The current study aimed to (a) evaluate the effectiveness of motivational interviewing, as applied by a community mental health team (CMHT) based in Singapore; (b) reduce hospital admissions and length of hospital stay; and (c) improve global functioning and satisfaction of individuals with mental illness. The current study used a quasi-experimental method. A convenience sample of 120 participants was selected from the caseload of the CMHT. Participants received motivational interviewing sessions at least once every month for 1 year. Data on the number of hospital admissions, length of hospitalization, Global Assessment of Functioning, and patient satisfaction were collected at baseline and 6 and 12 months. Participants who underwent the CMHT services with motivational interviewing were more compliant to treatment, resulting in significant reduction in hospitalization and improvement in functionality. Motivational interviewing is effective in facilitating better illness management for patients in the community. Adoption of the motivational interviewing approach may potentially provide significant benefits for psychiatric support services in the community. [Journal of Psychosocial Nursing and Mental Health Services, 53(12), 28-37.]
The importance of motivation in behavior change within the mental health care setting has garnered increasing research attention in recent years. In particular, motivational interviewing is an approach that has gained popularity in its use as a brief, long-term, and supplementary intervention. Motivational interviewing is a “collaborative, person-centered form of guiding to elicit and strengthen motivation for change” (Miller & Rollnick, 2002, p. 130).

Motivational interviewing attempts to increase patients’ awareness of potential problems caused by their behavior, consequences experienced from it, and risks faced as a result. Patients may also try to envision a better future when the behavior is changed and thus become increasingly motivated to achieve it. In doing so, the community mental health team (CMHT), psychiatric nurses, and allied health workers use non-didactic counseling skills, such as asking open-ended questions and using reflective listening, and direct the discussion to focus on ambivalence and its resolution (Miller & Rollnick, 1991).

The current study aimed to investigate the effectiveness of motivational interviewing used together with CMHT services administered to patients with mental health problems during home visits (each session lasting 1 hour). In supporting CMHT services, motivational interviewing was the technique provided to enhance family support and psychoeducation and follow up given by psychiatric nurses and allied health workers. It is likely for patients to experience relapses, high readmission rates, and defaulting follow up if the service approach is not improved. Knowing about these consequences prevents distress for patients and family members, and reduces health care costs. Hence, a vicious cycle is seen if service approach is not improved as patients are currently stabilized in the hospital, but unable to reintegrate into the community due to a lack of change in behaviors and compliance to treatment. The intervention lasted more than 1 year prior to discharge from CMHT services. Evaluation was based on patients’ number of readmissions to psychiatric hospitals, their length of stay (if any), and global functioning, as well as their (and their caregivers’) level of satisfaction regarding the services delivered using motivational interviewing. The current study is the first to investigate the usefulness and applicability of motivational interviewing on mental health patients in Singapore.

MOTIVATIONAL INTERVIEWING

The spirit of motivational interviewing is to encourage collaboration, evocation, and autonomy between patients and professionals (Hettema, Steele, & Miller, 2005). Collaboration, as opposed to confrontation, allows a patient-centered partnership between patients and professionals. Instead of directing action, professionals aim to draw out patients’ own motivation and commitment toward change. This is done by using motivational interviewing strategies of resolving ambivalence and asking evocative questions that elicit change talk. Autonomy is embraced throughout the process as patients are allowed to form ideas and make decisions.

Professionals practicing motivational interviewing are guided by four main principles of evoking change: (a) expressing empathy, (b) developing discrepancies, (c) rolling with resistance, and (d) supporting self-efficacy (Miller & Rollnick, 1991). Empathy is mostly expressed through reflective listening and by exhibiting characteristics similar to Rogerian therapy (Emmons & Rollnick, 2001). Developing discrepancy involves reflection of incongruity between patients’ current behavior and their values or future goals. For this purpose, the motivational interviewing approach emphasizes giving feedback in a nonjudgmental way and asking patients’ permission to explore issues. Ideally, practitioners should give feedback that involves a number of objective parameters, such as physiological, neurological, and psychosocial characteristics, that aim to enhance motivation for change. Professionals provide facts, but making those facts personally meaningful remains a task for patients.

