The Attitudes Towards and Enactment of Psychosocial Rehabilitation Principles: Discrepancies and Correlates

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THE ATTITUDES TOWARDS AND ENACTMENT OF PSYCHOSOCIAL REHABILITATION PRINCIPLES: DISCREPANCIES AND CORRELATES

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ABSTRACT

Background: Previous literature suggests that attitudes have critical effects on recovery outcomes. Yet mental health professionals' attitudes towards psychiatric rehabilitation principles (PRP) have not been fully addressed. Whether the professionals could act in accordance with attitudes has also not been examined.
Aims: This study explored how hospital professionals in Taiwan perceived PRP, and whether there were discrepancies between attitudes towards and enactment of PRP. Also, the correlates of attitudes and enactment were examined.
Methods: Survey questionnaires were sent to hospitals in Taiwan, and yielded a valid sample of 743 subjects, with a 23.48% return rate. The potential correlates included five groups of variables: demographic, professional background, training experience, and external and internal structure of hospital.
Results: The factor analyses revealed nine factors of PRP, which partly confirmed Cnaan *et al.*'s findings (1990), and added recovery components. Hospital professionals held favorable attitudes toward and enacted more on recovery and strengths perspectives, yet less on social change, commitment from staff, and using environmental resources. The discrepancies between attitudes and enactment were mainly on macro related principles. Attitudes and hospital emphasis on psychiatric rehabilitation (PR) in discharge plans were the two most important correlates of enactment.
Conclusions: Doctors are the training target group for enhancing favorable attitudes and enactment. Continuous advocacies on structural changes for increasing PR resources, and hospital emphasis on PR in treatment approach are needed.

Key words: attitudes, enactment, psychiatric rehabilitation, recovery

INTRODUCTION

Following the era of deinstitutionalization, psychosocial rehabilitation, also called psychiatric rehabilitation (PR), gained significant attention in the 1980s and thrived in the 1990s (Anthony *et al.*, 2002). Furthermore, in the 1990s the recovery concept was promoted

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through the voices of people with psychiatric disabilities, hereinafter called the consumer (Deegan, 1988; Leete, 1989). The recovery vision brings professionals' attention back to the people for whom we care (Deegan, 1988), and it is defined as a journey of self-discovery (Mitchell, 2001), a unique personal process of changing one's attitudes, values, feelings, and goals, and involves finding new meaning of life with or without the limitations caused by mental illness (Anthony *et al*., 2002).

Researchers (Coursey *et al*., 2000; Russinova, 1999) have maintained that professionals' attitudes have critical effects on recovery outcomes because PR services usually involve intense human contacts, and it is important for professionals to instill consumer hope and promote recovery (Russinova, 1999). The question is whether mental health professionals agree with the values and principles proposed in the literature and to what extent they could enact these principles. Given the importance of attitude on outcomes, however, the topic has not yet been fully addressed. To date, only two studies in the West have empirically examined attitudes towards PR or recovery (Borkin *et al*., 2000; Casper *et al*., 2002), and the correlates of attitudes examined in these two studies are limited and preliminary. In addition, no such study has been conducted in Taiwan. This study aimed at filling the gap, focusing especially on mental health professionals in hospitals, which are the major therapeutic and PR service providers in Taiwan. Specifically, this study has three aims: (1) to understand their attitudes towards and the extent to which they enacted PR principles (hereinafter called PRP); (2) to examine the discrepancies between attitudes and enactment; and (3) to examine separately the correlates of professionals' attitudes towards and enactment of PR principles. To achieve the aims, the investigator also developed a comprehensive measure of PRP for the further analyses in this study.

Values and principles of PR

The mission of PR is to use systematic provision of services to help consumers increase their functioning in the environment of their choice, and hopefully regain social roles in the community (Anthony *et al*., 2002; Rutman, 1994). To ensure practice consensus, Cnaan *et al*. (1988, 1990) developed 13 principles of PR: equipping people with skills, self-determination, utilizing environmental resources, social change, differential needs and care, commitment of staff, emphasis on employment, emphasis on the here and now, early intervention, social rather than medical emphasis, normalization, emphasis on strengths rather than weaknesses, and intimate environment of service. Anthony *et al*. (2002) mentioned eight key values of PR: person orientation, enhancing functioning, continuous support, environmental specificity, consumer involvement, consumer choice, outcome orientation, and growth potential. These values involve both the expected process and outcomes of PR. Anthony *et al*. (2002: 85) also developed nine principles of PR in accordance with the values.

