

Social networks of depressed patients

Magdalena Poradowska-Trzos, Dominika Dudek, Monika Rogoż,
Andrzej Zięba

Summary

Aim. The purpose of the research was to analyse the structure of social networks as well as the types and sources of support received by patients with unipolar disease.

Material and methods. Assessment was made according to Bizoń's method and Cohen's ISEL.

Results. In general, the patients' networks function worse than the networks of healthy people. Patients with unipolar disorder do not mention many people in their environment as significant or providing support. They devote less time to social life, are often isolated and lonely and restrict their interactions to family members. This is the group of people from which they obtain most support, and additionally all supportive functions often lie with one person. These patients have a sense of receiving a small amount of mainly emotional (self-esteem) but also appraisal, belonging and tangible support.

Conclusions. Stabilizing supportive relations in different aspects of life should be one of the aims of therapy, both in hospital wards and outpatient facilities. Surely this is one of the pathways which may, at least to some degree, alleviate the huge suffering caused by affective disorders.

depressive disorder / social support

INTRODUCTION

In Axer's definition a social network is a group of people with whom a person – central to the network – maintains contact [1, 2]. A social network differs from a small social group in that not all its members know one another [3]. It consists of the members of immediate and more distant family and other unrelated persons met in different places and circumstances. All of them are important to the central figure although the reasons why they matter are different. These people are the source of not only positive impulses but also negative ones; they provide support

and are a burden. Therefore the notions of social network and social support network should not be treated as identical. As we know, social interactions do not always have a positive impact. One of the consequences of being part of a social network is having sources of support. Support has been defined in different ways in the literature on the subject. Sarason defines it as help available in difficult situations. Pommersbach treats support as a consequence of belonging to social networks, whereas Gottlieb identifies social support with having access to helpful behaviour. Caplan and Sarason define support as having one's needs met (such as the need for being safe, but also having the feeling of belonging and of being accepted) by persons important in one's life, and other reference groups [4]. Many authors have attempted to distinguish different types of social support. Kahn and Antonucci (1980) divided support into: giving the feeling of emotional intimacy and care, explain-

Magdalena Poradowska-Trzos, Dominika Dudek, Monika Rogoż, Andrzej Zięba: Adult Psychiatry Clinic of the University Hospital, Krakow, Poland. Correspondence address: Magdalena Poradowska-Trzos, Adult Psychiatry Clinic of the University Hospital, 21 Kopernika St. 31-501 Kraków, Poland. E-mail: magda.trzos@wp.pl

This research has not been aided by any grant.

ing certain behaviours as well as devoting time, energy and money to the benefit of other people. Caplan (1981) distinguished instrumental support (giving advice, providing information and tangible help) and socio-emotional (empathy, acceptance). Wills (1985) divided social support in a different way; he distinguished the category of support helping to maintain one's self-esteem but also prestigious, informational, instrumental, social interaction and motivational forms of support [5]. According to Helena Sęk the types of support most frequently received are emotional, informational, instrumental and tangible (depending on what is given and taken in an interaction) [4]. It must be noted that each of the different types of support might have the same name but different range in works by different authors or they might be the same but named differently. For example Caplan takes instrumental support to mean supporting interactions, which Wills places in two distinct categories: informational and instrumental. Similar differences can be observed in the categories of emotional, motivational and self-esteem providing support. Taking these distinctions into account is significant in the interpretation of various data and scientific papers.

The aim of this research was the analysis of the structure of social networks as well as the type and source of support received by patients with recurring depressive disorders (Unipolar Affective Disorder-UAD).

MATERIAL AND METHODS

40 patients participated in the research, all being treated in the outpatient clinic of the Adult Psychiatry Clinic of the University Hospital and all with the diagnosis of recurring depressive disorders (Unipolar Affective Disorder). The diagnosis was made with the use of ICD-10 criteria, taking into account the criterion proposed by Perris (presence of at least three depressive phases without manic or hypomanic phases) [6]. Patients selected for this research attended control visits in the outpatient clinic and when the clinical and diagnostic tests (Hamilton's Depression Scale, Beck Depression Scale and Young's Mania Scale) confirmed that they were in remission, they were asked to agree to participate in

the research. Their social networks were evaluated based on Bizoń's Social Environment Questionnaire and Cohen's Social Support Scale. The control group consisted of people who were not treated psychiatrically, chosen with respect to their age and gender (also 40 people).

