

International Journal of Offender Therapy and Comparative Criminology

<http://ijo.sagepub.com>

Factors That Discriminate between Recidivists, Parole Violators, and Nonrecidivists in a 3-Year Follow-Up of Boot Camp Graduates

Brent B. Benda

Int J Offender Ther Comp Criminol 2001; 45; 711

DOI: 10.1177/0306624X01456006

The online version of this article can be found at:
<http://ijo.sagepub.com/cgi/content/abstract/45/6/711>

Published by:



<http://www.sagepublications.com>

Additional services and information for *International Journal of Offender Therapy and Comparative Criminology* can be found at:

Email Alerts: <http://ijo.sagepub.com/cgi/alerts>

Subscriptions: <http://ijo.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations <http://ijo.sagepub.com/cgi/content/refs/45/6/711>

Factors That Discriminate Between Recidivists, Parole Violators, and Nonrecidivists in a 3-Year Follow-Up of Boot Camp Graduates

Brent B. Benda

Abstract: *The authors conducted a study of recidivism of 480 male graduates, aged 16 to 40 years, of a boot camp in the South. Discriminant analysis was used to determine what factors discriminated between three outcomes in a 3-year follow-up: (a) nonrecidivists, (b) recidivists who had committed additional crime after graduation from boot camp, and (c) parole violators. Analyses indicated that present age, age when unlawful behavior began, incarceration as a juvenile, several personality deficits, peer influence, and perceptions of boot camp merely as an expedient avenue to release discriminated between recidivists and the other two groups. Self-esteem, self-efficacy, resilience, expectations of future success, and favorable perceptions of various aspects of the boot camp experience distinguished nonrecidivists from others. Practice and policy implications of these findings are discussed.*

Despite the hyperbole used to describe the innovation of boot camps in the media, and to an extent the professional literature, a military approach to incarceration is not original. Rather, regimens of military discipline were introduced in the Elmira Reformatory in 1888 by Warder Zebulon Brockway (Anderson, Dyson, & Burns, 1999). For more than a century, it has been assumed that regimented discipline instills self-control (M. R. Gottfredson & Hirschi, 1990) in youthful offenders before they become ensnared in a criminal lifestyle (Empey, Stafford, & Hay, 1999). The genre of mandatory participation in demanding regimens aimed at instilling discipline is expected to be assimilated into the inmates' thinking and motivation. For the first time in many inmates' lives, they would have consistent demands, expectations, and sanctions placed on them, and the assumption seems to be that this structure would be a welcome change for persons who otherwise have lived vacillating and precarious lives (see reviews, Cronin, 1994; MacKenzie, 1997; Zhang, 1998).

The official reason for correctional intervention with inmates in boot camps is rehabilitation. The primary rehabilitative goal of boot camp is to shock neophyte offenders out of a criminal lifestyle by incarceration in an austere environment with regimented drills and demanding structure (MacKenzie & Parent, 1991). Boot camps also are designed to reduce the overcrowding problem in prisons

throughout the country and to place in secured facilities persons whose offenses are too severe or frequent for probation (MacKenzie & Piquero, 1994).

At the same time, serious questions have been raised about the operational purposes of boot camp (McCorkle, 1995). For example, because incarceration in boot camp typically is for a considerably shorter period than traditional imprisonment and boot camps cost less to construct, some have argued that boot camps serve as an expedient and less expensive means of treating or sanctioning a large number of offenders than prison. Hence, many concerns have been advanced as to whether boot camps are designed primarily for rehabilitation, punishment, or political expediency (Anderson et al., 1999; Cronin, 1994; Zhang, 1998). Regarding expediency, one of the more skeptical arguments is that boot camps primarily are a political means to present the appearance of sanctioning a large number of offenders by placing them in a secure facility just long enough for scrutiny of the media and of the public to dissipate (Benda, Toombs, & Whiteside, 1996).

Boot camps often do appeal both to conservatives who subscribe to punishment for crimes against society and to liberals who want to offer rehabilitative intervention with the least invasive intervention necessary (Anderson et al., 1999). Indeed, aside from the shock of incarceration in an austere environment, many boot camp programs, such as the one investigated in the present study, have several treatment components (Cronin, 1994). Presently, there is no consistent evidence of the effectiveness of boot camp programs in reducing drug use or criminal recidivism (Zhang, 1998). According to the most comprehensive study to date (MacKenzie, Brame, McDowall, & Souryal, 1995), based on a comparative analysis of programs in eight states, no clear-cut conclusions can be made about the effectiveness of boot camps in reducing recidivism. There is evidence that boot camps are less expensive than prison while having commensurate recidivism rates.

