Behavioural and Cognitive Psychotherapy, 2002, 30, 153–164
Printed in the United Kingdom DOI: 10.1017/S1352465802002035

AN EDUCATIONAL AND ORGANIZATIONAL NEEDS ASSESSMENT FOR STAFF TRAINING

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Abstract. Studies of in-service training demonstrate repeatedly the difficulty of transferring training to the routine work of the staff. One of the likely explanations for this difficulty is the recurring absence of an educational and organizational needs assessment to guide the training. Such assessments can play a critical role in defining management support, goal setting, the selection of the trainee group and in analysing the readiness of staff in an organization for a training intervention. The present study summarizes and extends prior research in the field of mental health by conducting a comprehensive educational and organizational needs analysis. Six assessment methods were administered to $N = 72$ staff and 20 clients in a psychiatric hospital, including questionnaires, interviews, direct observations and an audit. The study design was based on a series of naturalistic, cross sectional comparisons between four wards. Significant differences were obtained between the four participating wards, which served to define training needs and to validate the needs assessment procedure. Implications are drawn for needs assessment within a more systematic approach to staff training.

Keywords: Needs assessment, staff training, PSI.

Introduction

Promising advances have been made latterly in the treatment of people who have a severe mental illness, termed ''psychosocial interventions'' (PSI). This treatment package includes the applications of cognitive therapy to hallucinations and delusions, family based education and intervention, behavioural analysis and the careful monitoring and adjustment of neuroleptic medication (Wykes, Tarrier, & Lewis, 1998). To be effective, PSI skills need to be transferred to staff through well-organized training (Milne, Keegan, Westerman, & Dudley, 2000). Staff then have to be helped to maintain those skills by a supportive work environment (Corrigan & McCracken, 1995). Goldstein (1993) noted that many such initiatives are ''doomed to failure because trainers are more interested in conducting training than in assessing needs'' (p. 20). Dipboye (1997) agreed that needs assessments were rare, noting that training is more often based on a ''persuasive salesperson, a slick brochure or testimonies from previous participants'' (p. 35).

When conducted systematically, staff training commences with a needs assessment, which provides the necessary information for the setting of learning objectives, the planning of the

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https://doi.org/10.1017/S1352465802002035 Published online by Cambridge University Press

training (e.g. preparing learning materials), delivering the training and the concluding training evaluation (Milne & Noone, 1996). At the level of the trainee, an educational need is something that he or she ought to learn for his/her own good, for the good of the organization, or the good of society. A discrepancy in one of these areas may be judged formally by another person, a professional organization or by society itself (Cogswell & Stubblefield, 1988). The main purpose of the needs assessment is to gather and apply data so as to design a training programme that meets the defined need.

The above training cycle should also be informed by assessment of the organizational context, including the degree of support provided by the top management (e.g. membership of a steering group), participation in the setting of training goals, the selection of the course delegates and analysis of the organization's ''climate'' (Goldstein, 1993). The full cycle is set out in Figure 1, together with examples. In essence, therefore, there are two needs assessments that should be carried out in order to guide staff training, one at the organizational level (Panels 1&2) and one at the personal level (Panel 3).

The organizational and personal needs assessments are vital if training is not to be ''doomed to failure''. The classic ''myth of the hero innovator'' (Georgiades & Phillimore, 1975) drew attention to the way that organizations can annul the effects of otherwise successful training, since when there has been a series of confirmatory analyses in the mental health field. For instance, Milne (1984a) reported that, despite good learning outcomes following a 5-day classroom based course in behaviour therapy, only 26% of the 41 nurses actually implemented the methods with their clients on the rehabilitation wards. It took a ward based and client centred learning format to overcome the implementation problem (Milne, 1984b). In this latter format nurses (N = 24) selected and worked with a client throughout the same 5-day period, resulting in better learning outcomes and much improved implementation: 75% of these nurses transferred their training in the 2-month follow-up period.

