**Evaluation of *Life Skills*, a Model Illness Management and Recovery Program**

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## *Introduction*

Illness management and recovery are now recognized as important – and achievable – goals in a comprehensive approach to treating schizophrenia and other severe mental illnesses. Illness management refers to the ability to understand one's illness and manage its symptoms. Recovery, in contrast, is a more abstract concept that has been described as "getting on with one's life." In addition to objective measures such as obtaining a job or returning to school, recovery incorporates subjective notions of empowerment, hope, personal responsibility, and support.

*Life Skills*, developed with the support of the Flinn Foundation, was one of the first programs to offer a structured and practical approach to teaching the skills and strategies necessary for managing symptoms and pursuing recovery. The program incorporates a set of evidence-based practices that include *psychoeducation* techniques to impart basic knowledge of mental illnesses and treatments; *behavioral tailoring* to identify practical ways to incorporate medication compliance into one's daily routine; *relapse prevention methods* to teach participants how to recognize and respond to early signs of relapse; and *cognitive behavioral techniques* to teach coping, problem solving, and social skills. These practices are presented in 20 one-hour classes taught by two instructors. A workbook for clients and a teaching manual for instructors are also crucial parts of the program. Although each of the individual practices that comprise *Life Skills* is "evidence-based," the effectiveness of these techniques when combined in a comprehensive, structured skills training program is unknown. We addressed this question, with a grant from the Flinn Foundation, in an evaluation of the effectiveness of *Life Skills* at Rose Hill, a residential treatment facility for individuals with schizophrenia and other severe mental illnesses.

## *Description of Study*

Sample

Our original proposal called for evaluating *Life Skills* at two sites - Rose Hill and at Genesis, a clubhouse affiliated with the Brighton Community Mental Health center. These sites were selected 1) because current clients had not participated previously in the *Life Skills* program and 2) case managers were available to participate in the evaluation.) At Genesis, strict adherence to the clubhouse model meant that the *Life Skills* classes had to be held at the end of the "structured day." Unfortunately, this was also the only time transportation was available for clients to return to town from the rural location of the clubhouse. Under these circumstances just three individuals were able to participate in

*Life Skills*. Therefore, while we continued the full session of *Life Skills*, the data from these few participants were not included in the analyses.

Two back-to-back sessions of *Life Skills* were conducted once a week at Rose Hill. Participants had to complete at least half of the 20 classes to be included in these analyses. Sixteen individuals enrolled in the classes; however, one did not sign a written consent to participate in the evaluation, another withdrew soon after signing, and three left Rose Hill before completing half the classes. The results for the remaining 11 participants are presented here. We also combined the data from these participants with data obtained in two previous studies of *Life Skills* at Rose Hill which used a similar client evaluation instrument. The combined sample consisted of 26 subjects. As shown in Table 1, participants in the current and earlier Rose Hill groups did not differ significantly on age, sex, race, or education.

Measurement instruments and study design

All participants completed a 45–item self-administered questionnaire at the beginning and at the end of the program. In addition to demographic and clinical information, the questionnaires assessed 1) social adjustment; 2) a sense of belonging - defined as a person's perception of being valued and sense of fit in interpersonal relationships; 3) understanding of one's illness; 4) compliance with medications; 5) overall quality of life - a composite of three items (satisfaction with family relationships, satisfaction with amount of friendship; and satisfaction with my life in general); and 6) mastery – or a sense of empowerment and self-confidence (e.g., "I can do just about anything I set my mind to;" "What happens in the future mostly depends on me."). The questionnaire is a composite of items from several well-validated instruments (the Social Adjustment Scale[1], Sense of Belonging Scale[2], Quality of Life Scale[3]), from published, but not-yet-validated instruments (the Mastery scale[4]), as well as items designed by us specifically for this study (e.g., "Understanding one's illness" and "Compliance"). The 11 clients in the current Rose Hill classes also completed a 34-item survey at the end of the program that measured satisfaction with several aspects of the program in general, and with each class topic. In addition, case managers for the current clients completed the 39-item Life Skills Profile[5] at the beginning and at the end of the program. This instrument measures five dimensions of behavior and functioning: 1) social functioning, 2) health behavior, 3) independent living, 4) living with others, and 5) dangerous behavior, and the total score provides a measure of overall functioning. For statistical inference, a value of $p \leq .05$ was considered significant. However, because this was a pilot study, we did not want to eliminate from consideration any potential effect; therefore, we also considered differences with p-values between 0.05 and 0.15 as "approaching statistical significance."

