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EMPIRICALLY DERIVED DIMENSION OF CRITERIA FOR A SECONDARY PREVENTION PROGRAM

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Our primary objective was to develop a conceptualization and a demonstration of criteria for a secondary prevention program, by concentrating on a second tier of intermediate treatment effects that are related to the more distal social outcome of police contact. Five intermediate, factor-derived treatment criteria were obtained from a 31-item follow-up questionnaire administered after participation in a secondary prevention program (Passport for Adventure). Oblique rotation factor analysis yielded 5 factors, of which parent–child involvement, being in psychotherapy, school behavior, and (to a lesser extent) school athletic involvement, were related to the "social good" outcome criterion, whereas motor activity level was not. In sum, using validated intermediate treatment effect criteria gives a spectrum of more sensitive and tailored target behavior/treatment methods by which to change behavior. Such treatment dynamics may, for some participants, eventuate in police contact, but for the majority only reduce coping effectiveness unless modified. The results emphasize the importance of a broad spectrum definition (positive through negative) of social good.

Keywords: parent–child involvement, psychotherapy, school behavior, athletic involvement, treatment effects, secondary prevention, social good.

While identification of strong criteria of success–failure is necessary for developing a superior, cost-effective treatment program, failure to properly conceptualize success has contributed to the current notion that "nothing works" among offenders and preoffenders (Martinson, 1974; see also

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response by Palmer, 1978). Our focus in this study was, thus, to examine the nature of criteria used for evaluation of treatment programs.

Cohen, Filipczak, Bis, Cohen, and Larkin (1970) stated that "a major objective for professionals participating in human research…is health" (p. 57). The World Health Organization (1964) defined *health* as a state of complete physical, mental, and social well-being that does not indicate merely the absence of disease or infirmity, and Goldston (1977) described primary prevention as both the elimination of illness and the promotion of health. Thus, when examining criteria for success of secondary prevention and treatment programs, we believe it is important to ask "Are we here only to protect society or, rather, to protect society and also enhance such aspects of a child's life as family interactions, educational adjustment, and social interactions?" It appears to us that, when establishing criteria for the evaluation of such programs, efforts should be made to direct such criteria toward not only the demands of society (e.g., prevention of court attention) but also coping health, as defined multifactorially. However, a weak relationship between a prevention or treatment program and the concerns society has for its own protection, calls into question the value of such early intervention. Were such concerns the only criterion, our motivation toward the child would be suspect.

Thus, a criterion is often used for two related but distinct purposes: to evaluate the success of the program as is, and to obtain feedback to guide the treatment process (Ketterer, Price, & Politser, 1980; Lewin, 1947; Weiner, 1948). These considerations emphasize the importance of proper conceptualization of criteria measures in terms of both society's practical applications and the problems toward which a given program is aimed.

When evaluating a treatment program, we are really asking two related but nonidentical questions: a) how much "social good" is achieved, and b) does the treatment itself work/how can it be improved? We contend that separate evaluation processes should be used to attempt to answer these questions, because the sources for determining the dimensions of each are different. To determine the behavioral patterns to be treated, one observes the behavior of the involved individuals, whereas social good dimensions, while involving the individual's behavior, are set by society.

When measuring the criteria (regardless of which question is to be answered), there are certain considerations in the development of such measurements. Obviously, it is critical that investigators are able to tell the difference between success and failure, so that reliable and useful information can later be obtained. Responses should be as objective and relevant as possible, and include as wide a range in criteria as the investigator believes the data warrant. To limit criterion responses to a success–fail binary is a severe restriction of range.

There are further reasons for a more sensitive measure of criteria. According to Robins (1966), youths displaying antisocial behavior rarely seek psychotherapy. With the development of primary and secondary prevention programs that operate in "seeking" rather than "waiting" mode (Rappaport, 1977), sensitivity to diversity of problems has increased. Such early-stage intervening often occurs before serious misbehaviors have developed; thus, it may be other problems that lead to serious misbehaviors. If dealing with such problems is the goal of treatment, the use of reduction of aggressiveness, for example, as a primary criterion for treatment success—especially when considering the assertions of Kagan and Moss' (1962) and Robins' (1966) that aggressiveness is an unusually stable trait over time—is an extremely limited choice that may miss the actual goal of treatment. Thus, to truly measure the effects of a treatment program, it is critical to develop broad spectrum success criteria that are sensitive to factors in terms of both treatment effects and social good.