In a similar way, Rogers, Cohen, Danley, Hutchinson and Anthony (1986) overcame some of the organizational obstacles by training a group of two or more product ''champions'' from nine mental health agencies to train their colleagues. McDonald (1991) asked trainers (N = 322) to rate the extent to which 20 problems and organizational conditions affected their use of the training that they had received. The most significant predictor was the trainee's personal attitude to the training, followed by external agency approval, then the administration's commitment (i.e. use of incentives), and lastly personal competence.

Examples of studies in the mental health field where no attention was paid to the organizational context and where the training was ''doomed to failure'' include those of Kavanagh et al. (1993), and Fadden (1997). In the first of these studies, it was found that only 18% of the 45 therapists trained in cognitive behavioural interventions had implemented the methods with three or more families up to 3 years post training. In Fadden's (1997) analysis, the 86 therapists who had received training in behavioural family therapy had only applied it with a mean of 1.7 families, at periods of up to $3\frac{1}{2}$ years post training. Both studies highlighted significant obstacles to the implementation of the training (including insufficient time and confidence; inappropriate clients). Such outcomes are typical of the field of staff training in general (e.g. Baldwin & Ford, 1988; Hesketh, 1997).

Given these poor transfer of training findings, it is not surprising to find that reports of training needs assessments in the mental health field are uncommon. In one of the few analyses, Corrigan et al. (1994) invited 40 members of staff in a psychiatric rehabilitation

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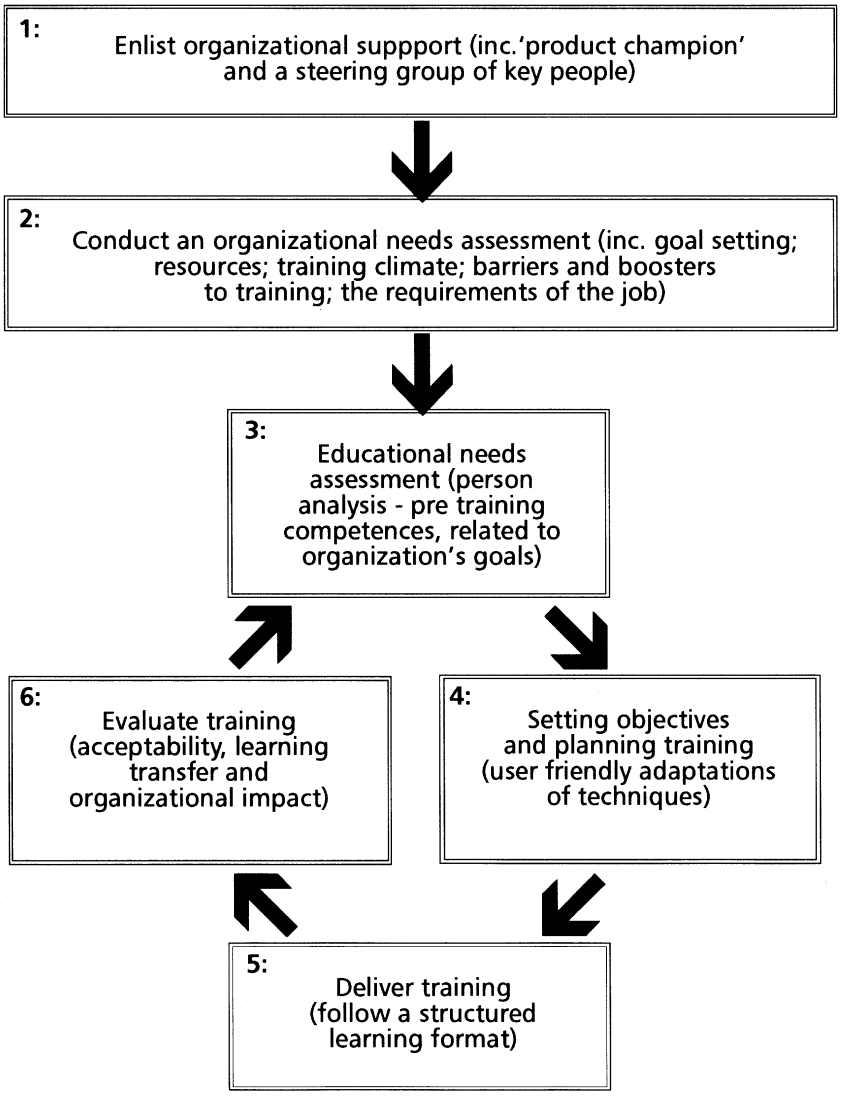