Hesitancy toward change is common among individuals seeking treatment or changing behavior; they are ambivalent—they want and do not want it (Hettema et al., 2005). Motivational interviewing acknowledges this ambivalence and advocates rolling with the resistance rather than directly challenging it. Rolling with resistance encourages professionals and patients to work together to explore and resolve ambivalence (Levensky, Forcehimes, O’Donohue, & Beitz, 2007). This resolution is achieved through a variety of reflective listening techniques. One such technique is amplified reflection, which works on the assumption that the oppositional tendency of the patient will lead to a withdrawal because his/her resistance and negative position is overstated (i.e., the patient will rethink his/her extreme behavior and negotiate for a reason to change) (Treasure, 2004). Double-sided reflection highlights the contradiction between what patients are currently stating and contrary statements that they have made previously (Markland, Ryan, Tobin, & Rollnick, 2005). The goal is to heighten patients’ awareness and emphasize their autonomy in the matter of change. The therapeutic relationship elicits hope and optimism in the feasibility of accomplishing change by uncovering patients’ own strengths and resources. This self-efficacy is essential in realizing sustained behavior change.
BACKGROUND

Miller (1983) first explored the use of motivational interviewing as a treatment for problem drinking. Since then, use and effectiveness of motivational interviewing as an intervention for other addictions has been extensively studied. Lai, Cahill, Qin, and Tang (2010) found that motivational interviewing was an effective tool in helping individuals stop smoking and its effectiveness was more significant when multiple sessions (≥20 minutes) were conducted. Other studies have targeted behavioral outcomes, including reduction in substance abuse (Forsberg, Ernst, Sundqvist, & Farbring, 2011) and gambling (Carlbring, Jonsson, Josephson, & Forsberg, 2010), and changes in health-related behaviors (e.g., diet, exercise, safe sex) (Bowen et al., 2002; Brodie & Inoue, 2005; Van Wormer & Boucher, 2004). Meta-analyses of studies that examined the effects of motivational interviewing on behavioral outcomes found the strongest relationships to engagement in treatment for substance abuse and addiction behaviors, whereas the impact on other behaviors showed conflicting results (Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010).

Use of motivational interviewing can be extended to promoting general health (Shinitzky & Kub, 2001). Research showed that if motivational interviewing was offered as a stand-alone intervention, its long-term effects may be enhanced by booster sessions or stepped care (Swanson, Pantalon, & Cohen, 1999). Stepped care refers to interventions that start with the least intensity, but are likely effective. With monitoring, interventions either increase or decrease in intensity depending on the needs of the patient (Bower & Gilbody, 2005). When used as a prelude to treatment, the effects of motivational interviewing appeared to endure over time, suggesting efficacy persisted in conjunction with other treatment procedures (Hettema et al., 2005).

Application of motivational interviewing for individuals with psychiatric disorders was examined by Swanson et al. (1999) as an adjunct to standard treatment (e.g., pharmacotherapy, individual/group psychotherapy, activities therapy, milieu treatment, discharge planning) during hospitalization. Their results showed significantly higher outpatient appointment attendance for individuals with dual diagnoses of psychiatric disorders and addiction. However, little research exists on the impact of motivational interviewing for individuals who are diagnosed with psychiatric disorder and do not have comorbid addictions. Use of motivational interviewing on patients with mental illness can be complicated because of severe lack of insight, as noted by Rüsch and Corrigan (2002). They explored use of motivational interviewing to improve insight and treatment adherence and found that use of the intervention can improve insight and adherence of clients with schizophrenia who were concurrently treated by specific psychotropic medications (Rüsch & Corrigan, 2002). As Jaspers (1963) explained, mere awareness of the illness is a feeling of being ill, whereas insight involves an "objectively correct estimate of the severity of the illness and an objectively correct judgment of its particular type" (p. 419). As such, insight can be seen as the internal and subjective perspective of one's illness. Hence, it stands to reason that when patients were allowed to explore their own goals and share decision in their treatment, insight would improve, resulting in better adherence (Rüsch & Corrigan, 2002).