The principles listed in the two articles are similar; they all view consumers holistically and see their potential for growth, and emphasize the ongoing support, skill development, and social changes tailored by the environment of the consumer's choice, and consumer self-determination through partnership with professionals. As maintained by Stromwall & Hurdle (2003), the philosophical base of PR services is built around the principles of consumer empowerment, competence and recovery.

Correlates of attitudes toward PR principles or recovery

Casper *et al*. (2002) found that the two significant predictors of practitioners' beliefs, goals and practices in PR were the amount of literature they had read by leaders in the field and what degree they held. Work tenure, professional affiliation (social work, psychology, etc.) and primary service role (direct service, supervisor, etc.) were not significant. The study by Borkin *et al*. (2000) found that black people, older groups and women held more favorable attitudes toward recovery. Length of time as a professional correlated positively with attitude scores. The two studies suggested that some *demographic variables* (race, age, sex and education), *professional background* (work tenure) and *training* (important literature read) might predict attitudes towards PR principles.

To explore other potential correlates of attitudes toward and enactment of PR principles, the investigator reviewed the literature dealing with professionals' practice. Payne (1997) maintained that social work was a socially constructed profession, and was always constructed from three elements: worker, client and context. In creating a profession, many social forces are involved, such as changing social needs, the influence and needs of related occupations, political and legislative changes, and academic development of the profession. These forces affect expectations of what professionals should do. Moreover, mental health agencies controlled by management boards would affect professionals' practice. Agencies also existed in a political and social context that influenced how they and professionals operate and how they deal with clients (Payne, 1997). Agency demands might be conflicted with professionals' internalized values and principles, and the pressures from the former usually are larger than those from the latter (Chang, 1998).

Based on Payne's argument (1997), the investigator hypothesized that *structural context* and *training experiences* would affect professionals' attitudes and enactment of PR principles. Training helps professionals learn and internalize professional principles and service modalities. The structural context includes external factors (policy, regulations, insurance payment system, etc.) and internal ones (treatment approach, process, support, etc.). In addition, according to Payne (1997) and Chang (1998), there is a discrepancy between attitudes and enactment. In sum, the potential correlates include five groups of variables: demographic, professional background, training experience, external structure, and internal structure.

METHOD

Subjects

This study is the first one on this topic in Taiwan, and thus the investigator wished to include a large sample, consisting of all of the psychiatry-related professionals working in local hospitals, general medical centers, and psychiatric hospitals. The survey design was based on the following considerations: (1) professionals are suitable candidates for self-administered questionnaires; and (2) there would be a minimal incremental cost to survey all of the professionals, which could help yield a larger sample with a mailed questionnaire. The list of hospitals was obtained from the Department of National Health. Hospitals were contacted for information on the number of professionals and were asked about their willingness to participate in the study. From December 2004 to March 2005, 3479 questionnaires were sent out

to 76 hospitals and 817 were returned from 65 hospitals, with a 23.48% return rate. Seventy-four returned questionnaires were unusable owing to omitted information, and thus there were 743 valid samples in this study.

Variables and instruments

Dependent variables

There were two dependent variables in this study: *attitudes towards* and *enactment of* PRP. The PRP scale was adapted from Cnaan *et al.*'s scale (1990) and some recovery-related items were added. The original scale is conceptually comprehensive and consisted of 47 items loaded on 13 factors (principles). In this study three items from the original scale were omitted because they either do not fit common practice in Taiwan or might cause negative feelings among professionals: item 37 (following up for at least a year after discharge), item 55 (does not encourage clients to rely on medication) and item 56 (uses a lot of common sense rather than prescribed methods of care). Six items (28, 39, 40, 41, 49 and 50, see Table 1) related to consumer recovery were added to the original scale by the investigator. Item 49 and item 50 were adopted from Casper *et al.* (2002). Ten professionals from two hospitals were pre-tested. They provided opinions on the clarity of the wording and data for examining the discriminatory power of the items. No major changes resulted from the pre-test. The final PRP scale in this study consisted of 50 items. To measure *attitudes*, the study subjects were asked to rate the extent to which they agreed with the statement, with four response categories ranging from highly disagree (0) to highly agree (3). The enactment of PRP was tapped by asking how often they actually enacted the principles. The response categories included: never (0), seldom (1), sometimes (2), and very often (3). Item 40 and item 41 need to be reverse coded in scoring.

Independent variables

Demographic variables: including sex (1 = male, 2 = female), actual age, and highest level of education (high school, college and graduate school).