Figure 1. The six tasks in systematic staff training (based on Corrigan & McCracken, 1997; Goldstein, 19983; Milne & Noone, 1996).

faculty to identify individually the problems that prevented patients from being discharged; to validate consensually the identified problems (i.e. staff all agree the problems are worth addressing); and to enumerate methods for tackling these problems. Five problem areas were identified, namely bureaucratic interferences, negative staff attitudes, aversive patient behaviours, insufficient resources, and inadequate treatment approaches.

Einzig, Curtis-Jenkins and Basharan (1995) carried out a similar kind of analysis with 23 counsellors working in general practice, in that it too was based on staff perceptions of their learning needs. Shaddock, Hattie, Edwards, Bramston and Brummmel (1986) used the

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Delphi Technique to identify the training needs of staff working in community homes for people with learning disability. It transpired that staff with widely different training and experience, working in a wide range of facilities, showed very similar views on their staff training needs. Frisch (1989) conducted a slightly more thorough needs assessment with a group of 15 supervisors (including Nurses and Occupational Therapists). First, the staff participated in a brief structured interview, addressing such domains as job responsibilities, problematic situations and suggestions for training. Next, he surveyed the supervisors' managers ($n = 15$) to ascertain the importance of 34 potential topics to be covered in the training. Finally, Frisch (1989) related the identified topics to those included in the relevant literature, resulting in the development of 16 teaching modules.

However, the most thorough prior needs assessment in the field was conducted by Pledge (1993) in a community mental health centre. She studied organizational needs (defined by the psychiatric diagnoses of the clients) and operational needs defined as specific skill deficits identified by staff, supervisors and administrators in their development plans and in a survey sample of approximately 320 multi-disciplinary staff. Unlike the above studies, Pledge (1993) reported considerable disagreement about needs. The greatest area of need identified by the survey method was the treatment and diagnosis of depression (60% of respondents affirmed these topics). However, only 1% of the staff development plans identified such a training need. This difference was typical: no topics were equally prioritized by the three methods, which the author attributed to ''know it all'' attitudes in the context of a personal discussion of a development plan, as opposed to the anonymous survey. Other possible explanations are the poor response to the survey (only 19% of staff returned it); the reliance on clients' diagnoses as a basis for defining staff's learning needs; and the use of psychometrically unsound assessment instruments, a common problem in the needs assessment field (Cogswell & Stubblefield, 1988; Hicks, Hennesy, & Barwell, 1996). Pledge (1993) concluded that a multi-method assessment approach was indicated by the disparate data obtained from her three methods of data collection.

These studies report useful analyses of personal and, to a lesser extent, organizational needs assessments. For instance, Cogswell et al.'s (1994) study was thorough and met two of the basic requirements of a needs assessment in that they elicited the perceptions of various stakeholders (including clinicians and administrators) within the organization. They then related these views to what could realistically be achieved through training. However, a comprehensive needs assessment should, in addition, incorporate comparative data (i.e. information from external standards and norms) that indicate what training should cover, such as staff baseline scores on an assessment of competence (Milne & Noone, 1996). Finally, a comprehensive needs assessment will link these aspects together, so as to pin point and prioritize those areas that require attention, as illustrated in Figure 1 (Goldstein, 1993).

Therefore, the purpose of the present project was to conduct a needs assessment incorporating the above features, and to do so in relation to an in-service PSI training initiative taking place in the UK. It was predicted that this assessment would indicate clear needs, in terms of both the personal and organizational dimensions that are necessary for successful staff development initiatives. Given that the sample was deliberately mixed, it was also anticipated that these needs would be significantly different across the four units that were studied.