The need for accurate identification of the full target of the treatment process is of obvious importance. For instance, if socialization is transmitted through parent involvement, focusing upon a criterion such as police contact, which is really a question of social good rather than one of treatment effects, may be the wrong approach through which to influence change. Unless the criterion scale is sensitive along the entire range of treatment dimensions, two unfortunate consequences are likely to occur: a) the actual effects of the treatment may well be missed, and b) variables used to predict success may utilize a criterion so limited it is not sensitive in the prediction of the whole range of success, which includes not only lack of failure but also competence, enhancement, high levels of dynamic wellness (Danish, 1983), and social usefulness (Spaulding & Balch, 1983).

There are reports of separate and sometimes contrary results for strongly behavioral, observable criteria (e.g., police contact and school grades) as opposed to more treatment-directed, subjective, judgmental criteria (e.g., the happiness of the child and quality of family relationship; McCord, 1978). Strongly behavioral criteria often tend to be related more to social good than to processes that are normally the direct target of intervention (i.e., how does one directly treat police contact?). In early-stage intervention programs especially, failures such as contact with police are typically low for both treatment and control groups, making the seemingly contradictory results mentioned above unsurprising.

Our purpose was, thus, to explore the dimensions of treatment criteria found in a 31-item follow-up survey used by a secondary prevention program. While our intent was not to determine the success or failure of the program, we did examine the relationship between the treatment dimensions and one social good criterion (i.e., absence of police contact).

Method

The Secondary Prevention Program

Passport for Adventure (Burdsal & Buel, 1980), a division of St. Francis Boys' Homes, Inc., is a community-based, early-stage family intervention program for teacher-nominated children experiencing difficulties. Selected groups of 12 fourth-, fifth-, and sixth-grade children travel by bus, camp with three counselors knowledgeable in outdoor skills, are earnestly involved in group processes, and learn new skills in three approximately 15-day expeditions of isolated wilderness experiential learning. The resolving of both interpersonal and logistic problems by on-the-spot group solution, counselors' and parents' recognition of new experiences, achievements and sense of competence (Bry, 1982), and the creation of a heightened self-esteem are prominent treatment activities. Concurrently, parents attend nine weekly group meetings to expand their parenting skills.

Development of the Evaluation Instrument

A follow-up interview form was developed that contained 31 items covering family, school, peers, boy–girl relationships, personality, alcohol/drug use, work, and treatment domains (see Table 1). The covered areas of inquiry were sourced from Powers and Witmer (1951), McCord (1978), and Palmer (1978), and our own experience with Passport for Adventure and the St. Francis Boys' Home residential treatment follow-up.

Table 1. *Evaluation Questionnaire*

1	Which of the following best describes your child's relationships with other members of your family (including yourself)? a. very warm and close b. pleasant but with occasional rough spots c. somewhat distant d. he/she does not get along well with other members of the family
2	To what youth organizations does your child belong? How often does he/she attend the organizations? What rank or office does he/she hold in each organization? (number of organizations recorded)
3	What chores does your child do regularly around the house? How often does he/she do them? (number of chores recorded)
4	How much pressure do you have to put on your child to do his/her chores? a. I almost have to force him/her b. quite a bit c. some d. very little, if any
5	How well does your child do his chores? a. very well b. satisfactory c. poor d. not at all
6	What hobbies or projects does your child actively pursue? (number of hobbies recorded)

Table 1 (continued)