Professional background: (1) Type of hospital (medical center, local hospital and psychiatric hospital), (2) type of profession (doctor, nurse, social worker, psychologist, occupational therapist, case manager and vocational counselor), (3) total work tenure in the profession, and (4) years after graduation.

Training experiences: (1) If the subjects have attended psychosocial rehabilitation courses, conferences, or read related articles or books, respectively. (2) If yes, then asked about the extent (hours, times, or numbers) of training.

Structural factors related to psychosocial rehabilitation: (1) Eight indicators were developed to measure the subjects' opinions regarding the extent of the *external structure* that favors psychosocial rehabilitation, including policy orientation, regulation, national insurance coverage and payment, sufficiency of rehabilitation programs (number and amount of grant), and sufficiency of rehabilitation resources in the community in terms of the number of agencies and capacity. (2) Seven items measured the extent to which the hospital *internal structure* favors rehabilitation, including treatment approach, sufficiency of rehabilitation facility, treatment plan, discharge plan, subjects' decision power in discharge plan, support on rehabilitation from the head of the hospital or department, and sufficiency of manpower

for rehabilitation. Each item has five response categories, ranging from highly unfavorable (1) to highly favorable (5).

Statistical analysis

In addition to descriptive analyses of the variables, the following types of analyses were performed:

Factor analyses were performed on the PRP scale to ensure its factorial construct validity. The principal component method of extraction and varimax rotation were used. The number of factors was decided in accordance with the criteria of eigenvalue $\leqslant 1$ and factor loading $\leqslant 0.4$.

Bi-variable analysis: Included *t*-test, one-way ANOVA, Pearson correlation and Spearman correlation depending on the level of measurement of the variables.

Regression analysis: A hierarchical method of entry was used to examine the R^2 increment induced by each group of variables. The relative importance of each variable was also decided while controlling other variables.

RESULTS

Sample characteristics

Almost four-fifths (79.6%) of the study samples were females. Subjects tended to be young workers, with a mean age of 32.11 ($SD = 7.10$, range = 20–70) in the study. Most of them held a college degree (82.9%), and 12.5% held a graduate degree. Over 50% (55.6) of the subjects worked in local hospitals, 25% in psychiatric hospitals and 19.4% in medical centers. Some of the categories within *type of profession* were combined due to too few cases in these sub-samples: occupational therapists (OT, $N = 50$), case managers ($N = 12$), vocational counselors ($N = 22$) and other ($N = 11$) were combined as OT. The subjects were predominantly nurses (52.2%), followed by doctors (12.5%), social workers (12.3%), psychologists (10.2%), and occupational therapists (12.9%). Compared to the composition of professionals in the 76 hospitals (sampling frame), doctors and nurses were underrepresented; whereas social workers, psychologists and OT were overrepresented (see Table 1). The mean total work tenure was 81 months ($SD = 72.51$, range = 1–480) and on average the subjects graduated over six years ago (mean = 74.17, $SD = 73.42$, range = 0–480). Thus, the subjects represented a group of relatively experienced professionals. About 70% had attended rehabilitation-related conferences, 54.3% had attended training courses and 79% had read articles or books.

Factor structure of PRP

The factor analysis was performed using the data on the enactment of PRP among professionals because it captured more variances than the attitude responses ($SD = 0.439$ vs 0.337). Through three factor analyses, three items (item 5, item 40 and item 41) were deleted based on the above criteria. The remaining 47 items each had acceptable measures of sampling adequacy (MSA, range = 0.85–0.97). The results showed that there were nine factors within the scale, with 59.21% variances explained by the factors (see Table 2).

Table 1
Type of professionals in the sampling frame and sample (%)

	Doctor	Nurse	Social worker	Psychologist	OT	Total (%)
Sampling frame	19.4	60.7	6.1	6.5	7.3	100
Sample	12.5	52.2	12.3	10.2	12.9	100

The item variance explained (VE) by the first factor is 33.59%, which is far above the rest. It covered all aspects of *utilizing recovery strategy*, including assessment and helping principles (items 16, 17, 18 and 19), workers' commitment (items 20 and 21), emphasis on the here and now (items 27, 29 and 30), emphasis on employment (item 25), and self-determination (item 6). This factor seems to represent a short version of PRP. The second factor included three items (items 12, 13 and 14) of the four items that measured '*social change*' on Cnaan's scale (1990). The other three items loaded on this factor were not as direct but were related. For example, 'Emphasis on assessment under specific environment' may be needed when advocating for employment and housing.