Nevertheless, although individuals who are diagnosed with severe mental health problems may lack insight and have cognitive deficits, motivational interviewing recognizes that change occurs at different rates for different individuals (Swanson et al., 1999). Therefore, for change to occur and be sustained, especially for individuals with chronic and recurring mental disorders (e.g., schizophrenia), patient collaboration and self-responsibility is crucial in managing their own lives with greater autonomy (Corrigan, McCracken, & Holmes, 2001). To achieve this, clinicians and professionals must first help clients identify their goals. Goal assessment assures that the focus of treatment is driven by clients' own perceptions of important needs (Noordsy et al., 2002). Following goal assessment, Dades et al. (2005) described the important role clinicians play in helping individuals identify the cost and benefits of specific existing behaviors as well as planned behaviors. Benefits detail reasons why the individual should pursue a goal; costs define barriers to achieving that goal (Noordsy et al., 2002). The motivational interviewing framework seemed to support the current study and suggests a promising method to motivate change behaviors in individuals with mental health issues.

The CMHT at Singapore’s Institute of Mental Health has been providing services and treatment support to individuals living in the community for many years. The program is approved by the National Mental Health Blueprint—a ministerial initiative that
aims to improve treatment and quality of life of individuals who are diagnosed with mental illness. A primary goal of the CMHT is to improve patients’ illness self-management and treatment adherence. This goal is achieved when the team (i.e., psychiatric nurses, medical social workers, and occupational therapists) conduct home visits, medication counseling, depot injection, social skills training, occupational therapy, family therapy, recovery interventions, and motivational interviewing.

METHOD

The current study used descriptive and inferential statistics to evaluate the effectiveness of motivational interviewing in modifying patients’ behaviors in managing their illness in the community. Over a 12-month period, nurses and allied health workers (e.g., medical social workers, occupational therapists) from the CMHT visited a convenience sample of 120 participants (59% female and 41% male) and used the motivational interviewing technique in their interventions. Effects of motivational interviewing techniques on the number of readmissions to psychiatric hospitals, length of stay in psychiatric hospitals, global functioning, and level of satisfaction were evaluated.

Participants

One hundred twenty participants newly recruited to the CMHT programs comprised the study sample. Inclusion criteria for participants were: community-dwelling adults ages 18 to 65; diagnosis according to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association [APA], 2013) of severe mental illness (e.g., schizophrenia, delusional disorder, bipolar disorder); presence of symptoms and impairment that produce distress and disability in daily function; significant disability caused by severe mental illnesses that is not helped by traditional outpatient management services; and having three or more admissions and/or duration of hospitalizations of >30 days in the past year.

Exclusion criteria were organic brain disorder, acute exacerbation of symptoms, concurrent alcohol or substance abuse problems, residence in chronic wards of the Institute of Mental Health, being homeless, and other medical problems. Family was not present during the home interventions as most were working.

Individuals who declined to participate were those who also declined home visits; hence, they were not accepted to CMHT services. No data were available for dropouts.

Procedures

Patients who consented to the current study were selected from a CMHT case worker’s caseload. In the following 12 months, 32 case workers visited participants’ homes once or twice per month to provide family support, psychoeducation, and medication education using motivational interviewing. The number of visits was determined by participants’ medical or mental condition as well as the support required by family members, including financial capabilities. A structured questionnaire designed for the study was administered at baseline and 6 and 12 months.

During the initial session, the case worker provided information about the study and gave detailed explanations of the nature and purpose of the interview. After obtaining consent, a 15-minute interview with the participant was conducted in a private room at the participant’s home to complete the questionnaire. Data collected were then entered into an electronic worksheet saved on a laptop brought by the case worker. Any questions or queries were clarified.

Data Collection

Data were collected using a structured questionnaire. Case workers were briefed on the use of the instrument and trained to adopt a uniformed approach to ensure consistency in the interviewing process. An interrater reliability test of the case workers for using components of the questionnaire yielded 0.981 for the Global Assessment of Functioning (GAF) scale (APA, 2000).

