

## Trends and methods of evaluative studies in community-based psychiatry in the world in the years 1993–2000

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### *Summary*

*321 research reports were analysed. Most of the studies were devoted to the effects of interventions and solely a several were referred to the analysis of process. The influence of intervention on patients was that considered most often. During a period of the first 3 years the influence exerted through mobile community teams, community support programmes, day care, and crisis interventions was more often than later on. In the following 5 years interventions by the service system and primary health care were studied more often than earlier. The influence on staff, system of services or populations was considered only occasionally. Relatively the majority of the studies fulfilled the requirements of methodological correctness.*

*Key words:* community psychiatry, evaluative studies

The analysis of global literature studies evaluating forms of community-based psychiatry was possible thanks to a database named *Data Bank of Evaluative Studies on Community-Based Psychiatry* established in 1993, which contains the program reporting and searching the information stored according to the specially prepared IFEI questionnaire [1]. The questionnaire includes descriptive information and 600 categorised variables to draw up structured syntheses of articles published in eight English language periodicals (*Acta Psychiatrica Scandinavica, American Journal of Psychiatry, Archives General Psychiatry, British Journal of Psychiatry, International Journal of Social Psychiatry, Psychiatric Services, Psychological Medicine, Social Psychiatry and Psychiatric Epidemiology*). After the first three years of functioning of the IFEI system, the analysis of methods and directions in evaluative studies published between 1993 and 1995 year was done. The analysis included evaluation of community-based forms as well as psychosocial methods [2]. This paper is concentrated on the studies of community-based programmes in psychiatry published in the five years – 1996 to 2000 – and on the comparison of the research methods, types of influence and means

of evaluation with a period of the previous three years. In the selected periodicals 226 reports of the studies that we are interested appeared, during the last five years. Most of them – 217 publications – were devoted to the effects of intervention and only nine of them were concentrated on the process of carrying a programme out. During the previous three years 95 evaluative studies in community-based psychiatry were published. As well as the above, studies were dedicated mostly to the effects of interventions. In conclusion, in the earlier of the compared periods the evaluation of community-based forms became a subject of approximately 32 publications per year and 45 publications per year (40% more) during the following years. Numerous papers appeared in the years 1996–64 articles, 1997–52, and 1998–45.

### **Types and schemes of studies**

In both of the compared periods the greater part of the studies had a prospective character, in addition during the last 5 years there were 8 % more of them (67 to 75 %) than earlier. Retrospective-prospective studies were represented in some degree but their participation was larger in the earlier period (9%) than during the following years (4%). Retrospective studies in both periods appeared in similarly low proportions (6 and 7%) and cross-sectional studies were more frequent (16% and 15%). The measurements before and after intervention or during the total time of intervention (*pre-test – post-test design*) were the most often used, with a 15 % domination of the latter scheme in the recent years (proportionally 59% and 74%). In this group, the prospective, cohort-based studies (referring to the same study subjects during the whole period of the study and in every point of the measurement) dominated and the ratio proportion during the last five years was also about 15 % higher than previously (47 and 62%). Participation of prospective studies, with the measurement done solely after intervention, was in the first period almost two times higher (19%) than later on (10%). The other study designs appeared occasionally, especially in the second comparative period – retrospective-prospective studies of *self control* type with measurement done both before and after intervention (9% and 3%), retrospective with measurement only after intervention (3% and 0,5%), *case control design* (3% and 1%). A control group was introduced in 35% of the studies published between 1993–1995 and in 45% of studies in the next five years. Random assignment was the group selection scheme most often used in both the analysed periods (proportionally 55% and 58% of studies). The studies in which the methodological principles were applied properly without any reservation about the correctness of inference on the influence of an intervention (measurement before and after the introduction of changes, prospective, referred to the same subjects, with the control, random or ‘pair’ assignment to the groups) were represented in a similar proportion in both the analysed periods (23% and 24%). Whereas the ‘poor’ methodological designs appeared comparatively more often in the earlier period (cross-sectional studies or with measurement only after intervention, without control group constituted 23% of studies in 1993–1995 and 16 % in 1996-2000).

Table 1

## Study designs in research on community-based interventions

Study design *	Number of research reports (percentages) in the years	
	1993-1995 N=95	1996-2000 N=226
1. Cross-sectional	16	15
2. Case control	3	1
3. Posttest	22	10
A. Retrospective	3	0,5
B. Prospective	19	10
4. Pre-test-posttest	59	74
A. Retrospective	3	6
a) cohortbased	2	5
b) not cohortbased	1	1
B. Retrospective-prospective	9	4
a) selfcontrol	9	3
b) not selfcontrol	0	0,5
C. Prospective	48	65
a) cohortbased	47	62
b) not cohortbased	1	2
D. Other, hard to classify	0	0,5
5. Other	0	0,5

\* In few studies two designs were used

### Interventions studied

#### *Subjects of intervention*

In the great majority of studies patients were the subjects of intervention – in both compared periods they added up to 95%. In very few studies the influence was exerted on personnel, system of service or local community (9% and 8%). In addition during the last 5 years no study was devoted to the local community. The studies in which only patients were addressees of the intervention composed 86% of all analysed studies in the first period and 84% in the last 5 years.