Bizoń's Social Environment Questionnaire was devised in the 1980's. It consists of the Social Environment Map, Social Environment List and Support System Record Sheet. In the second reviewed version of the questionnaire, which its authors called the research version and which has been used for the purposes of this study, eight areas of social environment have been distinguished. These are: people who live with patients participating in the research, immediate family, other relatives and kinsmen, work colleagues, neighbours, other acquaintances, therapists and other significant persons. In case of the first two areas, the participants in the research were obliged to mention all of the people who met a given criterion, and in other cases he or she could mention only those people who, for some reason, were more significant than others. The Social Environment Map is a graphic presentation of a social network. Further on in the research it became an element which made it easier for the patient to respond to the questions asked, and which introduced structure to the interviews. Next in line was the Social Environment List, where patients answered questions about the duration of their relationships with the persons they had mentioned before, their intensity and the availability of these people. In the last part of the questionnaire, patients answered more specific questions relating to the type of support received. The questions were designed to identify people who fulfil each supporting function while eliminating those members of the networks who don't provide any support at all [7]. The Questionnaire provides both qualitative and quantitative characteristic of social network through the following parameters: [2, 8, 9, 10]

- Range of the network (size of social environment) – the number of people with whom the interviewed patient maintains contact
- Size of non-family network – involves all of the persons mentioned before, who are unrelated to the interviewed patient

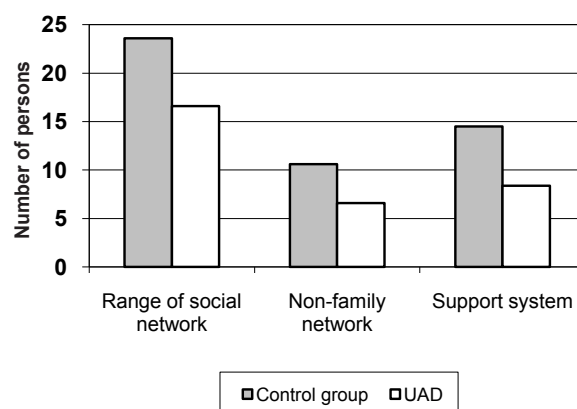
- Age of the network - specified on the basis of the duration of relationships within the network
- Activity of the support system – frequency and duration of personal social interactions, making contact by telephone, correspondence
- Size of the support system (number of sources of support – the number of persons in the patient's social environment who maintain the system)
- Range of support - the number of network functions fulfilled within the system of a given patient. Independent of the number of persons fulfilling a given function.
- Type of support system – dependent on the distribution of individual support functions onto the members of the network
- Localization of support – defined by identifying a family or non-family circle as a dominant source of support
- Support Level Parameter – takes into account the number of network functions fulfilled in a given system and the degree to which a given function can be replaced by other sources. It is also sensitive to the differences in significance of individual functions.

Cohen's Social Support Scale (ISEL – Interpersonal Support Evaluation List) is one of the few questionnaires to distinguish between various types of support. Their categories are similar to those distinguished by Helena Sęk. [4]: emotional support (providing conditions for the acting out of negative emotions, feeling of safety, stabilization, calming down, hope and high self-esteem), informational (advice, hints, conversations that help the understanding of one's situation, also reasons behind and sense of different situations), instrumental (environment for undertaking actions together, also aimed at solving problems), tangible (material help, assistance with daily duties and in unexpected situations, care). The statistical analysis was carried out with the use of the following tests: Mann-Whitney's, Kolomogorov-Smirnov's, Pearson's χ^2 with Yates' amendment and an exact Fisher's test $20 < n < 40$, expected values < 5). The tests were considered statistically relevant at $\alpha < 0.05$.