Measurement Tools

The structured questionnaire used for data collection comprised four sections. Section A was a demographic profile designed by case workers, including participants’ age, sex, ethnicity, and education. Section B tracked the number of hospital admissions and length of hospital stays over a period of 1 year before and after the study began. Section C comprised the GAF scale to measure level of impairment or dysfunction associated with emotional disturbance. Based on DSM-IV (APA, 2000) criteria, the GAF scale has been widely used and reported to have good reliability and validity, including correlations with measures of overall severity of illness and relationship to rehospitalization. The GAF scale is a clinical tool that enables a rating of participants’ general functionality on a hypothetical continuum of mental health illness. The rating takes into account functionality in the psychological, social, and occupational dimensions. Scores range from 1 to 100, where 1 represents persistent danger of severely hurting oneself or others (e.g., recurrent violence), persistent inability to maintain minimal personal hygiene, or serious suicidal act with clear expectation of death; 100 represents superior functioning in a wide range of activities (APA, 2000). Section D comprised the Patient’s Satisfaction Questionnaire (PSQ; Larsen, Arktisson, Hargreaves, & Nguyen, 1979). This questionnaire comprises eight 4-point Likert scale questions targeted at measuring participants’ satisfaction level on various aspects of the program. Total scores were converted into a scale with a possible score of 100. Cronbach’s alphas for internal reliability for the scale were 0.86 (after 6 months) and 0.91 (after 12 months). Factor analyses also supported that all eight items loaded on one panel.
for data collected at 6 (factor loading range = 0.68 to 0.77) and 12 (factor loading range = 0.71 to 0.88) months when a rule of thumb of an eigenvalue >1 was used.

Permission to use the GAF and PSQ scales was sought with the current authors by the administrators of the Institute of Mental Health.

Motivational Interviewing Intervention

The motivational interviewing approach was used by case workers visiting participants and their families during the course of the current study to implement interventions such as psychoeducation and therapy. One or two visits per month were scheduled according to participants’ preferences. Each visit lasted approximately 1 hour. Case worker–participant interactions revolved around healthy lifestyle, medication issues, relationships, education, and work. Motivational interviewing was used to acknowledge and reflect participants’ concerns, encouraging them to share more and use their own abilities to solve problems. Other motivational interviewing strategies (e.g., the change ruler…0-10 [Hesse, 2006]) were used to identify the level of importance, confidence, and readiness toward change. Option menus or evoke-change statements were used to elicit change talk. Motivational interviewing strategies commonly used during these home visits included open-ended questions, reflections, double reflections, amplified reflections, roll with resistance, avoid argumentation, affirmations, evoke-change statements, action reflections, and summaries. Double reflection was defined as having statements meant to capture both sides of an individual’s ambivalence; it is a reflection of the pros and cons of change that the participant has said or hinted at saying. Typically, the two sides are joined by the phrase, “On the other hand.” Amplified reflection was defined as a reflection of what the participant said in a slightly amplified or exaggerated form. It is important to be genuine and not sarcastic. Often the amplified reflection will cause the participant to clarify or elaborate on an important aspect of what was said, especially when what was amplified revealed resistance (Miller & Rollnick, 2002).

Motivational Interviewing Training

Staff were trained in motivational interviewing by a local trainer who is a member of the Motivational Interviewing Network of Trainers (MINT) and an overseas motivational interviewing trainer. Local trainers included a doctor (L.J.-Y.J.) and nurse clinician (T.C.H.S.). Regular practices and supervision were conducted according to weekly and monthly schedules. Assessment of staff competency was conducted using One Pass coding as advised by the MINT instructor.

The current study and ethical issues were approved by the Project Director of the CMHT. Ethical issues were guided according to the hospital ethic review committee and guidelines. All participants were informed of the purpose and nature of the current study and consent was sought prior to initial assessment. Anonymity of participants was preserved.