The lack of demonstrated efficacy of boot camp programs, in large measure, seems to result from the following interacting aspects: (a) They typically are composed of such a heterogeneous population that they are not able to meet the needs of many inmates; (b) most are too brief in duration to meet needs and change attitudes, motivations, and other influences on illegal behavior; (c) programs with which the author is familiar are ill-conceived in terms of policies and practices; and therefore, (d) staffed with persons who cannot articulate the goals, objectives, components, and strategies of the program they have implemented. Also, boot camps have not been adequately evaluated.

A useful preliminary approach to beginning to understand what practical purpose boot camps may serve is to identify what factors discriminate between recidivists and nonrecidivists. Recidivism is the ultimate measure of effectiveness of correctional programs (D. M. Gottfredson & Tonry, 1987; Jones, 1996; Maltz, 1984). Identifying what factors discriminate between graduates of boot camp who return (recidivist) to the Department of Correction (DOC) and those who do not return to the DOC can offer valuable clues to programmatic interventions and to

policy decisions such as penetration into the justice system, type of programs, and length of incarceration. Certain discriminatory factors can provide useful information about potential factors to target in intervention programming because they are alterable (Andrews & Bonta, 1998). For example, unemployment, use of drugs, and gang membership contribute to persistence in criminal behavior, and each of these factors are amenable to designed change, leading to abatement or cessation of crime (Benda, Corwyn, & Toombs, 2001, in press; Hanson & Harris, 2000; Piquero et al., 2001; Uggen, 2000). In contrast, there are factors such as age, prior incarcerations, and family history of illegal behavior that provide discrimination, but are not amenable to programmatic change. Yet, these factors often are very useful to risk classifications (Benda & Tollett, 1999; D. M. Gottfredson & Tonry, 1987; Jones, 1996; Loza, Dhaliwal, Kroner, & Loza-Fanous, 2000; Loza & Loza-Fanous, 2001) for decisions about resource allocation, penetration into the correctional system, and release (Harland, 1996; Sherman et al., 1997).

This distinction between types of discriminators is very useful because for many years, continuing into the present, risk classifications have been viewed as a completely discrete process from needs assessments. Personal characteristics and criminal history have been the primary elements of risk classifications, whereas factors amenable to change such as drug use or self-esteem are found in needs assessments used for treatment purposes (Bonta, 1996; Gendreau, 1996; Gendreau, Little, & Goggin, 1996; Hoge, 1999).

Only recently have factors amenable to change or needs been considered as viable or useful discriminators for risk classifications (Gendreau et al., 1996; Hoge, 1999; Kroner & Loza, 2001). Discriminators typically used for risk classification have included present age, age when drug use and other unlawful behaviors emanated, gender, past criminal history, early familial factors, and peer association (D. M. Gottfredson & Tonry, 1987; Jones, 1996). However, a meta-analysis of 131 studies indicates that many factors amenable to change are as discriminating of recidivism as are the more traditionally used predictors that cannot be altered (Gendreau et al., 1996; Hoge, 1999; Kroner & Loza, 2001; Loza et al., 2000). Because there is no evidence that boot camp per se has an effect on recidivism (Anderson et al., 1999; MacKenzie et al., 1995), the present study examines what factors, both alterable and unalterable, discriminate between recidivists and nonrecidivists among boot camp graduates. The assumption is that recidivism is the nexus of personality, sociodemographic characteristics, criminal history, personal attributes, associations, and perception of the boot camp environment (Andrews & Bonta, 1998; Kroner & Loza, 2001; Loza et al., 2000).

Preliminary studies of recidivism provide valuable clues about targets for intervention, as well as possible policy changes such as admission criteria, penetration into the correction system, and release. However, for many ethical, moral, and empirical reasons discussed elsewhere, recidivism studies should not be the sole bases for these decisions (D. M. Gottfredson & Tonry, 1987). For example, it is immoral to make decisions based on race, and is it unethical to deny release for

an individual based on an aggregate risk profile. Also, risk classifications have an unacceptable proportion of errors (see D. M. Gottfredson & Tonry, 1987; Jones, 1996).

