Community Psychiatric Nursing with Non-Psychotic Patients: Relating Process To Outcome.

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Abstract

The aim of this study was to investigate the community psychiatric nursing (CPN) process with non-psychotic patients and to relate various constructs of the initial assessment interview to final patient outcome. The overall purpose of the research was to provide future directions for CPN training.

This study utilised a repeated measures design, assessing patients at pre- and post-intervention on various scales (Beck Depression Inventory, Spielberger State Trait Anxiety Inventory, Standardised Psychiatric Interview) to obtain outcome data. These clients were referred by general practitioners to CPNs, working in primary health care settings, and the first contact session was video recorded (N=8). Process measures were derived from these recordings, using two independent expert raters, via the Vanderbilt Psychotherapy Process Scale, a Global Assessment Rating and a Self Evaluation Questionnaire. Whereas the subject pool was small, the raters correlated highly with each others perspectives on the sessions and high correlation coefficients were obtained between the outcome and process measures. Anxiety, depression and 'psychiatric caseness' indices all related to various process constructs (Rs $ 0.69). Whereas these results are based upon correlations and a small sample, the evidence suggests that a poor initial interview has a negative weighting on patient outcomes.

Indeed this first interview may be related on a more general basis to the CPN skill base. CPN training may need to incorporate a module on structured assessment techniques. This study also concludes that it is possible to conduct action research successfully within this field.

Although studies in the past have described the organisation of community psychiatric nursing (Todd, 1978; Mc Donnell, 1977; Corser and Ryce, 1977) very few have looked at aspects of the process during care, the notable exceptions being Paykel and Griffith (1983), Pollock (1987) and Barker (1988). However, there have been no studies of community psychiatric nursing which have attempted to link this process to outcome. With an estimated workforce of 4990 community psychiatric nurses (CPNs) (White, 1993) in the United Kingdom and 5418 registered psychiatric nurses and 5527 registered nurses tied to community health settings in Australia (AIHW, 1994), the need to ascertain effectiveness is of paramount importance for health service planning. This is particularly the case considering the increasing number of graduate-based nurse training courses and post-graduate courses for mental health nurses likely to be employed in community settings. Certainly in the area of community psychiatric nurse intervention with non psychotic clients there have been no controlled studies of the intervention process in any setting. The only published research in this area is an outline of the present study, which looked at the more general aspects of process and outcome (Gournay, Devilly & Brooker, 1993). That report concluded that it is possible to conduct linked process and outcome research and that such research has serious implications for CPN training. This paper aims to introduce such a direction to research and

expounds further upon the study.

Brooker (1990), whilst clarifying the CPN role collected demographic data concerning CPN clients and in doing so elicited not only their types of problems, age, sex, etc. but also the self-reported CPN intervention type and the length of the total intervention time. However, this study was administered by post and was entirely based upon CPN self report. This criticism can also be applied to the study of Barratt (1989) whose results suggest that CPNs work with different models of intervention with different client groups within differing settings. It is interesting that British researchers in psychiatric nursing have not given any substantial effort to a systematic, objective, quantitative study of the work of the CPN. Indeed in public health centres (PHC), where the CPN often acts as an autonomous therapist, the research opportunities are excellent, as contact with the patient by the CPN is usually uncontaminated by contact with other health care professionals. It seems even more surprising that the theoretical base of community psychiatric nursing contains no research in this area. In contrast, reference to any psychotherapy research text (e.g. Garfield and Bergin 1986) shows psychologists and psychiatrists to have provided a huge research base from which to draw. This paper wishes to partly address this deficiency and reports upon research carried out within the context of a much broader main study undertaken by

Gournay and Brooking (1992, 1994). Although other variables were addressed this paper will only look at independent raters' views of CPN sessions and how this relates to outcome.

Description And Design Of The Main Study. (Gournay & Brooking, 1991, 1994).

Within this study the work and performance of the CPN was compared with that of general practitioners (GP), evaluating the care received by clients.

Essentially a prospective, randomised, controlled clinical trial was conducted in 6 PHCs spread over 2 health authorities, and in addition a study was made of structure, process and economic variables. Clients who would normally be referred to CPNs by their GP were randomly assigned to one of three conditions i.e.