Data Analysis

All collected data were analyzed with SPSS version 21.0. Three-way mixed design analyses of variance were computed to identify the effects of motivational interviewing, gender, and age (i.e., younger versus older; patients were divided into two groups using a mean age of 45 as a split point) on participants’ number of hospital admissions, length of hospital stay, functioning ability, and satisfaction level. Huynh–Feldt correction was used to avoid violation of assumption of sphericity.

RESULTS

Demographic Characteristics

A total of 120 participants (59.2% female and 40.8% male) were interviewed at their respective homes. Table 1 summarizes characteristics of participants.

<table>
<thead>
<tr>
<th>Variable</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>71 (59.2)</td>
</tr>
<tr>
<td>Female</td>
<td>49 (40.8)</td>
</tr>
<tr>
<td>Age (years)a</td>
<td></td>
</tr>
<tr>
<td>≤20</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>21 to 30</td>
<td>10 (8.3)</td>
</tr>
<tr>
<td>31 to 40</td>
<td>28 (23.3)</td>
</tr>
<tr>
<td>41 to 50</td>
<td>44 (36.7)</td>
</tr>
<tr>
<td>51 to 60</td>
<td>30 (25)</td>
</tr>
<tr>
<td>≥61</td>
<td>7 (5.8)</td>
</tr>
</tbody>
</table>

a Mean (SD) = 45.04 (10.30), range = 20 to 65.

Number of Hospital Admissions

Results showed that motivational interviewing significantly influenced the number of hospital admissions at a 0.05 level (F [1, 119] = 84.11, p < 0.001, ηp2 = 0.42) (Table 2). Number of hospital admissions before motivational interviewing (mean = 1.47, SD = 1.19) were found to be improved compared to post-intervention (mean = 0.37, SD = 0.83). From the interaction graph shown in Figure 1, it was concluded that male participants showed better improvement than female participants in terms of number of hospital admissions (F [1, 119] = 6.52, p = 0.01, p2 = 0.05).

Length of Hospital Stay

Motivational interviewing was found to be significant in predicting length of hospital stay (F [1, 119] = 25.82, p < 0.001, p2 = 0.18) (Table 3). Length of hospital stay post-intervention (mean = 8.96, SD = 152.49) was reduced from pre-intervention (mean = 152.49). Male participants were found to have better improvement than female participants (F [1, 119] = 5.48, p = 0.02, p2 = 0.05). Older participants were also found to
have better improvement than younger participants (F [1, 119] = 4.01, p = 0.05, \eta^2 = 0.03) (Figures 2 and 3).

Global Assessment of Functioning

In this section, two variables were found to be significant in predicting GAF, namely motivational interviewing (F [2, 119] = 3.62, p = 0.03, \eta^2 = 0.03) and age (F [1, 119] = 5.62, p = 0.02, \eta^2 = 0.05) at the 0.05 level (Table 4). GAF scores collected at baseline (mean = 64.26, SD = 9.76) were significantly lower than those collected 6 (mean = 66.43, SD = 8.63) and 12 (mean = 66.72, SD = 8.14) months after the intervention. Older participants (mean = 66.99, SD = 7.51) were also found to have better functioning scores compared to younger participants (mean = 64.54, SD = 6.58).

Patient’s Satisfaction Questionnaire

Motivational interviewing had a marginally significant effect on PSQ scores (F [1, 98] = 3.23, p = 0.08, \eta^2 = 0.03). Satisfaction scores 12 months after the program (mean = 81.06, SD = 8.89) were higher than the 6-month scores (mean = 78.98, SD = 7.95).

DISCUSSION

The aim of the current study was to investigate whether motivational interviewing could reduce patients’ number of hospital admissions and length of hospital stay, as well as improve their GAF score. The current authors wanted to evaluate whether clients were generally satisfied with the motivational interviewing intervention and sought to understand how gender and age could potentially influence these outcome variables. Pre- and post-intervention comparisons with the addition of demographic information were performed to answer these research questions.