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Method

Measures and procedure

Table 1 summarizes the six assessment methods that were used, alongside the procedure adopted for each of them. The Table also indicates the nature and justification for each of those instruments. The instruments address the requirements set out in the second and third panels in Figure 1. It should be noted that some measures provided data that were relevant to two panels.

Table 1 does not indicate the nature and extent of organizational support (panel 1 of Figure 1), which is therefore now summarized here. The requests for the needs assessment was received from the relevant clinical psychology manager (the product champion), who formed a multi-disciplinary steering group for the needs assessment project. This group consisted of the nursing and psychology managers for the service sector concerned, the direction of operations to whom they were accountable, the four ward managers/charge nurses, and the authors (acting as consultants from a third party organization). Other staff also participated in the steering group meetings on an occasional basis (e.g. personal and professional representatives). This group operated in the highly participative style of ''stakeholder collaborative evaluation'' (Ayers, 1987), which includes generating, assessing and selecting instruments, as well as the interpretation of the obtained data, in terms of setting educational and organizational goals. The group met monthly throughout the one year period of the project to undertake these and related tasks. Between six and twelve people attended the meetings.

Research design

The study consisted of a series of naturalistic cross-sectional comparisons between four wards in a large NHS psychiatric hospital. Data were collected by a series of multi-method and multi-perspective analyses across the four service settings. This permitted between group comparisons to be made between the respective settings and, in the case of the Work Environment Scale, between the data from the present sample and those from a USA sample.

Participants

Forty-eight staff from four wards completed two forms (the WESQ and BARCQ – see ''Measures'' below), a response rate of 79%. There were 39 females in this sample, which was composed entirely of nurses ($N = 34$) and occupational therapists ($N = 5$). A sub-sample of these were interviewed, consisting of a stratified group of 20 staff, 5 from each ward. All were qualified staff who had completed the previous measures. In total, 4 nurse/ward managers were included, together with 12 Staff Nurses, 2 Community Psychiatric Nurses, and 2 Occupational Therapists. There were 15 females in this group of 20. In the final two phases of the study, each of the 4 nurse/ward managers was observed following a time-sampling procedure and an audit of their case notes was carried out ($n = 20$ clients' notes, selected purposively). Therefore, a total of 72 staff (some participating in all data collection phases) took part in this study, and the case notes of 20 residents were audited.

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Table 1. Summary of the instruments and procedure

Project phase	Assessment instruments	Justification for instrument inclusion	Procedure
1. Training climate	(a) 90-item Work Environment Scale Questionnaire (WESQ: Moos, 1974)	Afforded a broad assessment of the real and ideal ''social climates'' of the service settings	Distributed by hand to each of the four participating units. Four-week deadline
	(b) Barriers to Change Questionnaire (BARCQ: Corrigan et al., 1992)	Analysed major dimensions known to be significant to the transfer of training, including ''institutional constraints'', ''support from colleagues'', ''philosophical opposition'', ''client dissatisfaction'' and ''interference''	Distributed by hand to each of the four participating units. Four-week deadline
	Ad-hoc structured interview, based on the headings in (b) above (e.g. ''on your unit, how would you rate the current level of support amongst colleagues?'')	Designed to elicit the perceived knowledge, skills and attitudes relevant to implementing the PSI approach	Interviews conducted in private and in confidence. 45 minute duration. Definition of PSI and outline of the planned training provided in advance to all interviewees
2. Job requirements	(d) Ad-hoc observation (time sampling) of staff activities, focusing on client and bureaucratic tasks	Studied the range of staff duties in order to estimate scope for PSI implementation	Appointments made in advance and shadowing of ward managers for two hours each (one hour am, one pm)
	(e) Case note audit (Milne et al., 2000)	Surveyed the current use of PSI assessment instruments in each service setting	All four units approached for 10 sets of notes each. Two wards stated that no instruments used, so audit limited to remaining two units
3. Educational needs assessment	(f) Ad hoc questionnaire	Assessed past training and current competence; define education tasks	As (c) above

