Implementation of Diagnosis-Related Mental Health Programs: Impact on Health Care Providers

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Abstract
Mental health services are in the midst of change in different countries. In Quebec (Canada), the government has adopted a Mental Health Action Plan (2005-2010). In this context, 2 psychiatric institutions have developed and implemented a mental health services organization model based on diagnosis-related mental health programs and support for frontline services. This article presents the impact on health care providers of implementation of diagnosis-related mental health programs in the context of transformation of mental health services.

According to the World Health Organization (WHO), mental disorders, in 1998, represented 23% of years of life lived with a disability compared with 15% in 1990. By 2020, depression will become the leading cause of disability for the general population. Mental disorders currently rank second after cardiovascular diseases and ahead of cancer, when one accounts for mortality and morbidity and the duration of the disabilities they cause. According to the WHO, some countries have started to reform their health care system or are in a position to do so. Moreover, the WHO (WHO Regional Office for Europe) considers that developed countries such as Canada should establish more differentiated mental health services: (1) services mostly delivered on the front line with the support of specialized services and shared care in mental health, (2) timely hospital care, (3) patient-focused specialized walk-in clinics if resources allow, (4) outreach community care services, (5) residential resources with support for housing, and (6) support for employment. It should be noted that the WHO describes 3 phases in the development of mental health resources, the asylum model (phase 1), the community psychiatry model (phase 2), and the differentiated care model (phase 3). This article presents a transformation of the organization of mental health services with the aim of moving from phase 2 to phase 3.

The Quebec Ministry of Health has identified mental health as a priority line of intervention. Consequently, it developed a 2005-2010 Mental Health Action Plan, which favors public access to care, continuity of services, quality of care, effectiveness and efficiency of the health care system, and hierarchization of care, informed by evidence base. Priority development of community services, readily accessible for the entire population, is therefore at the basis of the plan, with support and judicious use of second-line (specialized) and third-line (ultraspecialized) services. In this context, health care providers and managers of 2 psychiatric institutions in Montreal, Canada, a psychiatric outpatient department of a university hospital and a mental health hospital, respectively, developed a second- and third-line mental health services organization model based on patient-focused care (diagnosis-related mental health programs) and support for frontline services. These models were developed in 2005 by different groups of actors and are based on common guiding principles, such as accessibility, continuity, the practice of shared services, evidence-based practices, partnership, interdisciplinarity, and hierarchization of services. 2-4 Patient-focused care consists of organizing resources by grouping them around common characteristics such as diagnoses (affective disorders, schizophrenia disorders, etc) and needs exhibited by the target clientele.9 The objectives of patient-focused care are as follows: (1) place the client and his/her immediate family at the center of the organization, (2) organize the environment based on specific groups of patients, (3) give the health care providers the necessary latitude to plan and perform their work to provide the best response to the patient’s needs and improve the processes, and (4) control costs by improving efficiency.10

Tidjans and Streeten 11 showed that patient-focused care, by reducing the number of health care providers who interact with clients, can reduce costs and increase client and health care provider satisfaction. However, Globerman et al.12 report that...
THEORETICAL FRAMEWORK: PSYCHOSOCIAL WORK ENVIRONMENT

The conceptual framework used by this study is based on 2 models, the Job Strain Model 16 and the Effort-Reward Imbalance (ERI) Model. 17 The 2 dimensions defined by the Job Strain Model are the following: psychological demands (amount of work, complexity of work, and time constraints) and decision latitude (the ability to use one’s qualifications and develop new job skills and the opportunity to choose how to do one’s work and to influence related decisions). The concept of social support has been included in the model to take into account the support of superiors and colleagues. 18 The Job Strain Model 16 is based on the assumption that job strain results from the combined effects of increased psychological demands and low decision latitude in the workplace and consequently increases health risks among health care providers. Social support obtained from both colleagues and superiors is supposed to moderate the effect of job strain. As for the ERI Model, 17 it is based on the hypothesis that a work situation with a high degree of effort expended combined with little reward received (money, esteem, and career opportunities) can have pathological effects on the health of employees.

METHODS

A multiple-case study approach using concurrent mixed methods of qualitative and quantitative research was used for this study. 19, 20 The main objective of the transformations in both cases was the establishment of diagnosis-related mental health programs to develop a specialized (second line) and ultra-specialized (third line) care and services model in mental health. On the one hand, this objective consists of reviewing the organization of mental health services to resolve problems such as reduction and inefficient use of professional resources, the diversity of care practices (nonstandard practices), and the services offered. On the other hand, these changes in clinical services are consistent with the external context of the Mental Health Action Plan 13 (ie, improving the psychiatric health institutions and university psychiatry departments transfer human resources and a certain number of patients who do not require specialized (second line) and ultra-specialized care to frontline teams working in local Health and Social Services Centres (community).

