

Treating Severe Mental Illnesses and Comorbid Medical Conditions in the Primary Care Setting: An Idea Whose Time has Come

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Abstract.

The mortality of patients with comorbid serious mental illness (SMI) and diabetes (DM) is high. In this pilot study in patients with SMI and DM, the effect of group work using the strategy of “targeted training in illness management” with nurse educators and peer educators was examined. The results indicated that improvements in the outcome of both the serious mental illness and the diabetes might be achieved with this approach.

Introduction

Individuals with serious mental illness (SMI), (schizophrenia/schizoaffective disorder, bipolar disorder or major depressive disorder), die earlier than individuals in the general population, losing on average, 9-32 years of life (1,2). Much of the premature mortality among persons with SMI is due to medical comorbidities, such as diabetes (DM), which has achieved epidemic proportions (3), complicates both psychiatric and medical health outcomes and inflates costs (4-6). SMI patients often rely on primary care settings for the treatment of comorbid medical conditions, yet studies conducted on management of psychiatric care and medical care in SMI patients have generally focused on patients recruited from mental health care sites (7-9).

We developed and tested a psychosocial group-format treatment targeted for SMI participants with DM, and adapted it to the primary care setting. The treatment blended psycho-education, problem identification, goal-setting, and behavioral modeling/reinforcement. A key feature of this 16-week intervention, Targeted Training in Illness Management (TTIM), was the use of a Nurse Educator, as well as a Peer Educator with both SMI and DM, to teach and model self-management for these concurrent conditions. After 12 group sessions were completed in the pilot, individuals participated in a 4-week maintenance period consisting of 2 telephone sessions (spaced about 2 weeks apart) with the SMI Peer Educator and 2 telephone sessions (spaced about 2 weeks apart) with the Nurse Educator.

In this pilot trial (N=12), TTIM was associated with significant improvement ($P<.05$) in symptoms of depression, functioning, role impairment and physical health status when compared with baseline values. While it is not surprising that mean BMI and HbA1c did not statistically improve over the 16

weeks, analysis of HbA1c in particular was promising. Eight (67%) participants had improvements in HbA1c at week 16, one of the subjects with controlled diabetes stayed the same, and three subjects had slight increases. Among those who had improvements in HbA1c, the average change was a clinically important reduction of 0.83 (SD= 0.74.) (10)

While these quantitative results of the pilot trial provided information on whether the intervention had an influence on patient health outcomes, we went beyond the question “Can the intervention influence outcomes?” to ask questions from the patients’ perspective: “How did the intervention influence outcomes and how did it influence the lives of the study participants?” (11)

Methods

Qualitative methods, consisting of focused in-depth interviews, were used to address these questions in 8 of the 12 participants of the TTIM pilot at the 16-week follow-up point. This sample size is within the recommended range for individuals experiencing the same phenomenon (12). We also interviewed the interventionists (Peer and Nurse Educators) to explore from their perspectives, the processes and dynamics that took place during the sessions. In in-depth interviews, the goal is to explore a topic more openly and to allow interviewees to express their opinions and ideas in their own words. Therefore, participants were given as much latitude as possible to describe their lived experience of being part of this study. All interviews were audio-taped and transcript-based methodology was used to analyze the data. We used a grounded theory approach to data analysis, encompassing open, axial and sequential coding, and the constant comparative method to generate constructs (themes) and elaborate the relationship among constructs (13).

Results

How did the intervention influence outcomes?

As presented in Table 1, analysis of the data revealed that the chief “mechanisms of action” of TTIM appeared to be increased illness knowledge, self-confidence and motivation. These mechanisms translated into improved self-management of their co-morbid conditions.

Table 1. Mechanisms of Action: Illustrative Quotations from Participants in the TTIM Pilot

Increased Illness Knowledge	<i>“Well I know that schizophrenia is a chemical imbalance in the brain. I know that it can’t be cured, but by me taking medications and seeing my psychiatrist and learning about my disease, I can get better.” Informant #2</i>
	<i>“I know that you have to regulate your blood sugar which is called blood glucose and if you’re on insulin you have to take it regularly.” Informant #5</i>
	<i>“I have more information and know what to look for and am more confident in why I’m doing what I’m doing which helps considerably.” Informant #8</i>
Increased Self-Confidence	<i>“I feel much more confident about managing the diabetes and I feel a little bit more confident about managing the depression.” Informant #1</i>
Motivation	<i>“I’m making a conscious effort to get more exercise. Before I was just doing it because I had to do it. Now if I don’t have to go somewhere, I still go out and exercise.” Informant #6</i>
Improved Self-Management of SMI and DM	<i>“I might have another personality pop up or something like that, but I now know how to handle it better. I can either read, or write, or watch TV, clean, do something when the time comes, pick up the phone, call somebody, let someone know!” Informant #4</i>
	<i>“I know now that I have to have a plan, that’s why I’m on a diet, knock on wood. So when I get back home, I’m gonna have baked pork chops. I’m not going to fry them!” Informant #3</i>

How did the intervention influence the lives of the study participants?