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Table 2. Mean ''real'' and ''ideal'' Works Environment Scale Questionnaire data from the four local settings and from normative (USA) groups

WESQ Subscales	Setting								Normative data			
	A		B		C		D		Real		Ideal	
	Mean	*ASD*	Mean	*ASD*	Mean	*ASD*	Mean	*ASD*	Mean	*ASD*	Mean	*ASD*
1. Innovation	6.84	1.9	7.78	1.4	5.0	2.08	4.78	1.84	4.37	1.82	7.18	1.99
2. Involvement	8.46	0.66	7.85	1.74	6.28	2.43	7.2	1.47	5.56	1.54	8.36	1.34
3. Peer cohesion	7.6	0.76	8.0	1.1	6	2.3	7.07	2.01	5.22	1.4	7.57	1.58
4. Supervisor support	6.69	1.49	6.85	1.35	6.14	2.54	5.57	2.37	4.99	1.4	7.97	1.38
5. Autonomy	6.38	0.65	6.85	1.56	5.85	0.69	5.78	1.36	4.98	1.46	7.44	1.67
6. Task orientation	7.07	1.44	7.14	1.65	6.85	1.57	7.35	1.39	5.63	1.31	7.80	1.60
7. Work pressure	2.53	1.56	1.85	1.16	6.42	3.20	6.57	2.13	4.87	1.57	2.35	1.80
8. Clarity	5.84	1.86	6.14	2.24	4.28	2.28	5.71	1.93	4.44	1.41	7.43	1.24
9. Control	4.92	1.25	5.5	1.65	6.0	2.1	6.92	1.77	5.43	1.42	4.87	2.11
10. Physical comfort	6.76	1.78	3.57	1.74	3.57	2.29	4.42	1.98	3.72	1.28	7.50	1.79

Results

The training climate

Data from the Work Environment Scale Questionnaire (WESQ) are presented in Table 2, indicating that staff held generally favourable perceptions of their ''real'' (i.e. actual) work settings (the maximum and most favourable score possible per subscale is 9). Normative WESQ data are also tabled from the ''real'' and ''ideal'' perceptions of health care staff in the USA ($n = 1607$ and 120 respectively), which further support the favourable interpretation of the local settings: all these units tend to score at least as well as the real USA services, and many approach or equal the USA ideal work environments scores. These data indicate that the environment in settings A and B provide a particularly good climate for PSI training and implementation.

Statistical comparisons between the four settings were significant for six WESQ subscales (numbers 1, 2, 3, 7, 9, 10: F's of 2.9 to 19.7, df: 3,44, $p < .05$), all favouring settings A and/or B over settings C and/or D. The WESQ findings were corroborated by the data from the barriers to change questionnaire (BARCQ). These BARCQ results point to consistently fewer perceived barriers for settings A and B. However, statistical comparisons indicated that only one of these, ''Institutional Constraints'', reached significance (Chi-square = 16.4, $df = 3$; $p < .05$), indicating that staff in setting A perceived fewer barriers to the implementation of PSI training.

The requirements of the job

Observations of the nurse managers also indicated that there were clear differences between the four assessed settings. Using a momentary time sampling procedure, the obtained frequency of the manager's behaviours ''clinical work with clients'' and ''personal interaction with a team member about a client'' averaged 21 and 17.5 for settings A and B, compared to an average of 0 and 1 for settings C and D, respectively. Corresponding higher frequencies

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of ''non-clinical paperwork'' and ''phone-calls'' were also obtained for settings C and D. These findings provide further support for training the staff in settings A and B, since there is much more client-related activity in those two environments.

The audit of the clinical case notes was restricted to settings A and C, as the managers from settings B and D conceded that there would be no indications in their notes of the use of PSI compatible assessment instruments. The audit covered assessments carried out in the previous 3 months and revealed that a total of seven different instruments had been used. These were the Hospital Anxiety Depression Scale, The Social Activities and Distress Scale, the General Health Questionnaire, the McGill Pain Questionnaire, an Assertiveness Questionnaire, a negative thoughts questionnaire and the Beck Depression Inventory. Setting A had employed these instruments on a total of 11 occasions, compared to five instances for setting C. These archival data again support the selection of setting A for PSI training, although in this instance setting C emerged as the second most favourable environment.