The first case involves the department of psychiatry of an academic hospital where mental health is one of the 7 clinical missions. The department includes 125 health care providers (nurses, psychologists, psychiatrists, social workers, occupational therapists). This transformation to a diagnosis-related mental health programs is part of the merger of 2 psychiatric outpatient clinics on a single site. The second case concerns the mental health outpatient services of a psychiatric hospital center. This center's outpatient clinics include more than 240 mental health practitioners. The organizational transformation resulting from the patient-focused program has the aim of regrouping several psychiatric outpatient clinics to the hospital site and regroup patients by diagnostic instead of clinical sectors.

PARTICIPANTS

The study was approved by each health center’s research ethics committee. The participants were recruited through a mailing list obtained from the organizations. Those who participated in the study were currently working in the programs. A total of 125 health care providers in case 1 and 240 in case 2 were invited to participate in this study. At the beginning of development of the program at time 0 (April 2006 for case 1 and October 2006 for case 2) and time 2 (April 2008 for case 1 and April 2009 for case 2), potential participants received a consent form and a letter of information by mail inviting them to participate in the study along with a self-administered questionnaire and an enclosed stamped envelope. For case 1, a total of 57 questionnaires were completed at time 0 (45.6%) and 44 at time 2 (25.3%), whereas 24 respondents completed the questionnaire both at time 0 and time 2 (19.2%). Among this group, the mean age of the respondents was 49.3 (SD: 12.02) years, and average time within the current position was 17.0 (SD: 10.88) years. Of this group, 33.3% were psychiatrists, 33.3% nurses, 8.33% psychologists, 16.7% occupational therapists, and 8.33% social workers.

Concerning case 2, a total of 107 questionnaires were completed at time 0 (42.1%), and 97 at time 2 (80.45%), whereas 38 respondents completed the questionnaire both at time 0 and time 2 (15.8%). The mean age of the respondents was 50.7 years (SD: 9.25), and average time within the current position was 19.5 years (SD: 10.87). Among this group, 23.7% were psychiatrists, 21.0% nurses, 23.7% psychologists, 13.2% occupational therapists, and 13.2% social workers, whereas 5.3% of the participants did not mention their type of work. All potential participants from each case were invited to take part in focus groups at the beginning of the organizational transformation, or time 0, after 1 year (time 1), and after 2 years (time 2) (Tables 1 and 2).

DATA COLLECTION

For quantitative data, the use of self-administered questionnaires allowed measurement of psychological distress, job strain, recognition, and use of evidence. For qualitative data, a semistructured interview guide served as the data collection tool for the focus groups. The main themes addressed were the context, the level of implementation, and the effects of the organizational transformation. 21-23

MEASUREMENTS

Psychosocial work environment
The Job Content Questionnaire (JCQ),16,14 is a self-administered instrument designed to evaluate the social and psychosocial job characteristics. The dimensions included in the JCQ are (a) decision latitude, (b) psychological demands, and (c) social support. All these dimensions are used to measure the high-demand/low-support model of job strain development. The validity of the 2 scales from the original English version, that is, the Psychological Demand Scale and the Decision Latitude Scale, has been well documented.16,25 The psychometric qualities of the French version used in this study were evaluated with a representative sample of workers in Quebec (n = 1190). The internal consistency values obtained in the study ranged from $\alpha$ = .68 to .85. Factor analysis also supported the bidimensional structure of the original model.24,26

The Decision Latitude Scale and the Psychological Demand Scale were each measured with nine questions.25 In the present data set, the internal consistencies, based on Cronbach coefficient ($\alpha$), were the following for the scale relative to job decision latitude: .71 at time 0 and .74 at time 2 (case 1) and .76 at time 0 and .77 at time 2 (case 2). The Cronbach coefficient estimates for the other scale (psychological demands) were .67 at time 0 and .68 at time 2 (case 1) and .68 at time 0 and .79 at time 2 (case 2).