CONCEPTUAL FRAMEWORK FOR THE STUDY

The conceptual framework for the present study is provided by Bronfenbrenner (1979, 1986), who stated that human environments consist of "nested ecological structures" having recursive influences on each other. Prior studies on recidivism among boot camp graduates typically have focused on institutional adjustment and changes in personality factors (see reviews, Anderson et al., 1999; Cronin, 1994; Gover, MacKenzie, & Armstrong, 2000; Zhang, 1998). Certainly, these are important factors to consider in formulating program policy and practices in boot camp. However, in my opinion, it is essential to examine several ecological domains. Especially in intermediate interventions (Byrne, Lurigio & Petersilia, 1992; Morris & Tonry, 1990), where direct intervention is relatively limited and involves a diversity of offenders, it is not known to what extent institutional adjustment and changes in personality factors account for variance in recidivism. Instead, the present study examines the relative discrimination of factors of recidivism from the broader ecological domains of personality, personal attributes, sociodemographics, peer associations, and perceptions of the boot camp environment.

Moreover, there is a paucity of studies of boot camps that discriminate between persons who return to the DOC because of additional crime, those who return because of a parole violation, and nonrecidivists. It is contended in this study that there are some noteworthy distinctions between these three groups that should inform policies and practices. Indeed, the purpose of the present study is to examine what static and dynamic factors discriminate between boot camp graduates who (a) return to the DOC because of additional crime, (b) return to the DOC due to a parole violation, and (c) do not return to the DOC during the 3-year follow-up period. These three outcomes, henceforth, will be referred to as recidivists, parole violator, and nonrecidivists, respectively, for convenience of discussion.

Due to the paucity of studies of these outcomes, no hypotheses are formulated about which outcomes will be distinguished from the others in a discriminate analysis (e.g., nonrecidivists from those who return to the DOC for any reason). However, based on prior research, it is hypothesized that the primary discriminators between recidivists and other graduates of boot camp will be age when crime emanated, age when drug use began, prior incarceration in the juvenile justice system, and the various subscales of the Jesness (1991a, 1991b) Inventory (e.g., Agnew, 1995; Akers, 2000; Benda, 1999; Benda & Toombs, 1999; Blumstein, Cohen, Roth, & Visher, 1986; Burton, Marquart, Cuvelier, Alarid, & Hunter, 1993; Hill, Howell, Hawkins, & Battin, 1999; Lutze, 1996; MacKenzie & Shaw, 1990; MacKenzie & Souryal, 1995). The Jesness personality traits include,

but are not limited to, social maladjustment, immaturity, and low frustration tolerance. Recidivists will be younger when they started unlawful behavior, have a juvenile incarceration, and score higher on the personality deficits measured by the Jesness Inventory. The personality traits measured by the Jesness Inventory are similar, in many respects, to characteristics of self-control described in M. R. Gottfredson and Hirschi's (1990) general theory of crime. M. R. Gottfredson and Hirschi theorized that the propensities (e.g., impulsivity, instant gratification, risk seeking, physical versus mental activity, self-centeredness, and low frustration tolerance) for unlawful behavior are evident by 10 years of age and remain the primary motivations for crime and drug use throughout the life span. No speculation is offered about whether these factors discriminate between recidivists and nonrecidivists or between recidivists and parole violators.

In contrast, the personal attributes expected to discriminate between non-recidivists and those who return to the DOC (for crime or as a parole violator) are self-esteem, self-efficacy, expectations of future success, and resilience. I believe cessation of crime is augmented by having a greater degree of these attributes (e.g., Gutman & Midgley, 2000; Scheier, Botvin, Griffin, & Diaz, 2000). Self-esteem is defined as a positive evaluation of the self, and self-esteem is important for promoting self-efficacy, an expectation of future success, and resilience (Gutman & Midgley, 2000; Scheier et al., 2000). Self-efficacy (Bandura, 1997) is a sense that one can be effective in bringing about desired results. Resilience is the ability to rebound from any setbacks and to overcome adversities and achieve despite the barriers (Aroian & Norris, 2000). In recent years, researchers have investigated these factors as antecedents of alcohol and drug use (e.g., Abernathy, Massad, & Romano-Dwyer, 1995; Vega, Apospori, Gil, Zimmerman, & Warheit, 1996; Wills, 1994). Support for a developmental linkage between these factors and alcohol and drug use comes primarily from problem behavior theory (Jessor & Jessor, 1977). According to problem behavior theory, self-esteem is part of a personal belief structure composed mainly of cognitive regulatory mechanisms (e.g., self-efficacy, expectations of success and resilience) that restrain natural impulses to engage in unlawful behavior. Experience suggests that persons with these attributes are the very individuals who are shocked by being incarcerated in boot camp for a brief exposure to the personal costs of imprisonment. Self-esteem is thought to facilitate confidence in one's ability to alter choice and behavior (self-efficacy), resilience in overcoming the barriers that often face former felons, and expectations of success in the future.

