Coping, productive time use, and negative mood among adults with severe mental illness: A daily diary study

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ABSTRACT

Most studies on coping among persons with severe mental illness have relied on retrospective self-report methods; a limitation of this methodology is susceptibility to recall bias. The purpose of the present investigation was to expand the current understanding of the impact of coping among persons with severe mental illness by examining coping strategies, mood, and social functioning (operationalized as productive time use) using a daily process design. Twenty-seven adults diagnosed with severe mental illness completed baseline clinical interviews and up to 20 days of nightly telephone interviews addressing coping and daily life. A total of 198 coping efforts were reported for 387 days. Mixed-effects regression analyses examined the association between type of daily coping strategy (problem-centered, neutral, or avoidant) and both daily proportion of time participants spent in productive activity and daily negative mood, controlling for demographic and clinical variables. The results indicated that productive time use was significantly lower on days when avoidant strategies were used, in contrast with days when problem-centered strategies and neutral strategies were used. There was no significant main effect of coping on negative mood, although there was a trend in the expected direction. Findings support the hypothesis that the types of coping strategies adults with severe mental illness use are related to better social functioning on a daily level.

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1. Introduction

Evidence supports that structured psychosocial interventions can facilitate positive outcomes for persons diagnosed with severe mental illness (Kern et al., 2009). A common feature of these programs is education and training in the use of coping skills to manage symptoms and prevent relapse (Mueser et al., 2002); however, coping has rarely been assessed as a mediator of treatment action. Nevertheless, a body of research has emerged demonstrating that persons diagnosed with severe mental illness use a variety of coping strategies to deal with symptoms and problems (Phillips et al., 2009). Terminology varies, but studies have generally categorized coping strategies according to problem-centered versus avoidant dimensions, and generally demonstrate that problem-centered strategies are associated with better social functioning (Yanos and Moos, 2007).

Most studies on coping among persons with severe mental illness have relied on retrospective self-report methods. A major limitation of this methodology is that it is prone to recall bias (Stone et al., 1998). Daily process studies (Tennen et al., 2000) aim to substantially reduce the impact of recall bias and to improve the validity with which psychological constructs such as mood, stress, and behavior are assessed by having participants record their experience of these variables on a daily (or more than daily) basis. In the only known study to examine coping among adults with severe mental illness using a daily process design, Lardinois et al. (2007) found that the use of non-symptomatic, as opposed to symptomatic coping (roughly corresponding to avoidant coping) was related to less distress on a daily level.

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The purpose of the present investigation was to expand the current understanding of the impact of coping among persons with severe mental illness by examining the impact of coping strategies on mood and social functioning using a daily process design. The proportion of time spent productively was used as a measure of social functioning as recommended in the general and daily process literatures (Krupa et al., 2003; Delespaul, 1995). The potential impact of demographic and clinical factors was also considered. Specific research questions were: 1) Is type of coping strategy used in response to stressors associated with daily productive time use and daily negative mood among persons diagnosed with severe mental illness?; and 2) do demographic and clinical factors influence the relationships between coping and either social functioning or negative mood? It was hypothesized that problem-centered coping strategies would be associated with increased daily productive time use and less negative mood, and that participants with greater positive and negative symptoms would tend to show less productive time use regardless of coping.

2. Experimental/materials and methods

2.1. Participants

Twenty-seven adults diagnosed with severe mental illness (16 male and 11 female) were recruited from 2 community mental health agencies: a day treatment program (14 participants), and 3 assertive community treatment teams affiliated with the same agency (13 participants). Individuals participating in illness self-management services (included both individual and group-based interventions) at these programs were eligible to participate in the study. The study focused on individuals participating in illness management in order to focus particularly on persons more likely to develop new coping strategies during the course of the study.

Participants had a mean age of 45.37 (SD = 9.13) and a mean educational level of 11.18 (SD = 2.17). Four (14.8%) participants identified themselves as European-American, 16 (59.3%) as African American, 6 (22.2%) as Latino and 1 (3.7%) as Asian/Pacific Islander. Chart reviews revealed that participants were primarily diagnosed with either a psychotic disorder or a mood disorder: 10 (37%) were diagnosed with schizophrenia, 6 (22.2%) with schizoaffective disorder, 3 (11.1%) with bipolar disorder, 6 (22.2%) with major depression or mood disorder NOS, and 2 (7.1%) with post-traumatic stress disorder. Twenty-two (81.5%) of participants also had a secondary substance use disorder diagnosis. Approval was received from all relevant Institutional Review Boards, and all participants provided informed consent.

2.2. Assessments

2.2.1. Baseline interviews

Baseline interviews occurred at the beginning of the study. The first baseline interview consisted of demographic questions, and a qualitative interview focused on stress and coping during the previous six months (analyses of data from this part of the study are reported in Robillotta et al., in press). The second baseline interview was conducted 1 to 7 days afterward and was used to clarify some of the issues discussed in the first interview, and to complete the Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987). The PANSS is a 30-item rating scale completed by clinically trained research staff following a semi-structured interview. For the purposes of this study, two of the five analytically-derived PANSS factor component scores discussed by Bell et al. (1994) were used: positive and negative symptoms.

2.2.2. Daily telephone interviews

The second phase of the study consisted of completing structured 15–20 min interviews each day for 10 straight days on two different occasions (thus, up to 20 days total per participant). Telephone interviews were selected as the means for collecting daily process data from participants based on findings from a pilot study that indicated that participants with severe mental illness found paper-and-pencil diaries to be burdensome and were not likely to complete them at the end of the day. Other methods (e.g., electronic diaries) were considered to be inadequate for collecting the detailed data sought for the study. An initial training session regarding the format of the daily interviews was conducted with participants after the baseline clinical/qualitative interviews were completed. The first 10 interviews were scheduled for roughly 4 weeks after participants had completed baseline interviews. Daily interviews began on a Tuesday and ended on the following Thursday. Telephone calls were made at a mutually agreed upon time between 8 and 10 PM (participants without their own phones were provided with cellular phones for the study). Questions focused on a systematic review of activities during the day, any symptoms experienced, and ways participants coped with symptoms and other problems. Negative mood ratings were based on the degree of agreement on a 1–7 Likert scale with four adjectives derived from previous daily process research (Delespaul, 1995) (lonely, guilty, irritated, and sad) concerning how the participant was feeling at the beginning of the interview. The second 10 consecutive days of telephone interviews occurred roughly 3 months after the first 10 day interview period. Questions for these interviews were identical to questions for the other telephone interviews.

2.3. Data coding

2.3.1. Time use

Participant activities were coded using the 2007 codebook of the American Time Use Survey (Bureau of Labor Statistics, 2007). Primary activity codes were then recoded into broader categories following prior research (Krupa et al., 2003; Shimitras et al., 2003). Ultimately, 10 categories were used: sleep, eating and personal care, purchasing goods, travel, work, socialization, active leisure (including participation in sports, games, and hobbies), passive leisure (including television watching), treatment, and childcare/volunteering. The raw number of minutes spent in each primary activity was recorded by the interviewer. The proportion of daily time spent engaged in a given activity was computed by dividing the number of minutes spent in the activity by the total number of minutes recorded for the day (roughly corresponding to the proportion of a 24-h day spent in the activity). Following previous research (Krupa et al., 2003), indices were created to reflect the overall proportion of the day spent in "productive" activity.