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Steps to Effective Problem-Solving in group homes

Sarah H. Ailey[a,*], Arlene M. Miller[a], Olimpia Paun[a], Michael Schoeny[a], Tricia Johnson[a], Teresa Moro[a], Arthur Nezu[b], Tamar Heller[c], Janet Melby[d]

[a] Rush University Medical Center, Chicago, IL, United States
[b] Drexel University, Philadelphia, PA, United States
[c] University of Illinois at Chicago, Chicago, IL, United States
[d] Iowa State University, Ames, IA, United States

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ABSTRACT

Aggressive/challenging behaviors (A/CB) are a major public health problem for individuals with intellectual disabilities (ID). A leading reason for psychiatric hospitalizations and incarcerations, such behaviors are costly to the health care system, agencies, and families. Social problem-solving (SPS) training programs for individuals with ID have had positive behavioral results, but most were conducted in clinical or forensic settings. None was a community-based preventive intervention, none examined whether the behaviors decreased in residential and work settings, and none addressed cost-effectiveness. In preliminary work, we modified an effective SPS training program (ADAPT: Attitude, Define, Alternatives, Predict, and Try out), using input from individuals with ID and residential staff, as a community-based preventive intervention that we delivered in group homes (STEPS: Steps to Effective Problem-solving). Individuals with ID have high rates of obesity, and our attention-control condition is a nutrition intervention: Food for Life. We describe the protocol for a randomized clinical trial to: (1) test the efficacy of the STEPS intervention for improving SPS skills and reducing A/CB compared to an attention-control nutrition intervention in group homes; (2) assess the mediating effect of residential staff SPS skills, group-home level SPS skills, and group cohesiveness on the improvement of SPS skills and reductions in A/CB; and (3) evaluate the cost-effectiveness of STEPS. We expect to show that STEPS is a preventive strategy to reduce A/CBs among individuals with ID and improve the cost-effectiveness of their care.

1. Introduction

Aggressive/challenging behaviors (A/CBs), including destruction of property and threat of or real personal injury, are a major public health issue for individuals with intellectual disabilities (ID) and their support systems. Such behaviors among individuals with ID are a leading reason for emergency department visits [1], psychiatric hospitalizations [2], and incarcerations [3]. A single trip to the ED may cost $1500 or more [4].

More than 530,000 individuals with ID in the U.S. now live in nonfamily residential facilities, with 77% residing in small group homes (typically 4–6 residents) [5]. In group homes, residential staff provide assistance with residents' many needs. The small group home environment can decrease the social distance between residential staff and residents and encourage social networks among individuals with ID [6]. If provided with appropriate assistance, the group home has potential to be an ideal environment for individuals with ID to obtain A/CB support. Fewer A/CB problems are reported in group homes than in larger facilities [7], but individuals with ID living in group homes have higher rates of A/CBs than those who live with their families [8–10].

Intellectual disability is characterized by deficits in social problem-solving (SPS), [11, 12]. the cognitive and behavioral activities (attitude and style) one uses to recognize, cope with, and find solutions to problems. Individuals with ID who have A/CBs tend to have a negative attitude and to view interpersonal situations as hostile [12]. Individuals with ID who do not use A/CBs use more assertive responses (rational style) [13]. Individuals with ID who have A/CBs respond to situations with hostile actions more frequently than non-aggressive individuals with ID, and, in stressful situations, use more aggressive responses (impulsive style) [13].

SPS training interventions have shown some success in reducing A/CBs among individuals with ID, but were conducted in clinical treatment and forensic settings [14–20]. Our modification, Steps to Effective Problem-Solving (STEPS), is a community preventive intervention. It is

* Corresponding author at: Department of Community, Systems, and Mental Health Nursing, Rush University, Chicago, IL 60012, 600 S Paulina Ave., #1080, United States.
E-mail address: sarah_h_ailey@rush.edu (S.H. Ailey).

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a 6-session, 12-week program with one booster session at 18 weeks that uses the group home support system, including residential staff [21]. STEPS is based on the ADAPT model (Attitude, Define, Alternatives, Predict, and Tryout) [12]. We pilot tested STEPS in two group homes. Findings from our pilot indicated that individuals with ID could provide examples of problems likely to lead to A/CBs and, with prompting, identify immediate emotional responses likely to trigger A/CBs. Among individuals with ID, the intervention improved SPS skills and decreased A/CBs with effect sizes of $d = 0.6$ for each. Residential staff also improved SPS skills with an effect size of $d = 0.6$. Findings indicated that SPS interventions can decrease A/CBs and have effects on residential staff skills [21, 22].

In this paper, we describe the research protocol for our ongoing clinical trial of STEPS, including development of the intervention, how we identify homes that meet criteria, how we identify individuals with ID and residential staff in the homes who meet criteria, our randomization procedure to the intervention and attention-control nutrition program, and the training and fidelity plans for the clinical trial.

