ-28 score and the level of appraisal support, somatic symptoms and emotional support, anxiety and insomnia and informational support, as well as social dysfunction and severe depression and appraisal support, what was excluded in other studies [20]. This also is contradicted in studies involving patients with breast cancer, in which age was significantly associated with distress but no significant association between psychological distress and social support was observed [45]. However, the study methodology and subjects should be considered in this respect. In our study, chronic disease was noted in 115 subjects, thus the population differed significantly from the patients in the quoted report, in which the subjects were burdened with a severe, life-threatening somatic disease, such as breast cancer.

Moreover, we demonstrated that an increase in the GHQ-28 score is accompanied by a slow increase in emotional support, slightly quicker increase in informational support and appraisal support, and the most rapid increase in instrumental support. According to observations, this may potentially result in an aggravation of social functioning disturbances as a result of learned helplessness [14, 15, 17, 19, 22, 46], especially in chronically ill patients, affecting independently negatively the clinical level of control of every somatic disease affceting the patient [18, 19, 22, 47], as well as mental health [48].

Limitations

Random selection of samples was abandoned due to specificity of the project and of the study group. The study was not aimed at randomized observation, but at evaluation of the phenomenon in the whole population of primary care patients who agreed to cooperate with the project staff members, what guaranteed reliable answers to the study instruments. For this reason also no attempt was made to increase the response rate. However, the answers to questions included in the questionnaires (standardized and validated) are of self-evaluating character, thus the results present a picture of the phenomenon from the patient's point of view (the study did not include obtaining data from primary care physicians). On the other hand, some authors investigating social support believe it to be the most important indicator [11, 12]. The subpopulation of patients suffering from chronic diseases included only 115 subjects – this hampered the possibility of categorization of chronic somatic disorders and a more thorough analysis. The number of chronic diseases in a group of 115 patients with chronic diseases was not determined. Among respondents other

parameters of somatic health, with the exception of data resulting from the GHQ-28 were also not determined.

The authors did not facilitate the analysis of patients who initially consented to the completing of the questionnaires, but did not return them, or return as filled incompletely. This made impossible comparative tests between the group finally analyzed in the study and the group of patients who decided not to participate in the project.

Conclusions

The studied population of primary care patients received mainly instrumental support and rarely – emotional support. Demonstrated by us low levels of informational support accompanying an increase in somatic symptoms point to an underestimated role of secondary and tertiary disease prophylaxis.

The results illuminate that we underestimate the role of emotional, informational and appraisal support and overestimate the role of instrumental support in primary care. This may lead to more often use of health care services together with low satisfaction from the services, exacerbation of social functioning disorders, and, especially in chronically ill patients, who would constitute more and more numerous subpopulation of primary health care patients.

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