#### *Types of intervention addressed to patients*

In the reports devoted to the exertion of influence on patients (87 in the first period and 206 in the second) the most studied community-based interventions were

the residential supportive care programmes. In the years 1993-1995 these studies composed almost one-fourth of all published studies (24%) and in the subsequent period, one-fifth (19%). Studies concentrated on out-patient care (11% vs. 12%), case management programmes (both periods 11%), and deinstitutionalisation (7% vs. 8%) in similar frequency in both periods. In the first analysed period assertive community treatment (14% vs. 8%), community support programmes (8% vs. 2%), day treatment (12% vs. 7%), crisis intervention (7% vs. 2%) appeared oftener. However in the next years, the studies referring to the service system (13% vs. 4%) and psychiatric service in primary health care (6% vs. 2%) were more frequent than earlier. Interventions where the point was to place patients in foster families or the programmes of finding potential patients in the community did not appear in neither of the compared periods. The papers referring to domiciliary care, self-help or vocational rehabilitation programmes were published very rarely. In a very few studies combined interventions (i.e. sheltered accommodation and out-patient care or day care plus community support programme) became the subjects.

Table 2

Patient-focused interventions evaluated in research on community-based psychiatry

Intervention	Number of research reports (percentages) in the years	
	1993-1995 N=87	1996-2000 N=206
1. Crisis intervention/emergency service	7	2
2. Domiciliary care	1	0,4
3. Out-patient care	11	12
4. Day treatment care	12	7
5. Case management programme	11	11
6. Community support programme	8	2
7. Assertive community treatment	14	8
8. Psycho-social treatment/rehabilitation	5	4
9. Vocational rehabilitation programme	2	3
10. Residential supportive care	24	19
11. Foster family programme	0	0
12. Self-help programme	2	0,4
13. Deinstitutionalisation programme	7	8
14. Psychiatric services in primary care	2	6
15. Community outreach of potential patients/care	0	0
16. Community care, no further description	0	0
17. System of services	4	13
18. Other	7	6

## Measurements of evaluation

### *Areas of evaluation*

The selection of programme addressees imply evaluation of very specific areas. In a greater part of the studies devoted to the intervention effects, patients became addressees (95% in both compared periods), thus measurement of influence on the patients occurs the most often – applied in 84% of studies in the first period and 83% of studies in the second one. The number of studies evaluating patient outcome is lower than number of all the studies with their participation because the programmes are often addressed to patients though the only area of evaluation is e.g. health economics. This issue was taken into account in quite a big number of studies – economic effects of the introduced changes were considered in 22% of papers in the first comparative period and in 19% of the second one – though mostly financial costs were estimated and only a few of the studies have taken up the subject of cost-effectiveness (4% vs. 3%). The effects of the influence of the intervention on services were studied much more often in the first period (14%) than in the second one (3%) especially in the domain of service use (10% vs. 2%). Family outcome was assessed in 10% of studies in the first and 7% in the second period, similarly as the influence on personnel (9% vs. 7%). Community outcome was assessed in 2% of the studies only in the first comparative period. Measurements of the therapeutic process were applied quite often (17% and 15% of studies).

### *Patient outcome measures*

In the studies referring to the influence of the intervention on patients, psychosocial (77% of studies in the first and 74% in the second comparative period) and health (respectively 54% and 56%) measures were applied the most often. The greater part of health measurements referred to the psychic condition – especially to the psychopathology (proportionally 47% and 53%). The social roles performance (47% of studies in the first period and 38% in the second one), satisfaction (proportionally 22% and 29%), and skills (22% and 16%) were evaluated the most often among the psychosocial measurements. The influence of intervention on social roles, social functioning, social adjustment, skills and legal problems, were oftener assessed in the first period whereas the influence on satisfaction, quality of life and subjective feelings (discomfort level, self-esteem) oftener in the second period. The measurements of service usage were more often applied in the first than in the second period (52% vs. 47%) and referred mostly to hospitalisation – number of admissions and hospitalisation time (41% vs. 37%) and use of the other psychiatric care or social service help (26% vs. 21%). The global functioning measurements were used in 17% of studies in the first and 14% in the second period.