2. STEPS conceptual framework

The STEPS Framework (Fig. 1) was used in our preliminary work and is now used in our clinical trial. The STEPS Framework is based on the Interaction Model of Client Health Behavior [23, 24] and the Relational/Social Problem-Solving Model [12] which are both grounded in the broad philosophic construct of human agency, which addresses the capacity of humans to adapt, change, make choices, and make things happen by their own actions [25]. Elements of the STEPS Framework include baseline determinants of the A/CBs of individuals with ID, intervention strategies, the support environment for SPS, and subsequent outcomes (SPS skills and behaviors). The framework specifies that participant outcomes (i.e., SPS and A/CBs) are dynamically related: the greater the improvement of SPS skills, the greater the likelihood of decreased A/CBs.

2.1. Determinants of A/CBs

Background characteristics include demographics, past life events, environment, current health, including depressive symptoms and medication use, and baseline SPS skills.

2.2. Intervention strategies

SPS is made up of two independent but interrelated dimensions: attitude (positive or negative) and style (rational, avoidant, or impulsive) [12]. The intervention's strategies are targeted to SPS skills, specifically to increase positive attitude and rational SPS style [12]. The dimension of attitude includes positive and negative attitudes. Positive attitude involves recognizing problems and their sources and believing in one's ability to manage or solve problems. Negative attitude involves thinking of problems as a threat, inaccurately describing their sources, and believing that one is unable to solve or manage the problems [12]. The three SPS styles are rational, avoidant, and impulsive. Defining problems, generating and thinking through alternatives, and systematically carrying out and verifying solutions are part of the rational problem-solving style [12]. Inaction, dependence, and passivity toward problems are part of the avoidant style. Immediate emotional responses to problems are part of the incomplete, hurried, and careless impulsive style of SPS. Aggressive/challenging behaviors are associated with negative attitude and impulsive SPS styles [13].

The STEPS intervention affects relationship between the baseline background characteristics and the outcomes of SPS skills and A/CBs. Targeting SPS skills for improvement can reduce A/CB outcomes. Aggressive/challenging behaviors were measured through a coded videotape of a group problem-solving interaction, scores on the General Maladaptive Index, and incident reports.

2.3. Support environment for SPS

2.3.1. SPS of residential staff

The results of two previous studies addressing A/CBs suggested that outcomes were better for individuals who had a staff member from a program setting accompany them, but staff were not included as an integral part of the interventions [16, 20], so the relationship between residential staff SPS skills and the SPS skills and A/CBs of individuals with ID residing in the home is not known. Our study systematically involves residential staff and addresses the mediating effect of residential staff SPS on the SPS skills and A/CBs of individuals with ID living in the home.

2.3.2. SPS of group

Group training in SPS skills may encourage individuals with ID to think about the point of view of others and identify alternatives for problem solutions [19]. Previous research showed that when individuals with mild or moderate ID living in residential facilities made decisions as a group about common problems, the decision-making skills of the individuals improved [26]. We measure group SPS from coding a videotape of a group problem-solving interaction. Our study systematically addresses the mediating effect of group SPS skills on the SPS skills and A/CBs of the individuals with ID residing in the homes.

2.3.3. Factors in the group environment

Factors in the group environment, such as group cohesiveness, have been shown to affect outcomes of research [27].

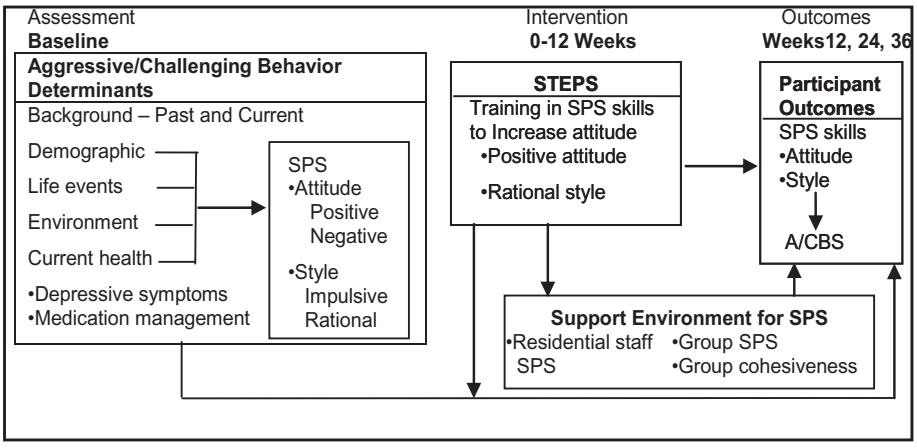

Fig. 1. STEPS Conceptual Framework.