Educational needs assessment

All service settings had at least one current member of staff with some post qualification training of relevance to PSI, although numbers varied widely across these settings (1 – 15 staff members per setting). Not surprisingly, the self-rated competence in the models underpinning the PSI approach also varied somewhat across settings, ranging from the ''novice'' (score 1) to ''proficient'' levels (score 4). Overall, staff perceived themselves to be most competent in methods other than the PSI ones (e.g. mean competence = 2.78, SD = 0.83), followed by medical, cognitive, family and behavioural methods (mean competence for all four methods combined: = 1.68,SD = 0.88). Competence was self-assessed on a scale from 1 (novice) to 5 (expert). On this scale, a score of 2 represents ''advanced beginner'' and a score of 3 ''competent''. Those settings with the highest level of participation in post qualification training tended to report the highest levels of competence (Spearman = 0.415, $p < .001$).

Information on the educational needs of staff was also obtained through the structured interview. The most frequently mentioned need was for all professionals to receive the PSI training (mentioned by 16 of the 20 interviewees), followed by the need for team building (10 mentions). Table 3 presents these data, together with the related organizational tasks. These data suggest that the PSI training is likely to raise competence levels in the non-medical aspects of PSI. The interview data suggested that this effort should be directed at all staff, and that team building and change management were unimportant topics to address in the training. As discussed below, additional educational needs assessments should follow within the training sessions themselves.

Discussion

This relatively systematic analysis of the educational and organizational needs of a group of staff yielded clear and consistent support for our two hypotheses. We found that there were many educational and organizational needs, and that these did indeed distinguish significantly between the four assessed service settings. While the present analysis goes beyond those reviewed in the Introduction (e.g. in including normative data), the overwhelming impression is entirely consistent with that literature: a needs assessment can reveal a com-

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Table 3. Organizational and educational factors that interviewed staff (n = 20) regarded as critical to the success of PSI training

	Organizational tasks	No. Staff mentioning each task
1.	Dedicated staffing resources need to be maintained	15
2.	Management's ''visible'' support for PSI is essential	15
3.	Provide resources for the increased clinical time	13
4.	Dedicated consultant cover is essential	12
5.	Negative attitudes from staff need addressing	12
6.	Major accommodation issues need to be addressed	10
7.	Specific PSI supervision is needed	8
8.	More staff resource rooms are needed	7
9.	Improved communication with other professionals (internal and external)	7
10.	Admin support is needed to ''free up'' clinical time	7
11.	Staff safety needs improving	5
12.	Provide cover for those staff involved in training	5
13.	Patient population needs to change	5
14.	Establish an ideas forum to promote staff recognition	5
15.	Create system for clear goals, feedback and evaluation	5
16.	Minor accommodation and equipment issues need addressing	4
17.	More structured approach to monitoring medication (e.g. do not introduce multiple drug changes as the effects of individual drugs cannot be monitored)	1
18.	Utilize current staff skills in order to meet the immediate requirements for PSI supervision, i.e. staff already possess relevant skills	1
19.	In order to encourage staff and management, keep the PSI momentum going by using forums, feedback sessions, teach ins etc. (don't let this become ''yet another'' initiative)	1
	Educational tasks	
1.	Consultants and other professionals need PSI education	16
2.	Team building is needed to promote cohesiveness	10
3.	Management of change will help cultural shift	8
4.	Provide more PSI information as soon as possible	5
5.	Nursing Assistants should receive PSI training	4
6.	Develop a more structured approach to care	2
7.	Cognitive behaviour training for all staff	1
8.	Family interventions training for all staff	1
9.	Train staff to use and evaluate all relevant PSI measures	1

plex and major set of impediments to successful staff training. Table 3 is perhaps the clearest illustration of this point, being a list of over 20 organizational and educational tasks. These bear a strong resemblance to those compiled by Kavanagh et al. (1993) and Fadden (1997), lending credence to the important role ascribed to the needs assessment part of a staff training initiative (Goldstein, 1993). By implication, this affords at least a partial explanation for the poor transfer of most training. It follows that trainers should accord needs assessment (phases 1–3 in Figure 1) greater attention, possibly by adopting some of the methods and