Table 3

Basic dimensions of evaluation in research on effects of community-based interventions

Basic dimension of evaluation	Number of research reports (percentages) in the years	
	1993-1995 N=92	1996-2000 N=217
1. Patient outcome	84	83
1.1. Health measures	46	46
1.2. Psychosocial measures	64	62
1.3. Global functioning	14	12
1.4. Service use – patient level	43	39
1.5. Feasibility of intervention studied	3	0,5
1.6. Other	2	1
2. Family outcome	10	7
3. Staff outcome	9	7
4. Service outcome	14	3
4.1. Availability/accessibility of services	4	2
4.2. Service use – system level	10	2
4.3. Other	2	0
5. Community outcome	2	0
6. Health economics	22	19
6.1. Costs expressed in monetary terms	21	18
6.2. Relation between monetary costs and effects	4	3
7. Other dimensions of outcome evaluation	0	0,5
8. Process measures	17	15

### Discussion and Conclusions

The comparison of publications in the years 1993-1995 and 1996-2000 demonstrates that the later period is characterised by a bigger number of studies referring to community-based forms which can be an expression of a bigger interest of study centres, however these phenomena are not necessary parallel. Most of all the articles devoted to these problems –161 – appeared in the years 1996-1998, the fewest of all – only 20 – in 1994. In both compared periods most of all the study reports were devoted to the effects of interventions, and only a few (3% vs. 4%) focused on the process of carrying the programme out. It still happens despite the common conviction, that the structure and area domain of various types of community-based programmes are not sufficiently specified until now [3, 4]. It is probably possible, that the shortage of

Table 4  
Measures of patient outcome evaluation in research on community-based interventions

Evaluative measures	Number of research reports (percentages) in the years	
	1980-1989 N=11	1990-2000 N=100
1.1. Health measures	54	56
A. Psychiatric status	51	54
Psychopathology	49	53
B. Psychiatric medication	6	7
C. Physical health	7	9
D. Suicides	0	6
E. Other	4	4
1.2. Psychosocial measures	11	14
A. Skills	22	16
B. Social roles performance and living situation	49	30
C. Behavioural problems	8	8
D. Legal problems	7	6
E. Satisfaction	22	29
F. Subjective measures (e.g. self-esteem)	6	9
G. Attitudes/expectations	6	0
H. Needs assessment	1	5
I. Social functioning	2	9
J. Social adjustment	9	4
K. Quality of life	9	8
L. Other	2	9
1.3. Global functioning	11	14
1.4. Service use	52	49
M. Psychiatric inpatient services	41	31
A. Other psychiatric care or social help services	24	21
B. General practitioners	6	3
C. Other	6	0
1.5. Feasibility of intervention studied	4	17
1.6. Other	2	2

notional apparatus and research tools to measure the process is the biggest barrier in the development of these kind of studies, what has been mentioned already in Polish literature [2].

Patients are the dominant subjects of intervention and evaluation (approximately 84% of studies in both periods). From other research areas, health economics appears to be the most common. In the first period this area was taken into account in 22% of studies, whereas in the second one, in spite of the expectations, the percentage not only did not rise, but it even dropped a little (to 19%). Opinions quite common in western review papers that the costs should become one of the most important areas of evaluation of community-based programme effects were the basis to predictions of a tendency of increase in the cost studies. According to some of authors, e.g. Creed, currently enough is known about the influence of community-based programmes on patients and because of that, recently highest attention is paid to usage of services and the costs as main measures of effects of an intervention [5]. Perhaps one of the most important barriers in more frequent studies of costs are methodological difficulties, especially lack of attainable and potentially simple research tools, which was mentioned previously in Polish literature [2]. Undoubtedly the methodological reasons again cause a situation where financial costs dominate still among health economics measures, whereas the relations between costs and effects are studied sporadically.

The issue of a considerable drop in the number of studies referring to study subjects other than the patients is intriguing. In the first comparative period there were 25% of studies assessing the influence of the community-based programme on personnel, service or general population, however in the second period it was only 10%. This phenomenon possibly demonstrates that community-based psychiatry focuses recently on the treatment and rehabilitation of people with psychic disorders, and distances itself from initial principles and definitions by which it was a synonym of a wide movement referring to mental health protection of local communities [6]. The predictions at that time were to undertake activities in order to increase health potential of the whole community, e.g. detection of morbidity risk groups, carrying consultative and educational programs for the personnel of institutions which have contact with mentally disturbed people. Certainly, we cannot preclude that these kinds of activities are provided, but they are rarely studied or the reports of these kinds of studies are published in other than psychiatric periodicals. However, the alternative explanations seem to be less probable than the hypothesis about narrowing of the interpretation of the term 'community psychiatry'.