Among the six items loaded on the third factor, three of them (item 46, item 47 and item 48) measured 'intimate environment of service' on Cnaan's scale (1990). The other three (item 39, item 49 and item 50) were recovery-related items added by the investigator. These items involved how professionals view and treat clients; thus this factor was named '*recovery-oriented helping relation*'. The fourth factor combined two principles on Cnaan's scale (1990): *normalization* (item 35, item 36 and item 37) and *early intervention* (item 31 and item 32). Item 34 emphasized the holistic view of clients and could be part of the normalization principle.

The fifth factor, *emphasis on strengths*, exactly confirmed this principle on Cnaan's scale (1990). The sixth factor confirmed the '*utilizing environmental resources*' principle on Cnaan's scale (1990). Item 15 was not part of the principle on the original scale; however, helping family members accept their mentally ill relatives is related to using environmental resources. The remaining three factors confirmed three principles on Cnaan's scale (1990): '*equipping clients with skills*' (factor seven), '*self-determination*' (factor eight) and '*commitment from staff*' (factor nine). The investigator thought that the two items in factor eight involve encouraging clients to express themselves and influence the agencies, and therefore renamed this factor as '*empowerment*'.

The internal consistency (Cronbach's α) for the entire enactment scale and subscales was acceptable,[1] given the number of items in each dimension (see Table 2). Applying the factor structure to the data on the attitude of PRP, the Cronbach's α values for the entire attitudes scale and its dimensions were similar to the ones for the enactment, and were satisfactory (0.96, 0.90, 0.72, 0.84, 0.83, 0.86, 0.82, 0.84, 0.48 and 0.60, respectively).

Professionals' attitude towards and enactment of PRP

The attitude and enactment mean scores were computed for the dimensions of PRP. The attitude scores ranged from 1.88 to 2.42, which fell within the responses agree and highly agree (see Table 3). Professionals agreed relatively less on the following four dimensions: equipping clients with skills, social change, empowerment and commitment from staff. Basically, the

Table 2
Factor analysis of psychosocial rehabilitation principles scale

Factors		Loading
F1	**Utilizing recovery strategy** (eigenvalue = 15.79; VE = 33.59%, $\alpha = 0.90$)	
19.	Allow each client to progress at his/her individual pace	0.683
18.	Teach clients different skills based on unique needs	0.679
20.	Encourage clients to achieve rehabilitation goals	0.658
17.	Provide individualized intervention	0.644
27.	Concentrating on the presenting needs	0.584
16.	Assess client's particular strengths and weaknesses	0.529
30.	Reorient clients who are fixated on the past as to present needs and future goals	0.509
25.	Discuss the importance of work with clients	
21.	Constructively dealing with daily development	0.486
29.	Focus on clients' future objectives and on what needs to be done	0.466
6.	Encourage clients to set their own rehabilitation goals	0.466
		0.407
F2	**Social change** (eigenvalue = 2.65, VE = 5.64%, $\alpha = 0.79$)	
13.	Lobby employers to employ mentally ill persons	0.750
28.	Emphasis on assessment under specific environment	0.680
33.	Encouraging employers to contact them in case of withdrawal	0.598
12.	Lobby landlords to rent apartment to the mentally ill	0.587
14.	Work with community services so that they will treat mentally ill persons as regular clients	0.552
26.	Engaging clients in routine chores as a preparation for assuming future responsibilities of work	0.488
F3	**Recovery-oriented helping relation** (eigenvalue = 1.97, VE = 4.20%, $\alpha = 0.83$)	
50.	Recovery process often involves the risk of relapse and failure	0.715
47.	Practitioners openly express their own limitations	0.694
48.	Consistently demystify the rehabilitation process for client	0.678
49.	Help clients establish positive self-image	0.542
46.	Inquire about clients' feelings and ideas regarding personal issues	0.505
39.	The things that clients want are the same as for others	
38.	Expect clients to be engaged in activities with people outside the agency	0.410
		0.409
F4	**Normalization/early intervention** (eigenvalue = 1.58, VE = 3.35%, $\alpha = 0.82$)	
36.	Openly express disapproval of deviant behavior of clients	0.728
35.	Clearly state expectations for appropriate client behavior	0.702
37.	Encourage clients to maintain a 'normal' daily routine	0.623
32.	Ask clients to return to the agency following discharge if new problems arise	0.525
34.	View the client as a whole and do not focus only on difficulties	
31.	Ask relatives and friends to report signs of withdrawal	0.433
		0.416
F5	**Emphasis on strengths** (eigenvalue = 1.33, VE = 2.83%, $\alpha = 0.86$)	
43.	Plan the intervention program to build on clients' strengths	0.672
44.	Assist clients in developing strengths toward facilitating positive experiences	0.639
42.	Assess clients' strengths as a primary part of assessment	0.618
45.	Help clients to overcome deficiencies by enhancing strengths	0.587
F6	**Utilizing environmental resources** (eigenvalue = 1.27, VE = 2.70%, $\alpha = 0.75$)	
15.	Work with families to help them accept their mentally relatives	0.654
9.	Involve relatives and/or friends in the rehabilitation process	0.630
10.	Assist clients in establishing strong social networks	0.550
11.	Encourage clients to join community support groups	0.517