## *Results*

Table 1 compares the demographic and clinical data from current and past Rose Hill clients. As noted above, there were no significant differences between the groups, and therefore they were combined for a set of analyses presented here. Over 90% of the clients at Rose Hill were Caucasian and 80% had at least some post-high school education. Diagnostic data, obtained from case managers, was available for the most

recent Rose Hill participants only; nearly three-quarters were diagnosed with schizophrenia or schizoaffective disorder.

Changes in function, skills, and knowledge as assessed by both clients and case managers are presented in the top and bottom of Table 2, respectively. Improvement is indicated by a lower score on the end-of-program assessment. In the combined sample, clients reported significant improvement in mastery ($p = .02$) and in their quality of life ($p = .03$). Improvement in illness knowledge and a sense of belonging were also reported, although these changes were significant only at a level that "approached statistical significance." In contrast, social adjustment and compliance scores did not change significantly during the *Life Skills* program. With the exception of quality of life (no improvement), results were similar in the smaller sample. As reported by case managers, all scores decreased (improved) during the course of the *Life Skills* program, although none of the changes attained statistical significance.

Client satisfaction results, reported in Table 3, were high for all aspects of the *Life Skills* program. All clients reported that they would recommend the program to a friend. Over 90% were satisfied or very satisfied with the workbook, the variety of classes, and the instructors. When clients were asked to rate their satisfaction with each class, 14/20 (70%) of the classes received ratings of satisfied or very satisfied from all clients. The lowest scoring class was "Healthy Eating," with 73% of respondents satisfied or very satisfied.

### *Discussion*

This evaluation demonstrates that *Life Skills* is an acceptable and effective program for teaching the skills needed for managing symptoms and pursuing recovery in individuals with a severe chronic mental illness. Client satisfaction was very high for separate components of the program, including the variety of topics, instructors, the workbook, as well as for the individual classes. Although the concept of recovery is not well-defined, there is some consensus that self-esteem, empowerment, social support, and quality of life, constitute important aspects of recovery[6]. These are the very dimensions that improved during the course of the *Life Skills* program as measured with scales of mastery, sense of belonging, and satisfaction with life. Social adjustment, in contrast, a potentially important component of recovery, did not show any significant improvement. Recently, the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Robert Wood Johnson Foundation (RWJF) supported the development of the Illness Management and Recovery (IMR) program, a psychosocial skills program similar to *Life Skills* in both structure and content. The results of a pilot evaluation of the IMR program, published several months ago[7], were very similar to ours. Specifically, the investigators found high levels of client satisfaction as well as improvements in client-reported coping with symptoms, knowledge about mental illness, and an increased hopefulness, but not in social contact or social support. The authors suggested an explanation for the latter finding this way: "improvements in the quality of social relationships and social support may simply take longer to accrue or that the amount of time spent on these dimensions was not sufficient to achieve improvements." Thus, the

two pilot studies both appear to support the effectiveness of psychosocial training programs in improving outcomes related to illness management and recovery.

***Future***

With similar results in two pilot studies, it is clear that a large controlled evaluation is needed to confirm the efficacy of these psychosocial skills programs, and to determine which subpopulations are most likely to respond to them. If efficacy is demonstrated, then the results will need to be disseminated through journal articles and presentations in order to convince patients, providers, and payers that these structured psychosocial programs are evidence-based and readily implemented.

As you know, Nancy Mann and Patrick Kraft have acquired the rights to *Life Skills* and will be marketing the program in the context of current and future research findings.

In summary, *Life Skills* has the potential to become a widely-used program that can contribute to improving the lives of individuals with schizophrenia and other mental disorders.

***Thank you***

We thank the Ethel and James Flinn Family Foundation for their generous and unwavering support over the past several years.

# TABLES

(NOTE: Data are from participants who completed 10 or more classes.)