7	During the last year, how often has your child discussed his/her problems with you or your spouse? a. not at all b. once or twice c. weekly d. almost daily
8	To the best of your knowledge, how often does your child get into physical fights? a. not at all b. once or twice during the last year c. once or twice a month d. about once a week e. almost daily
9	To what extent do you consider your child a “happy” person? a. almost always b. usually c. occasionally d. rarely
10	Compared to other children his/her age, which of the following best describes your child in terms of being hyperactive, excitable, upsettable? a. much more than average b. above average c. below average d. much below average
11	Which of the following best describes your reaction to your child’s friends? a. his/her friends are appropriate, and I enjoy having them around b. I know very little about his/her friends but they seem okay c. I worry that his/her friends may be a problem d. I believe that his/her friends get him/her in trouble
12	(read A. if the camper is a boy; read B. if the camper is a girl.) A. Does your child have a girlfriend? ( ) yes ( ) no B. Does your child have a boyfriend? ( ) yes ( ) no
13–14	During the last two semesters, how many days, if any, was your child absent from school? _____ excused, _____ unexcused
15	Compared to other children his/her age, which of the following best describes your child? a. very independent b. more independent than average c. about as independent as other children his/her age d. somewhat more dependent than average e. very dependent
16	During the last year, has your child received any psychological therapy? ( ) yes, ( ) no
17	During the last year, have you yourself received any psychological therapy? ( ) yes, ( ) no
18	Which of the following best describes your child’s chances of graduating from high school? a. has already graduated b. I fully expect him/her to graduate c. there is a good chance he/she will graduate d. there is about a 50% chance he/she will graduate e. there is a good chance that he/she will not graduate f. I do not expect him/her to graduate
19	In what organized sports is your child involved? (number of sports recorded)

Table 1 (continued)

20	During the last year, has your child been picked up by the police? If so, how many times?
21	During the last year a. my child has not been in jail, a reformatory, penitentiary, nor on probation b. my child has been on probation for an offense c. my child has been put in jail for an offense d. my child has been put in a halfway house or other residential treatment center
22	How many days during the last year, if any, has your child been suspended from school?
23	How often does your child volunteer to help around the house? a. daily b. once or twice per week c. once or twice per month d. rarely
24	During the last year, how many disciplinary conferences, if any, have been requested by the school concerning your child?
25	What is your child's approximate grade average? ( ) A, ( ) B, ( ) C, ( ) D, ( ) E, ( ) not in school
26	To the best of your knowledge, which of the following describes your child's use of alcohol? a. does not use it at all b. uses it occasionally with my permission c. uses it occasionally without my permission d. has been drunk more than once e. I worry that he/she may have a problem with alcohol
27	How often does your child speak of his/her plans for the future? a. daily b. once or twice per week c. once or twice per month d. rarely
28	To the best of your knowledge, which of the following describes your child's use of illegal drugs? a. as far as I know, he/she uses none b. I know of only one or two instances c. I think he/she uses drugs once or twice per month d. I think he/she uses drugs about once per week e. I think he/she uses drugs almost daily or more often
29	How much does your child like his/her school work? a. quite a bit b. some c. a little d. not at all
30	Which of the following best describes your child's relationships with his/her teachers? a. likes his/her teachers and gets along with them b. generally gets along with them well but with some problems c. he/she has problems with his/her teachers d. he/she does not get along with his/her teachers at all
31	How many hours per week does your child work at a paying job?

Respondents

Scholars have discussed who the criterion informants might best be, with sources varying from objective official police records (Gendreau, Grant, & Leipciger, 1979), to ratings by teachers (Feldhusen, Roeser, & Thurston, 1977), parents (primarily) and teachers (Mitchell & Ross, 1982), and by the participant him/herself later, as an adult (McCord, 1978). We used parents as the follow-up respondents because they were the adults most able to observe the range of behaviors and make judgements in all the areas covered in the follow-up form, and because they had the most continuous contact with their children throughout the period before, during, and after the Passport for Adventure program.

Participants

After teachers' briefing on Passport for Adventure, the children were nominated by public and parochial school teachers as being a) at risk for or actually engaged in behavioral difficulties, and b) *likely to benefit*—that is, self-defeating through fear, nervousness, self-doubt, oppositional attitude, inattention, stressor maladaptation, shyness, being scapegoated, academic inhibition, immaturity, or parent–child problems. Next, the families were informed about Passport for Adventure, and those who were willing to involve themselves formed a pool from which final selection occurred (Burdsal & Buel, 1980).