continued on next page

Table 2 continued

Factors		Loading
F7	**Equipping clients with skills** (eigenvalue = 1.17, VE = 2.49%, $\alpha = 0.73$)	
1.	Teach social interaction skills to all clients	0.714
4.	Teach independent living skills to all clients	0.670
2.	Teach communication skills to all clients	0.669
3.	Teach vocational skills to all clients	0.493
F8	**Empowerment** (eigenvalue = 1.06, VE = 2.25%, $\alpha = 0.56$)	
7.	Empower clients to assume an active role in influencing agency functioning and programs	0.526
8.	Encourage clients to veto interventions which may affect them and with which they disagree	0.479
F9	**Commitment from staff** (eigenvalue = 1.01, VE = 2.15%, $\alpha = 0.64$)	
23.	Engage in informal conversation with clients on the issues of the day	0.671
22.	Work with clients at all hours of the day and in a variety of settings	0.652
24.	Encourage clients to get involved in any kind of employment	0.452
	Total variance explained: 59.21%, α =0.95 for the entire scale	

enactment scores (range = 1.47–2.33) were lower than the attitude scores. Enactment scores on the following four dimensions were relatively lower: utilizing environmental resources, empowerment, commitment from staff and social change. It seems that professionals agreed and enacted more on principles related to individual services and rehabilitation, such as normalization, utilizing the perspectives of recovery strategy and strengths. However, they agreed and enacted less on the principles related to flexible, informal, environmental, and structural interventions.

Discrepancies between attitudes towards and enactment of PRP

The results of paired *t*-tests revealed significant differences between attitude and enactment scores on all of the dimensions (see Table 3). The ranking of difference from high to low was as follows: social change, utilizing environmental resources, empowerment, commitment from staff, emphasis on strengths, recovery-oriented helping relation, utilizing recovery strategy, normalization/early intervention, and equipping clients with skills. The ranking reveals that the consistency between attitude and enactment was higher on micro-related principles, but lower on macro-related principles.

The correlates of attitude towards and enactment of PRP

In the analysis, the 'number of training' variables were not used in the analyses owing to too many missing cases (range = 183–347). Age was highly correlated with work tenure ($r = 0.84$) and years after graduation ($r = 0.70$). Moreover, age had the lowest number of missing cases among the three. Therefore, only age was retained in the regression model to avoid the multicollinearity problem. In the regression analyses, dummy variables were created for the categorical variables. 'Medical center' was the reference group for the 'type of hospital' variable, graduate school for 'education', and OT for 'type of profession'.

Table 3
Comparisons between attitudes towards (p1) and enactment (p2) of psychosocial rehabilitation principles ($N = 723$)

Factors	P1 P2	Mean	*SD*	*r*	P1–P2	*t* value
Utilizing recovery strategy	P1	2.39	0.37	0.48***	0.18	10.35***
	P2	2.21	0.53			
Social change	P1	2.17	0.38	0.38***	0.70	31.48***
	P2	1.47	0.63			
Recovery oriented professional relation	P1	2.37	0.40	0.47***	0.20	10.45***
	P2	2.17	0.55			
Normalization/early intervention	P1	2.42	0.41	0.50***	0.09	5.08***
	P2	2.33	0.53			
Emphasis on strengths	P1	2.39	0.45	0.48***	0.22	10.04***
	P2	2.17	0.65			
Utilizing environmental resources	P1	2.39	0.45	0.39***	0.41	18.26***
	P2	1.98	0.62			
Equipping clients with skills	P1	2.23	0.49	0.35***	0.07	3.27***
	P2	2.16	0.57			
Empowerment	P1	2.13	0.49	0.43***	0.39	15.87***
	P2	1.74	0.70			
Commitment from staff	P1	1.88	0.53	0.58***	0.29	14.01***
	P2	1.59	0.67			
Total scale	P1	2.31	0.33	0.45***	0.27	17.20***
	P2	2.04	0.45			

Note: *** $p \leqslant 0.001$

Among the indicators of structure variables, only the significant ones in the bi-variate analysis were further included in the regression model to increase the ratio of the number of independent variables and cases, thus increasing the stability of results.