**Table 1 Sample Description: Current versus Past Groups at Rose Hill**

| | Rose Hill – current groups n = 11 | Rose Hill – past groups n = 15 | Significance |
|---|---|---|---|
| Age (years; mean ± sd)[1] | 31.5 ± 10.2a | 36.8 ± 10.5 | NS |
| Gender (n, % male) | 9 (82%) | 10 (67%) | NS |
| Race (n, % Caucasian) | 10 (91%) | 14 (93%) | NS |
| Education (n, % with more than HS degree)[1] | 8(80%) | 12 (80%) | NS |
| Diagnosis[2] | | | |
| Depression or bipolar (n, %) | 3 (27%) | | |
| Schizophrenia or schizoaffective; (n, %) | 8 (73%) | | |

NS: Difference is Not Significant
[1] N = 10 for current groups
[2]Diagnosis is based on case-manager report and is available only for current Rose Hill groups.

**Table 2 Outcomes Measures (mean scores) Before and After *Life Skills* at Rose Hill**

| | Rose Hill – current groups | | | Rose Hill – all groups | | |
|---|---|---|---|---|---|---|
| | Baseline | End of Program | P[1] | Baseline | End of Program | P[1] |
| **Client self-report** | | | | | | |
| Social adjustment[2] | 2.45 | 2.54 | .37 | 2.55 | 2.58 | .83 |
| Sense of belonging[3] | 1.97 | 1.79 | .07 | 2.19 | 2.05 | .14 |
| Mastery[3] | 1.84 | 1.56 | .04 | 1.90 | 1.71 | .02 |
| Compliance[3,4] | 1.40 | 1.55 | .50 | 1.64 | 1.57 | .62 |
| Illness knowledge[3,5] | 2.00 | 1.60 | .14 | 2.00 | 1.76 | .12 |
| Quality of life[3,6] | 2.23 | 2.07 | .49 | 2.40 | 2.03 | .03 |
| **Provider assessment[7]** | | | | | | |
| Social function | 1.75 | 1.65 | .41 | | | |
| Health behavior | 1.67 | 1.45 | .41 | | | |
| Independent living | 2.15 | 2.09 | .78 | | | |
| Living with others | 1.28 | 1.26 | .83 | | | |
| Dangerous behavior | 1.18 | 1.14 | .68 | | | |
| Mean score overall | 1.57 | 1.50 | .51 | | | |

**Notes on sample sizes.** Sample sizes vary due to missing responses. Sample sizes for mean scores are:
*RH evaluations - current sessions* : SAS: n=11;Sense of Belonging: n=9; all other scales: n=10.
*RH evaluations – all sessions*: SAS: n=23; Sense of Belonging: n=20; all other scales: n=21.
*Provider assessments* (Current 2 Rose Hill sessions only): n=11.

[1]***p***: Significance level. Conventionally, P ≤ .05 is considered significant. (See discussion).
[2] *Social Adjustment Scale*: Scored 1-5, where the lower the score, the higher adjustment.
[3] These measures are scored on a four-point scale (1=strongly agree; 2=agree; 3=disagree; 4= strongly disagree), where "1" indicates highest functioning and "4" indicates lowest functioning.
[4] *Compliance* is the average score for 2 items: coping with medications and taking medications;
[5] *Illness knowledge* is the average score for 2 items: know symptoms and seek help when they worsen and understanding nature of illness
[6] *Quality of Life* is the average score for 3 items: overall, satisfied with way things are between me and my family; overall satisfied with amount of friendship in my life; and overall, satisfied with my life.
[7] Each provider response is rated on an individual 4-point scale, where 1 is highest functioning and 4 is lowest.

**Table 3 Satisfaction with *Life Skills***

| Question | Response (n = 11) |
|---|---|
| 1. How satisfied were you with the… | |
| *Life Skills* program overall | 91% satisfied or very satisfied |
| Course workbook | 91% satisfied or very satisfied |
| Variety of class topics | 91% satisfied or very satisfied |
| Instructors | 91% satisfied or very satisfied |
| 2. Would you recommend *Life Skills* to a friend? (Yes or No) | 100% yes |
| 3. % of individual classes rated by *all* clients as either "satisfied" or "very satisfied" | 14/20 = 70% |

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