RESULTS

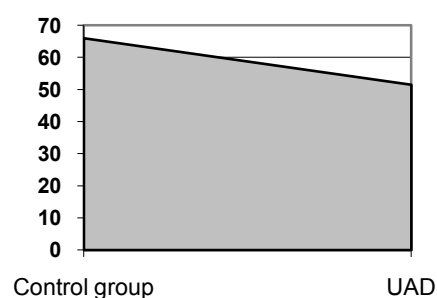
In the evaluation of the structure and functioning of patients' social networks, in the first instance what attracted our attention was the range of social networks, size of non-family networks and the overall size of the support system. The analysis involved a total number of persons mentioned by our interviewees in each area of the Social Environment Map. The differences were statistically relevant ($p < 0.001$). In all parameters, patients had smaller networks than people in the control group. (Fig.1).

Figure 1. Range of social network, size of non-family network and overall size of support system ($p < 0.001$).



Our analysis took into account the percentage of people of all those mentioned in the Social Environment Map used by interviewees as a source of support. It also focused on all those who fulfil at least one supporting function, independently of the total number of functions they fulfil altogether. Patients with a diagnosis of UAD used fewer people as a source of support, out of all those mentioned by them in the map, than the control group (Fig. 2).

Figure 2. The use of people mentioned in the Social Environment Map as a source of support (Y represents percentage values) ($p = 0.003$)



In the next instance, it was the so called network activity that was analysed. Both patients and the control group saw most of the people who belonged to their social networks at least once a month (less frequently than once a week). The lowest number of reported contacts took the form of daily meetings. Both groups contacted most of the members of their networks by telephone less frequently than once a month, and daily contacts were also least frequent here. As far as correspondence is concerned, the UAD patients differed in a statistically relevant way from the control group. They undertook these contacts less frequently ($p < 0.05$). Another essential element of personal contacts reported through the research was that UAD patients' meetings were much shorter (1-2 hours) than those reported by the persons in the control group who spent over 5 hours per meeting with the members of their networks. In this case, the difference between the control group and the group of patients was also statistically relevant ($p < 0.05$). Contacts lasting just a few minutes were reported as least frequent in both groups.

The so-called age of social networks was also compared, with the division of systems into old (where most members had been known by the patients for over 10 years), new (less than 1 year) and intermediate (1-10 years). In both groups, an old system prevailed, especially when not only non-family but also family networks were taken into account. Table 1 presents coefficients p achieved when comparing the parameters comprising network activity and those of the age of the networks.

Table 1. Network activity and age of non-family network (coefficients p).

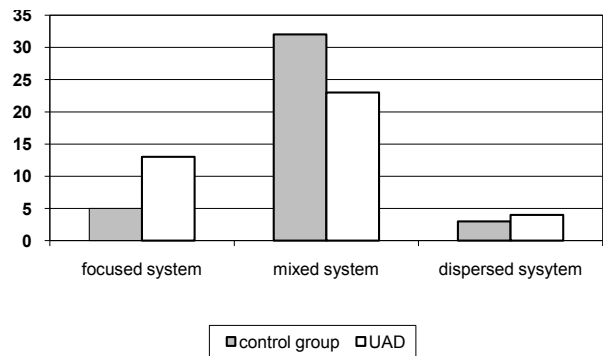
Personal meetings ©	0.472	Personal meetings ®	0.818
Telephone conversations ©	0.702	Telephone conversations ®	0.947
Length of personal meetings©	0.043	Length of personal meetings®	0,056
Correspondence	0.038	Age of non-family network	0.235

© by most frequent ® by least frequent

In the next stage of the research, the types of social networks were evaluated. In both groups mixed systems prevailed, although the patients participated considerably less frequently in the focused systems, in which most of the network functions are focused on one or two people (in the case of large systems) ($p < 0.05$). In both groups, the dispersed systems in which the dif-

ferences between the number of supporting roles played by each member of the group did not exceed two, were rather rare (Fig. 3).