Correlates of attitude towards PRP

The results of the bi-variate analysis are presented in Table 4. The regression analysis further revealed the significant correlates of PRP after considering other variables (see Table 5). The adjustment R^2 (9.5%) for the entire model was significant; however, it was relatively low. Structural variables had the highest correlation with the attitudes (R^2 increment = 7.6%). After controlling for other variables, four variables appeared to be significant: type of profession, attending a conference, law and regulations related to rehabilitation, and emphasis on rehabilitation-treatment plan. Compared with OT, doctors agreed less with PRP. Professionals who attended conferences were more likely to agree with PRP than those who did not. Those who agreed with PRP tended to feel that national policy and regulations were not supportive enough to PR. A hospital's emphasis on PR in the treatment plan correlated with more favorable attitudes toward PRP. Among the significant variables, 'emphasis on rehabilitation-treatment plan' ($\beta = 0.212$) was the most important correlate of attitude.

Correlates of enactment of PRP

The results of regression analysis indicated that the model was important in explaining the level of enactment of PRP (adjusted $R^2 = 40.9\%$, see Table 6). Each R^2 increment between

Table 4
Bi-variate analysis on correlates of attitudes towards and enactment of PRP

Dependent variables	Attitudes	Enactment
Demographic variables		
Sex	NS	N.S.
Age	$r = 0.10^{**}$	$r = 0.18^{***}$
Education	$F = 4.12^{*}$	N.S.
Professional background		
Type of hospital	$F = 4.96^{**}$	$F = 16.77^{***}$
Type of professions	$F = 3.37^{**}$	$F = 2.85^{**}$
Work tenure	$r = 0.09^{*}$	$r = 0.18^{**}$
Years after graduation	$r = 0.12^{**}$	$r = 0.18^{**}$
Training experience		
Attend conference	$t = -4.70^{***}$	$t = -7.43^{***}$
Attend courses	$t = -3.55^{***}$	$t = -7.75^{***}$
Reading articles/books	$t = -3.96^{***}$	$t = -8.31^{***}$
External structure		
Policy orientation	$r = 0.02$	$r = 0.06$
Law and regulations	$r = -0.12^{***}$	$r = 0.04$
National insurance coverage	$r = -0.14^{***}$	$r = -0.04$
Sufficiency of insurance payment	$r = -0.14^{***}$	$r = -0.03$
Sufficiency of rehabilitation programs	$r = -0.14^{***}$	$r = -0.05$
Amount of rehabilitation grant	$r = -0.15^{***}$	$r = -0.06$
Sufficiency of rehabilitation agencies	$r = -0.12^{**}$	$r = 0.05$
Sufficiency of rehabilitation capacity	$r = -0.14^{***}$	$r = 0.02$
Internal structure	$r = 0.07$	$r = 0.20^{***}$
Treatment approach	$r = 0.03$	$r = 0.21^{***}$
Sufficiency of rehabilitation facility	$r = 0.20^{***}$	$r = 0.32^{***}$
Emphasis on rehabilitation–treatment plan	$r = 0.06$	$r = 0.28^{***}$
Emphasis on rehabilitation–discharge plan	$r = 0.01$	$r = 0.17^{***}$
Decision power on discharge plan	$r = 0.09^{*}$	$r = 0.18^{***}$
Support on rehabilitation from the head	$r = -0.09^{*}$	$r = 0.07$
Sufficiency of rehabilitation manpower		
Attitudes towards PRP		$r = 0.45^{***}$

blocks was significant. Age, sex, type of profession, attending courses, reading articles/books, emphasis on rehabilitation–discharge plan and attitude toward PRP were significant predictors of enactment. Females enacted PRP more than males. Doctors enacted less than OT. Those who attended courses or read articles/books enacted more than those who did not. The more hospital emphasis on rehabilitation in the discharge plan, the higher the level of enactment of PRP. Higher attitudinal scores on PRP was positively associated with enactment. According to the standardized regression coefficient, attitude was the most important predictor of enactment ($\beta = 0.384$), with 'emphasis on rehabilitation-discharge plan' the second and age the third.