In both the compared periods the measures of the process of carrying out the programme were applied relatively often (17% and 15%). Though lots of facts indicate that they had the character of a descriptive variable, and only sporadically they were used to answer the question about the influence of the process on the obtained effects. This hypothesis is confirmed by numerous western authors' comments that the studies of the influence of particular programme components on its effectiveness are very rare, even in the case of the most often applied and studied community-based forms [3, 7, 8, 9, 10]. The authors of Polish review papers on the effectiveness of mobile community teams and case management acquired similar conclusions [11, 12].

Among the studies of community-based programmes for patients those devoted to sheltered accommodation were the most often represented. In a period of the last five years the number of these kind of studies is relatively lower than previously (19% vs. 24%), and perhaps it is the beginning of a continuing declining trend. The emphatic majority of the reports published in periodicals analysed by us, originates from western countries (and the situation will be probably similar in the future) especially from the United Kingdom and the USA - that is from the countries where this issue was repeatedly studied and the conclusions about the effectiveness of this accommodation are quite evident. Moreover, in some countries the peak frequency of the transfer of patients from hospitals to sheltered accommodation became a thing of the past, mainly because of a drastic decrease in the number of hospital beds. For example in England and Wales from the 130 psychiatric hospitals that existed in 1975, currently 14 remained and the number of beds kept in each of these hospitals is not more than 200 [13].

Mobile community teams are another form of help for the patients, and yet this form of help recently has had less attention paid in the studies than earlier. The effectiveness of this form is well documented and probably that is the reason why in some countries 'the experimental period' is a thing of the past. For example in the United States the studies into detailed guidelines for management of teams that are to be a component of standard care are almost completed [10]. Thus it seems probable that the number of studies devoted to the teams will decrease unless the analyses of the influence of the process of help conduction on its effectiveness awaited by many practitioners and scientists, appear.

Two types of programmes for patients – intervention by the service system (13% vs. 4%) and treatment for the mentally ill in primary health care (6% vs. 2%) – are recently being studied more often than previously. Both types of intervention are recommended for a long time, though it is hard to evaluate if they are being applied more often recently or the frequency of their application is constant but the studies are carried out more willingly.

In evaluation of influence of the programmes on patients, recently as well as previously, psychosocial measures dominate, however frequency of their application is different in both the periods. The measures of the social roles, adjustment or social functioning are recently more rare, whereas bigger emphasis is laid on the patient satisfaction and the other subjective measures like self-esteem, stress or discomfort. The frequency of evaluation of unmet needs increased as well. In many centres evaluation of unmet needs is considered as one of the most important indicators of the care effectiveness, the more so as good and attainable questionnaires of need evaluation were prepared recently [14, 15]. This aspect is still evaluated very rarely though – in 5% of studies. The frequency of evaluation of influence of the programme on the quality of life increased distinctly. The issue became very popular recently and lots of research tools for its evaluation appeared, however the opinion of some scientists is that the construct is often misleading and introduces undesirable term confusion. Often the so-called quality of life is limited to subjective elements only (and then it is identical to life satisfaction) but if it includes objective elements as well, the previously used indicators (i.e. social adjustment) are sometimes applied, however under

another heading.

There is another issue in the topic of effects of patient care programmes which is worth touching upon. It was not a subject of analysis in this study indeed but it is vital for knowing the research trends. For a long time back there are common opinions in the literature that the studies of effectiveness of various forms do not answer the question about a particular programme as being appropriate and effective for the given subgroup of patients [5, 8, 11]. One of a few studies in this area refers to the importance of the personality disorders factor. Tyrer ascertained that case management improves social functioning much more effectively than traditional treatment in the patients without diagnosed personality disorders, while if the patient had personality disorder traditional treatment was the more effective form [16]. A similar assumption was also made in relation to effectiveness of community mobile teams but it has not been verified until now. It seems that the causes of this serious defect are methodological problems, especially problems with the selection of groups being big enough to withdraw sufficiently numerous subgroups characterised by homogenous features.

During the last five years, in comparison to a previous period of three years, distinct improvement of the methodological level of published studies took place. The frequency of application of 'the poorest' schemes declined, whereas much more studies that fulfilled most of the criteria of methodological correctness appeared. Nevertheless the percentage of the studies that complied with all formal requirements, which allow attributing the effects exclusively to the used intervention and eliminate the influence of interfering factors (i.e. controlled prospective studies of the pre-test – post-test type, including the same subject during the whole period of study, using random or 'pair' assignment to experimental and control groups), did not increase. The relatively low percentage of the methodologically best studies results probably from a difficulty of selecting and preserving homogenous groups of patients during the whole study period. It makes studying different than initially patients as necessary or seeking the comparative material in retrospection or resigning from the control groups. Moreover, besides difficulties of selecting patients with similar clinical-demographic features, the control groups burden the studies with additional costs. Another important problem in introducing the control groups are ethical reservations – lack of consent to deprive one of the groups of community-based interventions with subjecting them to the procedures of research measurements at the same time.

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