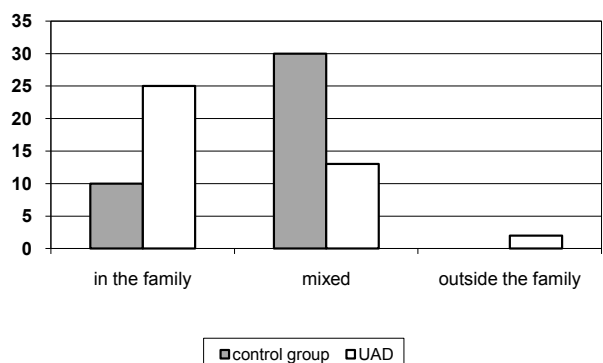
Figure 3. Type of support system ($p=0.032$), with the division into focused and other systems).



Y represents the number of interviewees with the system of a given type.

Localization i.e. the source from which patients draw most support, has been also analysed. A system was defined as localized in the family or outside of the family, with over 75% of support drawn from the former or the latter. Other systems were defined as mixed. People in the control group were mostly involved in the mixed systems, whereas patients with UAD received most support from their family members. The difference was statistically significant ($p < 0.001$). Systems in which most supporting functions originate in one non-family network were very few (UAD patients) or did not occur at all (control group) (Fig. 4).

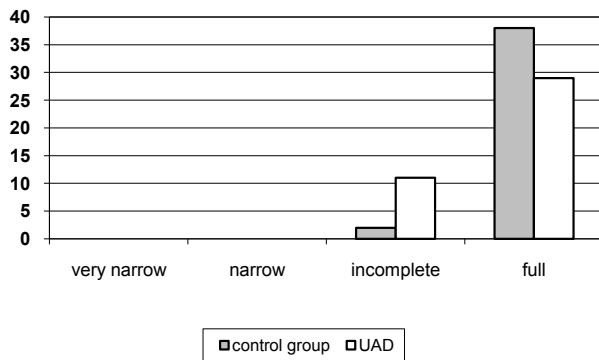
Figure 4. Localization of support system ($p < 0.001$). Y represents the number of interviewees with the system of a given type.



We also looked into the range of received support i.e. the number of network functions fulfilled in a participant's system. No one in the patient or in the control group had a very narrow

range of support. Patients diagnosed with UAD were mostly involved in incomplete i.e. average systems, although the most frequent system reported in both groups in view of the range of received support was a full, i.e. broad, system. The differences were statistically relevant ($p=0.006$). (Fig. 5).

Figure 5. Range of support ($p=0.006$). Y represents the number of interviewees with a system with a given range of support.



The parameter of the range of support was an important element in our attempt to evaluate the sources and levels of received support. The authors of the questionnaire think of it as a global measure of support properties in a support system. It takes into account the number of network functions fulfilled in a given system, the degree to which a given function can be replaced by other sources, and it is also sensitive to the difference in the significance of individual functions. The value of the parameter of the level of support is an algebraic function of plus and minus points and it falls between “-” 18 and “+” 30. In the studied group, there were no parameters of support level with the minus value and the lowest result reported by a UAD patient was 0. The parameter calculations for the patients diagnosed with UAD were considerably different from the control group ($p<0.001$) (Fig. 6).

Data obtained through the use of Cohen’s Social Support Scale, collecting information on the level of various types of support received by our patients was analysed. Patients with a UAD diagnosis received, in general, lesser emotional, tangible, informational and instrumental support than the control group. The largest deficit was noted in the area of emotional support (Fig. 7).

Figure 6. Level of support parameter ($p<0.001$).