Of all the nominees for the Passport for Adventure program from 1978 to 1979, 249 were located and interviewed (220 had participated in the program and 29 had not). Two families were located but refused to be interviewed, yielding a total of 251 families (192 boys and 59 girls). The mean age of the children was 11 years.

Procedure

We selected 2–5 years as follow-up period, as our own unpublished research demonstrated that 0–1 year follow-ups had lower intercorrelations than the .08 figure reported for 2–5 year follow-ups. Thus, there were at least 2 years between participants' nomination for the program and the follow-up. Distal follow-ups lasting 11–30 years have been reported (Cowen, Pederson, Babigian, Isso, & Trost, 1973), but we judged that for 45 days of intervention, 2–5 years was appropriate.

Attempts were made to contact by telephone each of the selected families at their last known address. Extensive efforts were made to locate families using neighbors, city directories, other relatives, friends of Passport nominees, former schools, and presumed subsequent schools. Once a family was contacted, the interviewer introduced herself and explained to the family that the purpose was to find out how their child was doing. She asked some general questions in order to establish rapport,

followed by the 31 survey items, recording the responses in the specified fixed format. The interview was concluded by thanking the parent and stating that there might be contact again next year for further follow-up.

Data Analysis

Based upon the descriptive statistics we computed, items with excessive skewness coefficients (greater than 2.0) were either transformed using a log transformation until the skewness was reduced, or eliminated (Items 21 and 28 were removed). Factor analysis was then performed on the data.

As our major purpose was to examine the relationship between any treatment dimensions found and absence of police contact, as a measure of social good, we divided the participants into three groups: 1) those who had had no police contact and had not been institutionalized (n = 210), 2) those who had had one or more instances of police contact but had not been adjudicated or institutionalized (n = 19), and 3) those who had either been placed on probation or institutionalized (n = 20). These groups were compared on each of the five factors determined by the factor analysis.

Results

Factor Analysis

Correlation coefficients were computed for all pairwise combinations of the 29 items used. Eigenvalues were then extracted from the correlation matrix (data available from the authors upon request). Next, Cattell's (1978) scree test for the number of factors was applied, indicating the presence of five factors that were extracted using an iterative principal axis solution until the communalities stabilized to the third decimal place.

The factor matrix was rotated by a varimax orthogonal rotation, followed by a promax oblique rotation, then three graphical oblique rotations, and finally a maxplane cleanup rotation. After rotation, 64.8% of all loadings were between +.10 and −.10, with all five factors achieving significant simple structure (Cattell, 1978).

Group Comparisons

To compare the groups defined by amount of contact with the legal system on the factors, factor scores were computed using regression estimates (Gorsuch, 1983). Further, to assess the stability of the factors and the quality of the factor scores, as suggested by Gorsuch (1983) correlations of the factors' scores with the factors were computed, resulting in reliabilities of .39, .93, .90, .88, and .85 for the respective factors.

A one-way analysis of variance was computed using each factor as the dependent variable and the degree of contact with the legal system as the

independent variable. Significant differences were found for all but activity involvement (see Table 2).

Table 2. *Scale Means by Degree of Contact With Law Enforcement*

	Follow-up				
	None	**Contact**	**Probation/Jail**	***F***	***p***
Factor					
Parent–child involvement	.093	.085	-.982	13.764	.001
Trouble-free	.105	.341	-.274	24.907	.001
School behavioral adjustment	.131	-.250	-.675	12.930	.001
Activity involvement	.023	-.079	.326	0.454	*ns*
Athletic involvement	.060	-.170	-.411	4.348	.25

Discussion

Table 3 shows the salient (greater than 1.301) loadings for each of the five factors. Each factor appeared to represent some aspect of adjustment as perceived by the parents.