Social support received from colleagues and superiors was measured with a 4-item subscale from the JCQ.25 The 3 components of social support were the following: sociomotional support or self-esteem, instrumental support, and hostility or conflict.25 Social support from colleagues was evaluated by using 6 items, whereas the social support obtained from superiors was evaluated by 5 items from Karasek's 35 JCQ instrument. These scales have been used in several studies with nurses and have proven to offer good psychometric properties.27,28 The internal consistencies ($\alpha$) obtained from this data set for the social support scale concerning colleagues and superiors, respectively, were the following: for case 1, there was .87 and .91 at time 0 and .85 and .88 at time 2. For case 2, Cronbach coefficient ($\alpha$) was .82 and .78 at time 0 and .84 and .89 at time 2.

**Effort/reward imbalance**

Reward was measured with 11 questions from Niehssamner and Siegrist's 29 ERI questionnaire, which targets 3 dimensions: (1) monetary remuneration, (2) esteem, and (3) career opportunities. Effort is measured with 6 items that describe demanding aspects of the work environment.30 Results of a comparative epidemiologic investigation in 5 European countries validated psychometric properties of the scales used to measure effort-reward imbalance at work.30 Based on Cronbach coefficient ($\alpha$), the internal consistencies of case 1 were as follows: .77 for effort and .75 for reward at time 0 and .77 and .81, respectively, at time 2. For case 2, the internal consistencies were the following: .72 for effort and .75 for reward at time 0, respectively, and .81 and .79 at time 2. In the present study, the imbalance between effort and rewards was measured by a ratio computed for every respondent according to the following formula: $r = \frac{e}{r + c}$, where $r$ is the sum score of the effort scale, $c$ is the sum score of the reward scale, and $c$ defines a correction factor for different numbers of items in the numerator and denominator. The correction factor is $6/11$. As a result, a value close to zero indicated a favorable condition (perceptions of relatively low effort and relatively high rewards), whereas values beyond 1.0 indicated the perception that a high amount of effort is not met with the expected rewards.30

**Psychological distress**

Psychological distress is a risk factor for the development of more serious mental health conditions and served as the outcome of interest. In this study, psychological distress was measured with the Psychiatric Symptom Index, which was available in the French version. It consisted of 14 questions measuring the presence and the intensity of symptoms of anxiety, irritability, depression, and cognitive difficulties experienced during the previous week. For case 1, the internal consistencies, based on Cronbach coefficient ($\alpha$), were .86 at time 0 and .86 at time 2. For case 2, the internal consistency coefficient was .85 at time 0 and .89 at time 2.

**Use of evidence in a health professional's practice**

To describe and measure the use of evidence by health professionals, the research team adopted the utilization stages proposed by Knott and Wildavsky 32 and Landry et al. 33 Based on the work of these authors, an evidence utilization scale of 7 cases was developed and validated in English and in French.34 Each item conveyed a dimension of the original model.24,26

**RESULTS**

Participants in cases 1 and 2 had similar perceptions concerning the impact on implementation of diagnosis-related mental health programs. The Figure illustrates the dynamics of such a transformation with health care providers. This approach favors teamwork that allows recognition of the expertise and contribution of each member, to optimize autonomous practice. However, the success of this approach in the context of transformation in mental health becomes dependent on the
The results of this study show that a transformation to patient-focused care structural organization leads the health care providers to work in a team in each program. The transformation requires much energy and is a stressful event for some participants and they find this stimulating. There were exchanges between team members and complementary expertise that allows the mental health practitioner to be supported by a care team and not be alone in managing a patient. This approach offers excellent management of clients with more complex needs. The clients are exposed to a wide variety of health professionals. The members of the care team develop their own identity as a team, which requires time to adapt. The challenge consists in integrating people from different schools of thought and different care practices, coming from different environments. Communication between the members of the care team is one strategy to develop continuity of information in patient management. A few case 2 participants felt little involved in the process and decisions leading to the transformations. The lack of information and exchanges with superiors posed an obstacle to their participation in the change. For case 1, the scores at time 0 on the "social support from colleagues" and "social support from superiors" variables were not significantly different than the scores at time 2 (Table 3). For case 2, the scores at time 0 on the "social support from colleagues" variable were significantly lower than the scores at time 2. The scores at time 0 on the "social support from superiors" variable were significantly higher than the scores at time 2 (Table 4).