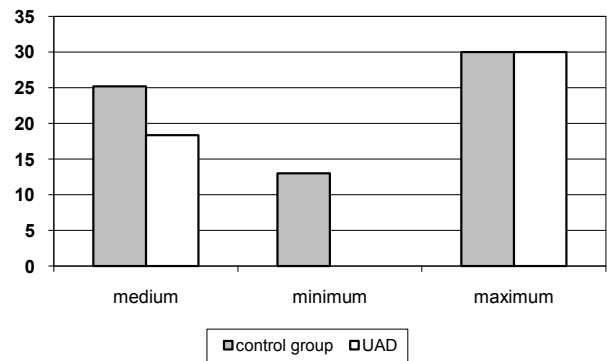
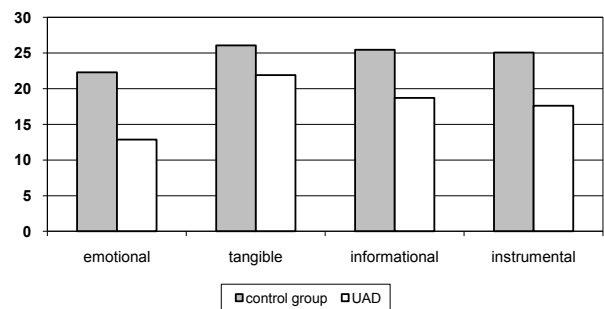


Figure 7. Types of support ($p<<0.001$ apart from the tangible support where $p=0.004$).



DISCUSSION

The study presented in this paper focused on the attempt to investigate the structure and functioning of social networks of patients with a diagnosed Unipolar Affective Disorder. A statistically relevant difference was observed between the range and size of the non-family network between the patients with a diagnosis of UAD and the control group. Our patients on average cited 17 and 7 persons respectively in their network, whereas healthy people identified 24 and 11. This data leads us to think that patients with a Unipolar Affective Disorder diagnosis have, in relation to the control group, much less extensive social networks, meet with fewer people, or regard fewer people as important. In the patients’ case, people providing support are recruited from a smaller group. No differences have been observed in the age of the group – in both cases it was the old systems that prevailed, i.e. the ones consisting of those that have been known to the people we spoke to for over 10 years, and the smallest number of the shortest relationships, i.e. shorter than a year. Perhaps this is due to the fact that all those investigated were on average over

45 and therefore considered their longest relationships to be most important, and perhaps did not think of a relationship shorter than a year to be relevant at all. The comparison of network activity levels revealed that most people in both groups mentioned monthly, but no more frequent than weekly, meetings as the most common model of social interaction. Very few people stated that daily meetings prevail in their social calendar. Frequent telephone conversations were also rare. Differences were also noted in the amount of time spent with friends, where the people in the control group spend over 5 hours on one meeting and the UAD patients 1 to 2 hours. These variations proved statistically relevant. Healthy people spend in total more time with the members of their networks because first of all their networks are more extensive and they spend more time on one social interaction. Also their correspondence within the network was undertaken significantly more frequently than in case of the UAD patients.

Similar results were obtained by Silberfield [see Axer 3], who concluded that patients who suffer from mental disorders have smaller social networks and devote less time to meetings with people who are important to them.

On average, approximately 8 persons from the UAD patients' social circles performed at least one supporting function selected from those accounted for in the questionnaire. In the control group this number was 14, with the difference between the two being statistically relevant. It is interesting that the UAD patients used fewer than 50% people from amongst those that they thought important to them in their social networks as a source of support; in the control group the equivalent percentage was over 60%. What this tells us is that not only that the patients have smaller social networks, i.e. potentially fewer people that might prove to be a source of support for them, but that they also draw less from the resources available to them. It came as no surprise, however, that the UAD patients had considerably more frequently an incomplete range of support i.e. not all network functions were fulfilled in their systems. Yet, it is comforting to think that none of the patients had a narrow or selective range of support. As far as the type of support system is concerned, mixed systems prevailed in both groups, i.e. the kind where the supporting functions are

not focused on one or two people or excessively dispersed. Such systems are generally regarded to be most beneficial. Systems in which the majority or all supporting functions are played by one person are in danger of falling apart when the person disappears from the system for any reason at all. In the systems regarded as focused, it is usually one central person who fulfils all ten functions identified in the questionnaire. The others provide minimum support (the difference between them and the main supporting person usually exceeds the three functions required methodologically). The fact of having a central supporting person, such as a spouse or friend, does not always mean that one's support system is focused. This disproportion does not occur in mixed systems where there are other persons who play different roles and fulfil various functions, which means that they can be more easily replaced if required. This problem will be tackled in more detail when the support level parameter is discussed.