Table 3. *Summary of Factors by Salient Loadings*

Factor I: Parent–child involvement		
#	*Loading*	*Item*
4	.73	amount of pressure for chores (low)
5	-.67	quality of chores (high)
1	-.64	child's relationships with family (close)
7	.57	times problems discussed (often)
23	-.51	volunteer to help around house (often)
9	-.50	is child happy (yes)
10	.40	is child hyper (no)
8	-.33	number of fights (low)
30	-.31	child's relationships with teacher (likes)
Factor II: Trouble-free vs. maladjusted		
#	*Loading*	*Item*
16	.87	child received therapy (no)
17	.65	parent received therapy (no)
Factor III: School behavioral adjustment		
#	*Loading*	*Item*
22	-.61	number of days suspended from school (low)
30	-.53	child's relationships with teacher (likes)
24	-.50	number of disciplinary conferences (low)
25	-.44	grade average (high)
29	-.42	child likes school work (yes)
20	-.37	times picked up by police (few)
18	-.35	chances of graduation (good)
Factor IV: Activity involvement		
#	*Loading*	*Item*
6	-.77	number of hobbies (low)
3	-.42	number of chores (low)
2	-.40	number of child organizations (low)
27	.40	child talks of future (rarely)

Table 2 (continued)

Factor V: School athletic involvement		
#	*Loading*	*Item*
15	-.43	how independent is child (independent)
19	.41	number of organized sports (high)
25	-.36	grade average (high)

Factor I, which describes the child's identification with the family as a unit, and particularly with the parents, was defined by items that pointed toward a degree of healthy mutual involvement of the child with the parents. When the involvement was high, parents reported that the child was both happy and involved the parents with his/her problems. This involvement and communication with the parents (the child's first representatives of society) allows identification and introjection to occur, which aids later role modeling with teachers, police, and other representatives of human interaction and authority.

Involvement in psychotherapy defines Factor II, with high scores indicating maladjustment but some positive coping as the family had obtained formal therapy for internal (felt stress, anxiety) or external (court or social agency urging) reasons. While seeking psychotherapy can be adjustive for the participant, those who sought it had among the lowest coping levels of all students in this study.

School problems dominate Factor III, which appears to measure the child's general behavioral adjustment to school, including days suspended from school, the child's relationships with teachers, and number of disciplinary conferences. The approach–avoidance of school course work and teachers may generalize to the next experienced stage of contact with authority in a broader society, for example, the police.

Factor IV, which seems to measure the motor activity involvement of the child, was marked by the number of hobbies, chores, and child organizations in which the child was involved.

Finally, Factor V, which was the weakest in terms of loadings, seems to measure the degree of the child's athletic involvement at school. Children scoring high on this factor tended to be independent and have high grades, with the latter likely occurring as a result of the grade requirements of athletic programs in schools. A child high on this factor appeared to be self-directed, identify with school, and athletic.

In terms of differences in factor scores between the groups having ascending contact with the legal system, there were significant differences on all factors except that of activity involvement. Children who had less contact with the legal system tended to have more socially desirable scores on the factors where such differences were found. Despite Robins' (1966) finding of a negative relationship between antisocial personality and participation in psychotherapy, we were not surprised to find that among

our participants, the trouble-free vs. maladjusted factor showed the greatest between-group difference. Greater contact with the legal system was associated with increased external and internalized pressure to become involved with formal therapy. We also found it unsurprising that children who were generally maladjusted at home and school (Factors I, III, and V) were more likely to have high involvement with the legal system. School athletic participation was less significantly related to legal involvement than was parent or school interaction; thus, preventive and therapeutic resources should be targeted at family and academic areas.

Conclusion

Through factor analysis, we identified five reliable criteria scores determined at a time sufficiently posttreatment to be stable. These factors reduce 31 different variables with diverse relationships to five unique, measurable dimensions of good psychometric quality and with high reliabilities in terms of common method variance. We find it interesting and encouraging to note that the items formed factors based upon neither the degree of face validity nor the objectivity of the items. This finding does not seem comparable to those of McCord (1978) and Sobel (1978), who admittedly had different definitions of *subjective* and *objective*.