Findings demonstrated the effectiveness of motivational interviewing in improving outcomes for all areas of measurement. In terms of hospital admissions, results showed a significant reduction after 1 year of motivational interviewing. As a directive, person-centered approach, a principle of motivational interviewing is the resolution of ambivalence toward desired behavior—in this case, treatment adherence (Miller & Rollnick, 2009). Motivational interviewing strategies encouraged participants to weigh the pros and cons of treatment adherence and take charge of their own illness management. The approach effectively helped psychiatric patients living in the community to be more treatment adherent, thereby lowering their need for hospital admissions. Similarly, in the length of hospital stay, reduction was significantly profound. Participants had better insight and adopted better coping strategies so that they were more ready to stay in the community. For the
same reason, participants’ functioning status improved slowly and their goals were met. Although participant satisfaction was not highly rated, many complimenting letters were received (Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003; Gollwitzer, 1999).

However, analysis of interaction effect suggested that the motivational interviewing intervention was more effective for male than female participants. Women may be less willing to change when they are stressed or frustrated by unexpected life circumstances (Hosseinpoor et al., 2012). Similarly, Spivey et al. (2009) noted that women’s resistance levels may potentially increase when they feel emotionally stressed.

Results also showed a significant reduction in participants’ overall length of hospital stay. Again, motivational interviewing strategies of increasing awareness and ambivalence resolution likely caused an improvement in participants’ treatment adherence. Most psychiatric patients, when asked, would readily voice their preference for staying in the community than admission into a hospital. The approach adopted by motivational interviewing effectively challenges participants to think through the consequences of poor health and illness management behaviors (Gourlan, Sarrazin, & Trouilloud, 2013). By increasing participants’ awareness of the consequences of poor management, they were thus motivated to improve self-management and stay longer in the community.

Male participants demonstrated a more significant reduction in the length of hospital stay than female participants. Recent evidence indicates women have higher rates of morbidity than men (Bird & Rieker, 1999). Women also experience higher levels of psychological distress (Gove, 1984). This is largely a result of their social role as nurturers. It has been argued that men, having highly structured or fixed roles, tend to be causally related to better health and lower rates of morbidity. In contrast, women’s roles as nurturers tend to add strain on their abilities, leading to poorer health and more illnesses (Gove, 1984; Jaspers, 1963; Van de Velde, Bracke, & Levecque, 2010).

Although the current study found motivational interviewing to be efficacious across all age groups, older participants were shown to benefit more from the approach than younger participants. This finding suggests a higher resistance among younger participants toward treatment adherence (Patel, Flisher, Hetrick, & McGorry, 2007). Older participants, being ill for a longer period of time, may have been ambivalent about treatment for a long time. Motivational interviewing, in emphasizing awareness and self-efficacy, may be more effective for older participants because it provokes an acknowledgement of the need for adherence. In addition, older participants may also have greater familiar-

**TABLE 3**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
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<tr>
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<td></td>
</tr>
<tr>
<td><strong>Within-patient effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MI</td>
<td>1</td>
<td>25.82***</td>
</tr>
<tr>
<td>MI × gender</td>
<td>1</td>
<td>5.48**</td>
</tr>
<tr>
<td>MI × age</td>
<td>1</td>
<td>4.01*</td>
</tr>
<tr>
<td>MI × gender × age</td>
<td>1</td>
<td>2.56</td>
</tr>
<tr>
<td>Error</td>
<td>116</td>
<td></td>
</tr>
</tbody>
</table>

Note. df = degrees of freedom; MI = motivational interviewing.
*p < 0.05; **p < 0.01, ***p < 0.001.

**Figure 2.** Interaction effect between motivational interviewing and gender on length of hospital stay.
ity with treatment and therapeutic requirement, and are therefore in a better position to self-manage. Findings are consistent in the categories of length of hospital stay and functioning capability.

For GAF, two main effects were found to be significant: motivational interviewing intervention and age. GAF scores collected at baseline were significantly lower than those collected at 6 and 12 months, indicating motivational interviewing strategies help in improving participants’ illness management behavior. Older participants were also found to have better functioning scores when compared to their younger counterparts. This finding suggests that as psychiatric patients get older, they become more competent in managing their condition. It may be a result of greater familiarity with treatment and methods of illness management or from having learned from experience the adverse effects of treatment nonadherence. Similarly, Callaghan (2004) found that older adults had better attitudes and more contributions to society than their younger counterparts. Younger participants may have unrealistic and untried expectations of the illness condition and its management, which may explain their poorer GAF scores.