Dispersed systems are also regarded to be less advantageous. People who operate within such a system have a feeling of chaos and insecurity. Having access to people who fulfil very few functions, and often only one, for example the kind of people that one approaches only for a specific need or in a specific situation, is of course permissible or even desirable, also in mixed systems; but in contrast to the dispersed networks the entire system does not only consist of people like that. According to the sources available on the subject, the dispersed systems are often typical for people with neurotic disorders [1, 2]. The overall analysis tells us that having divided people's social networks into three types: focused and other i.e. mixed and dispersed, the patients with a diagnosis of UAD have, statistically, most commonly operated within the first kind. As far as the localization of sources of support is concerned, for UAD patients, the most common were the systems in which most of the support was drawn from family members. The control group usually operated in the mixed systems which are characteristic for healthy people [1, 2]. Interestingly, two of the patients localized their support outside of their families, which is also considered less beneficial than the mixed network. Such systems were not identified in the control group. In our discussion of the type of support systems, special attention

has been paid to the fact that it is not important whether most or all the functions of the network are focused on one person but if there are others, who can readily take over these functions if required. This fact is analysed further through the support level parameter. Its minus values (from “-”18 to “+”30) are regarded to be alarming by the authors of the questionnaire, because they reveal very serious support deficits. In our research, the lowest “0” value obtained in this parameter was noted in a UAD patient. The mean value in the group of patients was 18.35 and in the control group 25.20. The difference was statistically relevant ($p=0.0001$) and considerable, especially when the significance of this parameter is taken into account. It is worth mentioning that the parameter also takes into account the number of network functions fulfilled in a given system (range of support), the degree to which a given function can be replaced by other sources, and that it is sensitive to the differences in the significance of individual functions. Patients with UAD, in comparison to the control group, received statistically relevant ($p<0.001$) lesser emotional, tangible, informational and instrumental support. The most significant difference was observed in the area of emotional support (mean test results 12.85 to 22.3) and the least significant in tangible support (mean test results 21.9 to 26.7). These results tell us that patients must therefore be feeling lonelier, less secure, and left to their own devices when in trouble or difficulty. Perhaps they do not even understand what is going on around them because they do not have someone who would help them understand. Perhaps, on the other hand, it is difficult for others to produce an explanation for the way things are.

In 1975, Pattison, de Francisco and Wood [see Zięba et al. 11] were among the first researchers to compare the size of social networks of depressive and healthy persons. Their study revealed that whereas the former mentioned 10-12 people in their social networks, the latter identified 20-30 people in theirs. Seretti et al., in their study of the social adjustment of patients with UAD in symptomatic remission with the use of SAS - the Social Adjustment Scale, revealed dysfunctional functioning in patients' non-family networks and in their use of free time [12]. However, Daskalopoulou et al., using the same test,

did not find any statistically relevant differences between the groups [13]. Bauwens et al. said that patients with a UAD diagnosis had fewer friends than healthy people [14]. In their large population studies on teenagers, Klein, Levinsohn and Seeley discovered that people with recognized lesser dysthymia had fewer friends, less frequent meetings with them and received lower levels of support [15].

CONCLUSIONS

The structure of social networks of patients diagnosed with Unipolar Affective Disorder differs from those of healthy people. Patients have less extensive social networks and smaller non-family networks.

Patients' social networks differ from the networks of healthy people in their level of activity. Patients spend less time with their friends and undertake correspondence with them less frequently.

The functioning of patients' social networks differs from healthy people. Fewer people in the patients' networks are their source of support. Patients have very often an incomplete range of support, and they receive most of their support from family members. Support systems of the patients with Unipolar Affective Disorder are more often focused on one person. They receive less emotional, informational, instrumental and tangible support, measured by the support level parameter.