We believe that our most important finding relates to developing an approach for defining the criteria for success. These criteria have in the past typically been measured in terms of the results of contact with the legal system. The key questions for the definition of success or failure of treatment program have been as follows: Does the program reduce police contact? Does the program reduce aggressive and/or antisocial behavior? How much social good does it do? While such concern is obviously important, it may have a serious flaw. Most researchers have continued the inappropriate application of the medical model of health being the absence of disease (translated: success is the absence of contact with the legal system). That a continuum of degrees of success or failure is important becomes increasingly clear as we reflect upon and work with the data.

However, to have an ultimate impact upon social good, treatment must be aimed at changing treatment dimensions that are related to the particular social good (avoiding police contact, in this case). It may be necessary to increase family involvement to reduce police contact, but a treatment could significantly increase family involvement and not show a statistically significant decrease in police contact. Especially in populations such as the one studied here, legal system contact is often rather low at both pre- and posttreatment and in both control and experimental groups. Thus, if police contact is the sole criterion for judging an effective treatment, the effectiveness in terms of increased family involvement and decreased police contact in the long run, will

likely be totally missed. Legal system contact is sometimes an end result but not the problem. Therefore, many useful treatment programs with such a sole criterion underestimate their full-scale success, essentially creating a Type II error.

While we are, of course, interested in reducing police contact in groups of high-risk children, what about the other children in such a high-risk group who have the dynamics that occasionally lead to police contact yet never experience such an end result? Which is the central problem: the police contact or the dynamics that sometimes lead to the contact? We propose that the true problem is such dynamics, whereby using police contact as the sole criterion ignores programs that are successful in altering such dynamics yet may not do so sufficiently well to show a statistically significant difference in police contact.

The problem seems to be differentiating between correlatively related but causally unrelated occurrences of a set of behaviors (a syndrome), represented here by incarceration, and the actual dynamic problem, represented by the factors of parent–child low mutual involvement, early disidentification with parents, and acting out in school. It may be rather common to have inferior parent–child involvement and/or school behavioral problems and yet never develop the syndrome of incarceration, even though the children in this study were nominated by their teachers as having active or potential behavioral problems. Trying to keep children out of jail also requires the identification and treatment of the underlying processes that result in incarceration, not all of which necessarily lead to incarceration. Difficulty in finding effective treatment or demonstrable success with treated offenders (Martinson, 1974) may be more a result of incomplete and inappropriate criteria than of ineffective programs.

As a sole criterion, we fault social good issues (e.g., offense commission or recidivism) as being overly simple and overly motivated by the single aim of protecting society. Such an approach may, in the long run, fail to achieve the desired social good by rejecting treatments that have some small effect on offense commission. A spectrum of different treatments targeted at a variety of dimensions, all of which have offense commission as only an occasional outcome, may be needed to actually affect such issues. If so, such treatments should be evaluated by the degree to which they affect the target dimension rather than some aspect of social good. We also feel that social good has tended to be too narrowly defined, including only the absence of "social bads," such as police contact and aggression. Thus, further outcomes involving health, coping, integration, competence, and usefulness should be given greater consideration.

In short, the primary emphasis is on helping the offender come to grips with his life and obtain, in nondestructive ways, greater satisfaction from his interactions with others. The achievement of this goal may

> often be reflected in but cannot be directly measured by recidivism alone. (Palmer, 1975)

Finally, it seems to us that there is a need for a two-part assessment of a treatment program and especially any prevention program. First, an evaluation of the treatment upon the target should be undertaken, to determine if it improves family involvement. Targets of treatment that show a research-demonstrated relationship with the desired social good criteria, may evidence an earlier indication of the efficacy of the treatment, thus allowing for shaping of the treatment to make it more effective.

At the same time, evaluation of societal benefits should be conducted by including the full range of potential social good. For most prevention programs, this will be a lengthy process; however, coupled with a treatment effect evaluation we can develop programs that will have a positive societal effect while minimizing the risks of "throwing out the baby with the bathwater" (Sobel, 1978).

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