Many of the informants felt that they were now more accepting of having SMI and diabetes:

"I have a new different outlook on the way I feel about mental illness. I accept it more now. People become alcoholics, you know, and they can't accept it and that's the way I felt about being schizophrenic. I didn't want to accept that I was schizophrenic because I thought people would look at me different- I'm crazy you know and stuff like that. But today I can accept who I am and take a good look at the changes I performed from where I used to be to where I am now." Informant #5

Group interaction and social support from the TTIM classes reduced feelings of loneliness, isolation, and alienation:

"The people that was there, we all talked, we shared each others' experiences, and that was so amazing to me. It's finally knowing some people out there that really is suffering like I'm suffering and thinks the same things, and being on psych meds and stuff like that, because I thought I was the only one." Informant #3

"Other people even have more severe problems than I do. It's very difficult to explain but it kinda made me feel that not only am I not the only one, but there are other people too and like I felt that I would be letting them down if I didn't try to do the best I could." Informant #1

Informants were also confident that they had more control of their daily lives because of the program:

"I can now identify symptoms of when I'm about to go into a depressed cycle. In fact I used those just recently, two or three weeks ago, to contact my doctor and she adjusted the medication accordingly." Informant #4

"I ordered the diabetes cook books so I can learn what to eat, what not to eat and you know, the amounts. Oh yeah, I check my sugar at least four times a day." Informant #2

Critically, informants now understood that one co-morbid condition can affect the other:

"Well one condition affects the other, like once your sugar is out of control you get to thinking all crazy and you know you just can't stay focused, and then you can go off to another zone and when I get depressed, I don't want to take my medicine, why try to take my other medicine? So they both play into each other." Informant #8

The processes and dynamics that took place during the sessions.

The nurse educator described the group process as empowering:

"It was so exciting when after probably about the third class in, people really had bonded with each other and when I saw some of the patients who had been quiet, who'd been a little reserved opening up and especially when we did the role playing, and the one patient used the word empowerment. I just about jumped out of my seat. It's just a wonderful thing for an educator to feel that they've actually empowered somebody, especially these patients who because of the stigma of mental illness, have socially isolated themselves a little bit, you know, they don't open up to much. So it was a wonderful thing!"

Peer leaders facilitated cooperative learning and added to the dynamics of the group sessions:

"It's very easy for me (diabetes nurse educator) to stand up there and say, you should do this, and you should do that, and this is a sign of this and this- but I haven't experienced what people with mental illness experienced, so having the peer leaders there that could jump in and say that she had also experienced it and explain how she handled it really added to the reality. And a lot of times that got more discussions started."

Discussion

These qualitative findings from a pilot uncontrolled trial of a psychosocial intervention (TTIM) targeted towards improving active patient illness self-management among individuals comorbid for SMI and DM found that the individuals had positive effects on both mental and medical disorders. Individuals attributed improved illness knowledge, self-confidence and motivation as key factors that translated into improved self-management.

Given the growing recognition of the synergistic negative effects of DM and mental illness, it is critical that individuals with these comorbidities receive treatment that addresses both of these issues concurrently. Pan and colleagues (14) recently published a prospective cohort study (N=78, 282) that evaluated the individual and joint effects of depression and DM on all-cause and CVD (cardiovascular disease) mortality rates. Individuals 54-79 years of age were followed from 2000 to 2006. During 6 years of follow-up (433,066 person-years), 4654 deaths were documented, including 979 deaths from CVD. The age-adjusted relative risks (RRs) (95% confidence interval) for all-cause mortality were 1.76 (1.64-1.89) for women with depression only, 1.71 (1.54-1.89) for individuals with diabetes only, and 3.11 (2.70-3.58) for women with both conditions. The combination of depression with a long duration of diabetes mellitus (ie, >10 years) or insulin therapy was associated with a particularly higher risk of CVD mortality after multivariate adjustment (RRs, 3.22 and 4.90, respectively). Clearly, the coexistence of these conditions puts individuals at particularly high risk for premature mortality.

Implications for Primary Care Practice

The primary care medical clinic setting offers a logical venue for teaching skills necessary to manage both mental health and medical care, and for facilitating the linkage of mental health and medical care for complex comorbid SMI patients. Primary care sites offer an opportunity to identify and work with patients with a mental disorder who may not be willing to seek mental health care. DM management is most often handled separately from other health counseling in primary care clinics, often with DM educators on staff. Training DM educators to work specifically with SMI individuals with comorbid DM utilizes existing clinic resources and facilitates better care of patients who may be most at risk for negative outcomes.

In conclusion, comorbid SMI and DM cause extensive suffering and premature mortality. Psychosocial interventions that empower individuals and allow them to self-manage their mental and medical comorbid disorders better can be readily and successfully implemented in primary care settings using existing staff. Larger and controlled trials are needed to confirm the positive findings from this pilot work.

GP comment

What have I learned from this paper?

1. Comorbid diabetes and severe mental illness can reduce life expectancy far more than either condition on its own.
2. Although this was a pilot study in a different culture, the results are very encouraging in suggesting that intervention by a nurse educator and peer educator might improve management of both the diabetes and the mental illness.
3. If these results are borne out by further large studies, they could have considerable implications for general practice, although the best way of organising the appropriate 'targeted training in illness management' in our setting would need to be determined.

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