It seems that any comprehensive treatment of affective disorders would benefit, apart from pharmacotherapy and various types of psychotherapy, from getting to know the structure and operating methods of patients' social networks. One of the therapeutic goals, both in hospital wards and outpatient facilities, should be stabilizing these supporting relations in various areas of patients' lives. It is certainly one of the ways which can be used to ameliorate the considerable suffering caused by affective disorders.

REFERENCES

1. Walczewski K, Wojciechowska A. Sieci społeczne pacjentów chorych na schizofrenię w trzy lata po pierwszej hospital-

- izacji. Porównanie grupy objętej programem leczenia środowiskowego z grupą z indywidualnym programem leczenia. *Psychiatr. Pol.*, 1998; 32, 1, 59–68;
2. Wojciechowska A, Walczewski K, Cechnicki A. Zależność między właściwościami sieci społecznej a wynikami leczenia chorych na schizofrenię w trzy lata po pierwszej hospitalizacji. *Psychiatr. Pol.*, 2001; 35, 1, 21–32.
 3. Axer A. Społeczne systemy oparcia w środowisku chorego psychicznie. *Studia socjologiczne*. 1983; 91, 4, 199–223.
 4. Sęk H. Rola wsparcia społecznego w sytuacji kryzysu. In: Kubačka-Jasiecka D, Lipowska-Teutsch A. *Oblicza kryzysu psychologicznego i pracy interwencyjnej*. Kraków: Wydawnictwo ALL; 1997. p. 143–158.
 5. Pommersbach J. Wsparcie społeczne a choroba. *Przegląd psychologiczny*, 1988; 31, 2, 503–525.
 6. Dudek D. Spostrzeżenie relacji małżeńskich przez pacjentów depresyjnych i ich współmałżonków w aspekcie stylu poznawczego. Praca doktorska. Kraków, 1997; (7).
 7. Ostrowska M. Opis kwestionariusza otoczenia – oparcia społecznego (wersja badawcza) Manuscript.
 8. Axer A, Bizoń Z. Konstrukcja skali oparcia społecznego i zasady obliczania wskaźnika poziomu podtrzymania. Manuscript.
 9. Axer A, Bizoń Z. Wskaźniki użyte do charakterystyki społecznych systemów oparcia. Manuscript.
 10. Bronowski P, Załuska M. Wsparcie społeczne pacjentów przewlekle chorych psychicznie. *Psychiatr. Pol.*, 2005; 39, 2, 345–356;
 11. Zięba A, Dudek D, Jawor M. Refleksje na temat roli czynników społecznych i rodzinnych w depresji endogennej. *Lęk i Depresja*, 1996; 1, 4, 313–324.
 12. Serretti A, Cavallini M.C, Macciardi F, Namia C, Franchini L, Souery D, Lipp O, Bauwens F, Smeraldi E, Mendlewicz J. Social adjustment and self-esteem in remitted patients with mood disorders. *Eur. Psychiatry*, 1999; 14, 137–142.
 13. Daskalopoulou EG, Dikeos DG, Papadimitriou GN, Souery D, Blairy S, Massat I, Mendlewicz J, Stefanis CN. Self-esteem, social adjustment and suicidality in affective disorders. *Eur. Psychiatry*, 2002; 17, 265–271.
 14. Bauwens F, Tracy A, Pardoën D, Vander Elst M, Mendlewicz J: Social Adjustment of Remitted Bipolar and Unipolar Outpatients. A Comparison with Age and Sex- Matched Controls. *Br. J. Psychiatry*, 1991, 159, 239–244;
 15. Klein DN, Lewinsohn PM, Seeley JR. Psychosocial characteristics of adolescents with a past history of dysthymic disorder: comparison with adolescents with past histories of major depressive and non affective disorders, and never mentally ill controls. *J. Affect. Disord.*, 1997; 42, 127–135.