1. Immediate CPN group:- The patient was seen by a CPN within a week;

2. Delayed CPN group:- The patient was seen by a CPN after a delay of 3 months, during which time they were instructed to see their GP if any problems arose;

3. GP group:- The patient was instructed to see their GP, and after 6 months they were offered CPN intervention if they still wished this. All clients were assessed at allocation and at 3 months and 6 months. Outcome was determined by :- Standard Psychiatric Interview (SPI; Goldberg et al., 1970), Beck Depression Interview (BDI; Beck et al., 1961), Spielberger

State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch & Lushene, 1970), General Health Questionnaire (GHQ; Goldberg, 1972), Problem Ratings (Mulhall, 1978) and Social Adjustment Questionnaires (Marks et al., 1977).

Area Of Enquiry.

We examined a sample of videotaped assessment interviews between CPNs and clients involved in the outcome study. This, therefore, allowed for the collection of process data on assessment interviews with clients whose outcome data was subsequently collected.

Measures.

Outcome was determined via the SPI, BDI and the state measure (Y1) of the Spielberger State-Trait Anxiety Inventory. The process measures were those rated by two independent raters, blind to each other's ratings. One of these raters was a principal lecturer in psychology, the other a senior research fellow in nursing. Their ratings were on :

A Global Assessment Rating (GAR). This was an eight element 5 point rating scale measuring the CPN proficiency by rating their: introduction to the patient; explanation of the purpose of the interview; ability to establish the clients main problem; ability to establish relevant background information; usage of a language the patient could understand; discussion of the aims of intervention; discussion of the nature of

intervention; and informing the patient of what was going to happen next. As this questionnaire was devised specifically for this study matters of reliability are reported in the results section.

The Vanderbilt Psychotherapy Process Scale (VPPS) (O'Malley, Suh & Strupp, 1983). This is an eighty element 5 point rating scale eliciting 8 main factors: Patient Participation; Negative Therapist Attitude; Patient Exploration; Patient Psychic Distress; Patient Hostility; Therapist Warmth And Friendliness; Therapist Exploration; and Patient Dependency. It is a "general-purpose instrument designed to assess both positive and negative aspects of the patient's and therapist's behaviour and attitudes that are expected to facilitate or impede progress in therapy" (Suh, Strupp & O'Malley, 1981). The psychometric properties of the subscales shows internal consistency, as measured by alpha, to range from 0.81 to 0.96 and interrater reliability to range from 0.79 to 0.94. Whilst much of the work relating this instrument to outcome has involved change scores on the scale between initial and later therapy sessions it has been noted that positive patient involvement in therapy consistently predicted various outcome measures and weak relationships were found for exploratory processes and therapist-offered relationship.

Ratings Of Session Performance From The Self Evaluation Questionnaire (SEQ). This is a twelve construct, 7 point rating

scale eliciting two factors, Depth of session and session Smoothness. The construct pairs are as follows: bad-good; safe-dangerous; difficult-easy; valuable worthless; shallow-deep; relaxed tense; unpleasant-pleasant; full-empty; weak-powerful; special ordinary; rough-smooth; comfortable-uncomfortable. During this study the SEQ was administered to both the CPN and the patient after the session as well as being rated by the independent raters. For the purpose of this paper only the independent rates' perspectives have been analysed.

METHOD

Design.

This study utilised a within subjects design over two time periods. For the purpose of this design a patient-therapist pair has been classified as a subject. This is exemplified in figure 1.

Figure 1.

Design Layout.

Clients	0 WEEKS	24 WEEKS
N=8	VPPS, SEQ, GAR.	Outcome
1 . 8		

Outcome = Change scores on SPI, BDI, Y1

Subjects.

We were able to obtain permission from 8 CPNs to video tape their interviews with clients. All CPN-patient pairs were involved in the research project (Gournay and Brooking, 1992).

Procedure.

Following initial assessment by a research assistant, clients were asked if they would be video taped whilst being assessed for the first time by a CPN. There was no special selection of clients. Following agreement written permission was obtained and an appointment was made with the CPN, whose written permission was also obtained. On the day of the appointment a video camera was placed, as unobtrusively as possible, in the consultation room and the session taped from the point where the CPN was introduced to the patient and for as long as the session ran.

RESULTS

Inter-Rater Reliability. Ratings of the two independent judges were tested for reliability on the Vanderbilt Psychotherapy Process Scale (VPPS), the Self Evaluation Questionnaire (SEQ) and

the Global Rating Scale, as can be seen in table 1.