Poor mental health is strongly related to other health and development concerns in young individuals, affecting them in many ways. The effectiveness of some interventions for individuals experiencing many mental illnesses in this age group has been well-established. However, more needs to be done to improve the range of affordable and feasible interventions. As noted by Patel et al. (2007), most mental health needs of young individuals are unmet, even in high-income countries. Young individuals may be more resistant to psychiatric treatment and are higher risk takers than older adults. Some younger individuals have better support, especially those who have a higher educational background. However, in the current study, they were comparable to older participants in terms of functioning status even though the overall results still showed a significant improvement. The overall effect of motivational interviewing strategies on this age group may be to move them slowly toward better health behaviors (Callaghan, 2004).

Improvement in patient satisfaction during the study was observed to be marginally significant. Satisfaction scores at 12 months were higher than those at 6 months. Although only marginally significant, participants were noted to be verbally happy and had written compliments for case workers after 6 months of motivational interviewing intervention. Recovery stories were collected and published previously as success

<p>| TABLE 4 | GLOBAL ASSESSMENT OF FUNCTIONING (N = 120) |</p>
<table>
<thead>
<tr>
<th>Source</th>
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<tbody>
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<tr>
<td>Within-patient effects</td>
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<tr>
<td>MI</td>
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<td>3.62*</td>
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<tr>
<td>MI × gender</td>
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<td>0.98</td>
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<tr>
<td>MI × age</td>
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<td>MI × gender × age</td>
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<td>0.47</td>
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Note. df = degrees of freedom; MI = motivational interviewing. *p < 0.05.
stories to be shared with others. Using feedback in a nonjudgmental way and eliciting participants’ permission are principle motivational interviewing strategies. Such an approach demonstrates respect for participants’ opinions and empowers them to make choices that work well for them. Hence, practitioners may provide facts, but the personal implications of those facts should be elicited from participants.

Evaluation of the intervention during home visits found that participants who receive motivational interviewing sessions are more compliant to treatment. Findings showed significant reduction in readmission and increased global functioning.

LIMITATIONS AND RECOMMENDATIONS

The current study was conducted to evaluate the preliminary program and is limited to only 1 year of the program. A longer study of 3 or 5 years may yield more observations about the sustainability of positive outcomes.

It is also recommended that further study be performed to compare different modes of interventions, such as using motivational interviewing with cognitive-behavioral therapy or another recovery intervention. Therapists’ competency has been found to be a significant factor in determining the effectiveness of motivational interviewing; studies attempted in this vein will contribute to achieving better outcomes in the future. All case workers, including nurses and allied health workers, were trained in motivational interviewing; hence, no control group was possible within the team. Future studies may be conducted to compare a control group in another department or other agency.

CONCLUSION AND RELEVANCE TO CLINICAL PRACTICE

The current study demonstrated the potential of the motivational interviewing approach in reducing hospitalization and improving global functioning for individuals with mental illnesses in Singapore. Findings suggest community psychiatric nurses and allied health workers of a CMHT, while working with patients with mental illness, could incorporate motivational interviewing to enhance effectiveness in providing psychoeducation, medication counseling, and family support. The staff’s engaging style has made patients feel respected and reflections have created the understanding of their problems. Developing the discrepancy of participants’ noncompliance behavior and what they want to achieve is commendable because it helps them become aware of what they want versus what they do. This discrepancy usually shifts these individuals to change their behavior of noncompliance to treatment compliance. As a result, individuals have improved wellness statuses to the extent of reduced hospital stays and also improved functioning ability.

Motivational interviewing is an effective technique to be used for mental health settings in supporting all services, whether in the inpatient setting or with a CMHT.

REFERENCES


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The authors have disclosed no potential conflicts of interest, financial or otherwise.

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