Table 5
Regression analysis on attitudes towards PRP ($N = 651$)

Predictors	B[a]	SE B	β[b]
Block 1: Demographic variables			
Age	0.003	0.002	0.061
Sex (1= M, 2 = F)	−0.019	0.038	−0.023
Professional Background			
Type of hospitals			
Local hospital	−0.054	0.034	−0.081
Psychiatric hospital	−0.008	0.040	−0.011
Type of profession			
Doctor (1)	−0.157	0.055	**−0.165****
Nurse (1)	−0.068	0.044	−0.103
Psychologist (1)	−0.036	0.058	−0.033
Social Worker (1)	−0.072	0.055	−0.071
Education			
High school (1)	−0.033	0.102	−0.014
College (1)	−0.080	0.041	−0.009
Block 2: Training experience			
Attend conference (1 = No, 2 = Yes)	0.079	0.038	**0.115***
Attend course (1 = No, 2 = Yes)	0.006	0.035	0.009
Reading article/book (1 = No, 2 = Yes)	0.003	0.037	0.004
Block 3: Structural factors			
1. External structure			
Law and regulations	−0.054	0.022	**−0.116***
National insurance coverage	0.022	0.028	0.057
Sufficiency of insurance payment	−0.026	0.029	−0.064
Sufficiency of rehabilitation programs	−0.032	0.026	−0.068
Amount of rehabilitation grant	0.005	0.028	0.010
Sufficiency of rehabilitation agencies	−0.007	0.025	−0.016
Sufficiency of rehabilitation capacity	−0.030	0.025	−0.070
2. Internal structure			
Emphasis on rehabilitation–treatment plan	0.083	0.019	**0.212*****
Support on rehabilitation From the head	0.009	0.017	0.024
Sufficiency of rehabilitation manpower	−0.031	0.017	−0.076
$R^2 = 12.8\%$; adjusted $R^2 = 9.5\%$; $F_{(23,\ 611)} = 3.903^{***}$			

Note: a: Unstandardized regression coefficient; b: standardized regression coefficient; * $p \leqslant 0.05$; ** $p \leqslant 0.01$; *** $p \leqslant 0.001$; Block 1 accounted for 3.6% of the variance; block 2 caused a 1.6% R^2 increment; block 3 caused a 7.6% R^2 increment.

Table 6
Regression analysis on enactment of PRP ($N = 634$[a])

Predictors	B[b]	SE B	β[b]
Block 1: Demographic and professional background			
Age			
Sex (1 = M, 2 = F)	0.010	0.002	**0.159*****
Type of hospital	0.100	0.039	**0.096***
Local hospital			
Psychiatric hospital	−0.053	0.035	−0.064
Type of profession	0.054	0.043	0.055
Doctor (1)			
Nurse (1)	−0.169	0.059	**−0.142****
Psychologist (1)	−0.027	0.046	−0.033
Social worker (1)	−0.070	0.060	−0.051
Education	−0.086	0.056	−0.068
High school (1)			
College (1)	−0.035	0.104	−0.012
	0.007	0.043	0.006
Block 2: Training experience			
Attend conference (1 = No, 2 = Yes)	0.053	0.039	0.062
Attend course (1 = No, = Yes)	0.074	0.035	**0.089***
Read article/book (1 = No, 2 = Yes)	0.129	0.039	**0.124****
Block 3: Structural factors			
Treatment approach	−0.025	0.019	−0.059
Sufficiency of rehabilitation facility	0.023	0.022	0.047
Emphasis on rehabilitation–treatment plan	0.039	0.022	0.078
Emphasis on rehabilitation–discharge plan	0.085	0.021	**0.178*****
Decision power on discharge plan	0.027	0.016	0.059
Support on rehabilitation from the head	0.006	0.019	0.012
Block 4: Attitude			
Attitudes towards PRP	0.490	0.041	**0.384*****
$R^2 = 42.8\%$; adjusted $R^2 = 40.9\%$; $F_{(20,603)} = 22.52^{***}$			

Note: a: Twelve outliers were excluded; b: unstandardized regression coefficient; c: standardized regression coefficient; * $p \leqslant 0.05$; ** $p \leqslant 0.01$; *** $p \leqslant 0.001$. Block 1 accounted for 13% of the variance; block 2 caused a 7.9% R^2 increment; block 3 further caused a 8.5% R^2 increment; block 4 caused another 13.4% R^2 increment.

DISCUSSION

Measures of PRP confirmed

The PRP scale adapted in this study was shown to have factorial construct validity with satisfactory internal consistency. The factor analyses confirmed seven main principles proposed by Cnaan *et al*. (1990), and the items concerning recovery merged with Cnaan *et al*.'s PRP (1990) into two main principles: *utilizing recovery strategy* and *recovery-oriented helping relation*. Thus, Cnaan *et al*.'s PRP (1990) are partly confirmed in this study; the new version in this study adds emphasis on recovery principles. This measure could be used in future studies for further tests of its psychometric properties, including test–retest reliability, concurrent

validity and discriminant validity. For practice usage, the 'utilizing recovery strategy' seems to be a useful short version of PRP (see Table 2). It could be used as a test for the recruitment of persons with recovery orientation, and as an outcome measure of training evaluation.