INSERT TABLE 1 HERE

Looking first at the VPSS, inter-rater reliability ranges on the Gamma Coefficient from 0.5 to 1 and on Spearmans Rho from 0.55 to 0.98. The most important figure here though is the overall correlation between the raters on all the factors together, which yields a high correlation (Gamma = 0.88; Rs = 0.96). Inter-rater reliability on the Self Evaluation Questionnaire factors was also very reasonable with a higher degree of Concordance on the Depth Factor (Gamma = 1; Rs = 0.9) than on the Smoothness factor (Gamma = 0.71; Rs = 0.54). The Global measures also show a high degree of Concordance between the raters with the exception of the language index (Gamma = 0; Rs = 0) which may be due to the low Sample number (N = 8) and that one of the raters judged six of the CPN's to have the same score. However this is the only exception and the Correlation overall between the raters on all the measures together is very high (Gamma = 0.93; Rs = 0.88). It should also be noted that these correlations are only indicative, due to the large number carried out. With this degree of inter-rater reliability it is felt that scoring by the raters on the various measures may be averaged for the analysis.

Global Measures.

As can be seen from table 2 the CPNs scored highest on the language measure (x = 4.13) showing their best feature to be that of using language that the patient understood when obtaining background information and in general discussion.

INSERT TABLE 2 HERE

This may well be indicative of the fact that the CPNs second highest scored attribute was the ability to gain relevant background information (x = 3.63). Their worst ratings were obtained on discussing their aims of intervention (x = 1.94) and the nature of intervention (x = 2.19). As table 2 shows, mean global measure scores ranged from 4.13 to 1.94 with an overall global rating of 2.77.

INSERT TABLE 3 HERE

As table 3 shows, the Spearman Rank correlation coefficients (Rs (x,y)) between the global measures and outcome (change scores) do indicate some strong relationships, although, again, caution is suggested considering the very low number in the sample. For this reason only coefficients of above 0.69 are tabulated. Although one cannot quote a significance level using this non-parametric correlation coefficient, tentative inferences may be drawn.

Looking firstly at the change in the Standard Psychiatric Interview scores (XSPI) table 3 shows a high inverse correlation with the nature of the CPNs introduction (Rs = -0.91), and a strong relationship is shown with purpose (Rs = -0.71), suggesting that a good introduction and explanation of the purpose of the interview is highly correlated with a reduction in "psychiatric caseness". A positive correlation (Rs = 0.72) is also noted with the language used, suggesting that using a language the patient can understand is negatively related to the client's performance on outcome. Looking towards the Beck Depression Inventory (XBDI) no correlations positive or negative appeared with the global measures. Change scores with the Spielberger State measure of anxiety (XY1) did show some noteworthy relationships. As with change scores in the SPI , there is a negative correlation with both the nature of the CPNs introduction (Rs = -0.88) and explaining the purpose of the interview (Rs = -0.7), showing proficiency in these two areas to be correlated with a reduction in patient anxiety. There is also a negative relationship of note here with the overall mean for all the global measures (Rs = -0.83) indicating that a good overall session is related to reducing patient anxiety.

The Vanderbilt Psychotherapy Process Scale (VPPS).

As shown in table 4 the factors of the VPPS range in mean score per element from 1.32 to 3.65. As can be seen the lowest mean

score per element was that of Negative Therapist Attitude (x=1.32). As expected this factor scored very low together with Patient Dependency (x = 1.7) and Patient Hostility (x = 1.75).

INSERT TABLE 4 HERE

The top three rated factors were Patient Participation (x = 3.65), Therapist Warmth (x = 3.29) and Patient Exploration (x = 2.49). Spearman Rank correlations (Rs(x,y)) between the VPPS and change in outcome scores were also computed. As with the Global ratings only correlation coefficients of greater than 0.69 have been reported due to the small sample size and to allow only the strongest relationships to emerge.

No strong correlations emerged between the factors and change in SPI scores but on change in BDI scores there was a correlation with Negative Therapist Attitude (Rs = 0.75) indicating, naturally enough, this attribute to be unconducive with lowering the depression index. Change in Y1 showed a correlation with Patient Participation (Rs = -0.77) and Patient Exploration (Rs = -0.73), suggesting that both of these factors are related to reducing patient anxiety scores.

Relationships Between The VPPS And Global Measures.

The VPPS factors were correlated with the Global measures in order to understand more fully the underlying dimensions of these scales

in relation to each other. Only high correlations (Rs > 0.69) are referred to here. Explanation of the purpose of the interview correlated with patient participation (Rs = 0.7) and therapist warmth (Rs = 0.8). Obtaining background information is inversely correlated with Therapist Warmth (Rs = 0.73), no doubt due to the necessary intervening nature of obtaining this information. Using language the patient could understand is correlated with Therapist Exploration (Rs = 0.7).This may be indicative of the medium with which the therapist explored. The overall mean for the Global Measures is highly correlated with Patient Participation (Rs = 0.85), Negative Therapist Attitude (Rs = -0.72), and Patient Exploration (Rs = 0.74). Although not above the coefficient cut-off point stipulated it may be of some interest to note that there is also a correlation here with Therapist Exploration (Rs = 0.68).