**DISCUSSION**

This article describes the results obtained from analyses of questionnaires and focus groups on the effects on health care providers of implementation of patient-focused care (diagnosis-related mental health programs) in the context of a transformation of mental health services. In general, the results of the quantitative and qualitative analyses show that an organizational transformation within mental health hospital centers is a stressful event for the mental health practitioners, even though their perception of the effects is positive. The results of this study show that a transformation to patient-focused care allows each practitioner of a care team to have his/her own individual identity and recognition of his/her competencies as a mental health practitioner. According to some authors, a person's identity is constructed by recognition from others, including the public sphere (work). Moreover, working in a team in each program allows the health care providers to be supported. As mentioned by O'Herron and Jalbert, if a patient-focused care structural organization leads the health care providers to work...
as a team instead of focusing on providing primary care. The results obtained from this study regarding the decision latitude of health care providers and care practices go in the same direction as those obtained by Cassidy,38 Johnson and Miller,39 and Lee et al.40 According to them, the implementation of the patient-focused care system provides many benefits. These include increased responsibility and more power for health professionals, organizational structures that meet the patients’ needs better, a reduction of caregivers’ travel time, better continuity of care, and shorter hospital stays. In addition, other authors41 consider that the implementation of a patient-focused care program results in valorization of the work of health professionals (nurses and pharmacists), because their skills are widened and they are given more responsibilities and autonomy in return. The patient-focused care program also allows them to acquire the necessary tools to provide high-quality care. Finally, many studies show that the implementation of the patient-focused care program leads to better communication between physicians and other health professionals and causes physicians to provide better care to patients.41-44 Although the perception of autonomy is positive, a reduction in decisional autonomy was noted for 1 group of mental health practitioners in 1 case. There is reason to believe that this group, based in an institution where mental health is 1 of 7 missions, is dependent on the other missions and disciplines for the allocation of professional and financial resources. This situation leads to challenges between the missions, given their different modus operandi. As mentioned by Brathwaite,45 resources and staff must organize around the patients instead of around departments or disciplines, based on the patients’ needs rather than the organization’s needs. Also, this transformation is unfolding within the context of the Mental Health Action Plan, which is based on the transfer of patients and health care providers to the front line. The frontline health services are also going through transformations and must prepare to receive a mental health clientele. To ensure a successful transformation by the second- and third-line specialized and ultraspecialized programs, the front line must be transformed at the same pace and must be ready to receive the patients. Negotiations and discussions among multiple partners are still under way to accomplish this complex transformation in a mental health services network.

The implementation of the patient-focused care program has brought about many positive changes for Pavillon Albert-Prévost, Sacré-Cœur Hospital, a center of excellence in psychiatry affiliated to University of Montreal (Canada). The patient-focused care program was implemented from 1996 to 2003. As in the case of Pavillon Albert-Prévost, the results obtained from the 2 cases in this study show that the transition to patient-focused care management has also led to better integration and better sharing of responsibilities between partner institutions and agencies, but with increased caseloads, no more time was available for research and training.6

Although positive results were identified in our study, there is an increase in psychological distress among some of the participants. These results are close to those obtained by Jenner.46 According to Jenner,46 patient-focused care means that nurses have a broader field of responsibilities and consequently report a higher stress level related to multiple tasks and their increased responsibilities. Other authors also mention that, during organizational changes, the health care providers’ psychological stress increases, as do emotional fatigue and absenteeism.27-40 Finally, an increase is noted in support from colleagues and a reduction in support from superiors for health care providers in one of the cases, where the transformation was implemented throughout the institution. A change in a big organization leads to multiple challenges. According to Gilbert,49 being through a major change is never easy, neither for senior executives nor for the employees at the base of the organization. Even though management planned the changes over several years in partnership with the teams, the change was radical; that is, it occurred on a specific day when most mental health practitioners changed teams, patients, and physical locations. Thus, there is reason to believe that the employees went through a lot of changes and felt less supported by their superiors and that it is necessary to allow health care providers enough time to master this change and improve their competencies before they can experience new changes.30

CONCLUSION

This study shows the complexity required by a transformation of mental health services involving all the partners of the continuum of care. Second-line patient-focused care seems to be an avenue to favor. The results obtained from this study concerning the effects of implementation of the patient-focused care program generally inform us about the different aspects affected by this type of implementation. Improvements are noted in relation to the work environment and practices. However, these transformations require a lot of energy and are very stressful for mental health practitioners. It is important to continue the involvement with mental health practitioners and maintain good relations with the different health care partners.

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force des items. Gouvernement du Québec; 2005. [Context Link]
35. Carpenter-Roy M-C. Corps et âme: psychopathologie du travail infirmier. Montréal, Canada: Liber; 2000. [Context Link]
37. D'Amour D, Labbert Y. Le gestion par programme clientéle: influence sur les soins...


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