Agreement and enactment of PRP

The findings revealed that the hospital professionals held more favorable attitudes toward and enacted more on principles concerning strengths perspective, recovery strategy and helping relation, which is a good basis for further advocacy of such concepts and practices. They agreed and enacted less on flexible, informal and environmental intervention, empowerment, and social change, especially on 'commitment from staff' and social change. Compared with the values and principles proposed by Anthony and colleagues (2002), psychiatric professionals in Taiwan lack commitment on environmental specificity, enhancing functioning and consumer involvement and choices.

Discrepancies between attitudes towards and enactment of PRP

The discrepancies between attitudes and enactment were mainly on environmental intervention, empowerment and social change. The results are worrisome because without bringing in environmental resources and working with consumers in a more flexible way, the outcomes of PR interventions would be less promising. Consumers need continuous social support to maintain community living, and an informal style of interactions reflecting partnership would instill hope and could be empowering. Moreover, without advocating the social acceptance of and social opportunities for the consumers, their journey to recovery will be bumpy and difficult.

Correlates of attitudes toward and enactment of PRP

The results support the argument of Payne (1997) and Chang (1998) in terms of the contextual influences and training effects on attitudes and enactment. The importance of training also confirms the findings of Casper *et al*. (2002) but contradicts their findings on professionals' affiliation. This study found that doctors held less favorable attitudes toward and enacted less PRP than OT. In addition, age and sex were significant for enactment of PRP but not for attitudes, which is not consistent with the findings of Borkin *et al*. (2000).

The hospital's emphasis on PR in the treatment plan correlated with more favorable attitudes towards PRP. Furthermore, the level of enacting PRP mainly correlated with professionals' attitude and whether a hospital emphasizes PR in a discharge plan. Thus, the internal structure of a hospital is crucial for the level of enacting PRP, particularly on the treatment plan and discharge plan. In Taiwan, hospital services mainly focus on symptom control and there is a lack of rehabilitation emphasis in the treatment and/or discharge plan. In addition, doctors usually hold the highest decision-making power among professionals. Nevertheless, the findings in this study showed that doctors held less favorable attitudes towards and enacted less PRP than OT. Thus, to enhance the enactment of PRP, especially on environment intervention and empowerment, doctors are the primary target for advocacy and related trainings.

The findings of this study suggest that attending conferences, courses and reading articles/books related to PR might be helpful for changing professionals' perceptions and behaviors towards PR. Moreover, the target could be on doctors, males and younger professionals. The

lack of agreement with and enactment of macro-related PRP could be due to the lack of competencies or structural barriers as mentioned above. Future training activities could arrange more courses on such topics. Continuous advocacy for the increase of resources for rehabilitation services might be helpful in enhancing positive attitudes toward PRP.

Contributions and limitations

This is the first large-scale study on attitudes towards and enactment of PRP in Taiwan, although it is not based on a random sample. In particular, the analysis of discrepancies between attitudes and enactment might contribute to this issue because it has not been examined in previous studies. The return rate of 23.48% is acceptable and the sample size (743) is large enough. However, the sample overrepresented social workers, psychologists and OT, and underrepresented doctors and nurses. The composition of disciplines might have effects on the results in terms of attitudes and enactment because different disciplines' perspectives and expertise may vary significantly. Despite this, doctors and nurses together still accounted for almost 65% of the sample. Moreover, the overrepresentation of the other disciplines made the comparisons between disciplines possible. In addition to confirming the effects of training (knowledge) on attitudes (Casper *et al*., 2002), the study explored more potential correlates of attitudes and enactment, and demonstrated the importance of national policy and hospital structures for the issue in question. Nevertheless, the relatively low R^2 (9.5%) within attitudes implied the need for including other important predictors in this study. Finally, the analyses examined only the correlation between the variables instead of the causal relationship. Future studies could further explore how professionals' attitudes are formed.

NOTE

1. Based on Nunnally's formula (1978), to achieve $r \geqslant 0.8$, the number of items needs to be increased to 6 for the 'empowerment' dimension, and 7 for the 'commitment from staff' dimension. His formula is: $K = r_{kk}(1 - r_{ii})/r_{ii}(1 - r_{kk})$.

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