Relationship Between The VPPS And The Depth And Smoothness Factors Of The SEQ. The depth factor is correlated highly with Negative Therapist Attitude (Rs = -0.87), Patient Exploration (Rs = 0.88) and Therapist Exploration (Rs = 0.94). How smooth the raters saw the Sessions has a high negative correlation with Patient Psychic Distress (Rs = -0.85). However, it should be noted here that neither the Depth nor the Smoothness of the sessions had any apparent effect on outcome.

Discussion.

This process study was conducted on a relatively small number of CPNs and hence the findings must be treated with some caution and, therefore, the dangers of over-generalising from the results must be stressed. From the diagnostic standpoint the clients in this sample were representative of the overall study within the context of which this process study was undertaken. According to the SPI scores, all clients had significant pre-intervention symptoms and outcome was mixed, ranging from a worsening at 24 weeks to almost total recovery. It would seem that from the Global Measures a good structured first interview is of key importance in reducing symptom scores. A good introduction and explanation of the purpose of the interview both showed a strong relationship with decreasing SPI and anxiety scores. It would also seem from the results that "impressing" the patient with more technical terminology may instil confidence in the client as to the clinical proficiency of the CPN. Indeed, this result may well be indicative of the CPNs actual knowledge base and hence related to outcome in a more dynamic way than has been tested here. This is of particular interest as using a language that the client understood was the CPNs best attribute. However, the use of language as the major medium for gaining information must be of great importance to the

CPN as it was noted from the videos that not in one case was any form of objective measurement taken, which forestalls future standardised measures of change. Another major omission in the assessment interviews relates to the area of intervention. It was noted that during this first session CPNs did not specify to the patient the nature of intervention they envisaged and there was, hence, no opportunity for any mutual negotiation or target setting. This was exemplified by the result that the discussion of aims for intervention was rated as the CPNs least achieved goal. This overall lack of structure may of course be linked to the "Client Centred Philosophy" held by CPNs but may have major consequences for training. These deficiencies may be due to the specialist skills required to undertake these facets of intervention. Indeed Waterreus (1993) reports upon these short comings and argues that they "cannot be delivered most effectively by a generic CPN".

The VPPS, however, demonstrates that the CPN does not have a negative attitude towards the session and this may go someway in promoting patient participation which scored very highly along with patient exploration of feelings. This also kept patient hostility towards the session and CPN low and the CPN was seen as relatively warm and friendly. However, it is consequential to note that during this assessment interview therapist exploration was not rated higher.

Looking towards outcome the more positive the attitude of the CPN, the better clients perform on the depression index. It is therefore, very important that this attitude was the lowest rated factor on the VPPS. It is also interesting to note that the patient dynamics of the sessions are the most related factors to outcome on the VPPS with patient participation and exploration being highly conducive to lowering anxiety scores. As pointed out in the results section there are some strong relationships between the Global ratings and VPPS scores that need some explanation. As mentioned it is felt that an explanation of the purpose of the interview may stimulate patient participation and the raters view of therapist warmth or genuineness. As patient participation has already shown to have a relation to outcome on anxiety measures, again the necessity of a more structured interview is stressed. Also the use of a facilitative language is highly related to therapist exploration. This is as one might expect, although language was the most highly rated global measure whilst therapist exploration was not that notable on the VPPS. As stressed earlier, this may well have something to do with the small sample but it may be indicative of the fact that the language being used has more to do with other topics than therapist exploration of assessment, such as facilitating patient participation and exploration, again questioning the nature of this first assessment interview. The SEQ factors of depth and smoothness were used for

attaining rater reliability scores and have no relation to outcome. However their ability to accurately measure these two constructs seem to have been validified by the relationship depth has to negative therapist attitude, patient exploration and therapist exploration, and the relationship smoothness has to patient psychic distress. Although this paper has only related raters' view of the CPN intervention to outcome, analysis is under way relating patient views and CPN views of the session with patient satisfaction and outcome. Over and above all it is hoped that these results have shed some light on CPN strengths and weaknesses in assessment interviews with non psychotic clients and secondly, given the increasing number of post graduate courses preparing nurses for mental health practice in integrated community and hospital settings, provided some direction for future research and implications for designing courses and training.

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