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Table 4. The frequency with which staff ($N = 72$) identified different factors as important to successful PSI training (the totals sum to less than 72 as respondents were not required to rate all factors)

Factor	Adequate	Inadequate
Time available	36	24
Staff resources	30	28
Relevant supervision	43	13
Peer support	47	4
Management support	50	6
Client benefits	61	—
Potential knowledge gain	59	1

measures in the present illustration (see also Hick et al.'s (1996) needs analysis instrument).

In keeping with the long-standing advice of Georgiades and Phillimore (1975), the present study also indicates that it is possible to define parts of a hospital that are relatively amenable to innovation through a staff training initiative. Settings A and B were found to be consistently more supportive environments for the PSI training than settings C and D, including more ideal work climates (WESQ), fewer barriers to change, and more appropriate job requirements. Psychologists may traditionally have had limited ability to alter the work environments, but they can at least assess these settings with a view to locating the most favourable contexts for their training efforts. This is not to ignore other potential threats to innovation; it should be assumed that any significant change to a large system will have proponents and opponents. For example, PSI may promote ''professional tribalism'', insofar as it is perceived as a challenge to the medical hegemony in psychiatric institutions.

Although affording clear and consistent data on the value of a needs assessment, the present study was weakened by the partial reliance on three ad hoc measures of unknown reliability, a familiar problem in this area (Cogswell & Stubblefield, 1988). The consistency of the findings from the properly validated measures (i.e. WESQ and BARCQ) does, however, provide an indication that the ad hoc instruments have some convergent validity. Other improvements would include the use of more objective comparative information on the educational needs of staff. This could be achieved by collecting direct observational or simulated data on competence, as opposed to relying on self-report (e.g. see Milne, 1984a). Self assessed needs assessments are prone to biased perceptions, including the influence of attitudes to the training and managerial support (Guthrie & Schwoerer, 1994). Furthermore, competence could usefully be defined still further in terms of staff adherence to the PSI approach and their interpersonal effectiveness when applying the approach (Waltz, Addis, Koerner, & Jacobson, 1993).

Alongside such improvement there is scope to go on from the present cross-sectional research design to the inclusion of longitudinal and experimental designs. This could include the addition of a ''live'' needs assessment pre-teaching in order to fine-tune the content to the needs of the participants (Milne & Noone, 1996). A second option is the random allocation of staff to training programmes that are either informed by a needs assessment or not (Corrigan et al., 1994). The latter piece of research represents the acid test of the needs assessment exercise.

In conclusion, a participative and thorough needs assessment has indicated the potential

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value of this process and the readiness of two of the four assessed units for PSI training. Practical suggestions have been made for ensuring that the training is successful, and not, as Goldstein (1993) commented, ''doomed to failure''. However, it should be recalled that the needs assessment phases are only the beginning of a systematic approach to staff training. Equal attention needs to be paid to the setting of learning objectives, the delivery of the training, and the use of evaluative data to guide the whole process (Milne & Noone, 1996). To maximize the chance of success, these activities should be undertaken with the continuing guidance and support of a project steering group, as detailed by Greene (1987) and Papineau and Kiely (1996).

Acknowledgements

We are indebted to the many staff who contributed to the needs assessment and particularly to the project steering group. The group were: Paul Bates, Tim Cate, Simon Punton, Judy Sheahan, Rian Lamprecht, Maria Blades, Barry Hudson, Nigel Maguire, Bob Craig, Angus Bell and Catherine Coogan. The manuscript was prepared by Katherine Bateman.

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https://doi.org/10.1017/S1352465802002035 Published online by Cambridge University Press