In this regard, it is anticipated that inmates' perception of the boot camp environment and its potential to effect changes will discriminate between non-recidivists and those who return to the DOC. Indeed, inmates have personal needs, and insofar as inmates believe their needs can and will be met by a program, they are more likely to adopt the attitudes and behaviors sought in intervention (Palmer, 1992). Toch (1977, pp. 16-17) identified the essential needs as privacy, safety, structure, support, emotional feedback, social stimulation, activity, and freedom. Without perception that these needs will be addressed in the program, it

is unlikely that the desired attitudinal and behavioral changes will occur (Andrews & Bonta, 1998).

Some recent studies have considered how the environment of boot camp affects inmates by measuring the participants' experiences and attitudes. Typically, these studies have found that boot camp inmates adjust well to the environment (MacKenzie & Shaw, 1990), possess positive attitudes toward the program and the staff (Burton et al., 1993; Lutze, 1996; MacKenzie & Shaw, 1990; MacKenzie & Souryal, 1995), and expect to see changes in their behavior (Burton et al., 1993; Lutze, 1996; MacKenzie & Shaw, 1990; MacKenzie & Souryal, 1995; McCorkle, 1995). These studies measured inmates' attitudes toward the boot camp experience rather than asking inmates to evaluate the boot camp's environment.

The present study builds on prior research by asking questions that measure some of Toch's (1977) needs for safety, structure, support, helpful feedback, and stimulation to change. Moreover, questions are asked to ascertain if inmates perceive boot camp as merely an expeditious avenue to release from incarceration instead of serving a longer period in prison. The boot camp studied is, although more regimented than prison, voluntary and may be chosen by several inmates because it expedites their release. The expectation is that inmates who perceive boot camp merely as an expeditious avenue to release are more likely to return to the DOC than are those who perceive benefits from the boot camp program.

METHOD

SAMPLE

The convenience sample in the present study consists of 480 male participants in the only boot camp in a southern state. Between 15 and 30 persons are received at this boot camp from the diagnostic unit every 21 days. The variability in size of classes is due to the number of persons eligible when classes are shipped to the boot camp and to the fact that participation in the boot camp program is voluntary. That is, eligible persons choose whether they participate in the boot camp program or serve their sentence in prison. To be officially eligible for boot camp, persons have to meet five criteria: (a) be a first-time referral to the adult correctional system in this southern state; (b) be sentenced to 10 or less years; (c) have no recorded violent offenses in the adult correctional system; (d) have an IQ above 70; and (e) have no physical or psychological problems, including drug addiction, that would preclude military training. These persons are screened at the diagnostic unit by correctional counselors. All persons who entered the boot camp in 1 year were approached to participate in the study. The dropout rate from the boot camp is approximately 20%, and these persons return to prison to serve their sentences. Twenty of the initial 500 persons selected for the study dropped out of boot camp.

Table 1 shows the sample characteristics. For example, 42% of the sample are Caucasian, whereas 45% percent are African American, and 10.4% percent are Hispanic American. The majority (63.3%) have never been married, whereas 32% are married. These are first admissions to the DOC, and, officially, the inmates are not supposed to have committed violent offenses. However, approximately 42% are committed to the DOC for property, person, and drug offenses; 3% for property and person crimes; and 4.4% for drugs and crimes against persons. The largest percentage returned to the DOC after release from the boot camp within the 3-year follow-up period studied for property offenses (38.5%), followed by parole violators (20%), those who committed all three types of crimes (16.7%), drug offenders (16.7%), former inmates who have property and person offenses (5%), and those who have crimes against persons (3.1%). More than half of the sample had been incarcerated in the juvenile justice system (56%), and more than half (57.9%) did return to the DOC during the 3-year follow-up study period. The average (or mean) number of days in the community before being returned to the DOC is 725.7, with a standard (or average) deviation of 309.9 days.

PROCEDURE AND DATA

Questionnaire were administered to each class of 15 to 30 boot camp participants by a staff psychologist, who had eight research associates available to monitor each table of 5 respondents to clarify wording or to answer questions. Respondents who could not read (usually 1 or 2 persons with each class) were given one-to-one interviews by research associates trained to administer the questionnaire. The questionnaires were administered approximately 3 weeks into the 105-day program to allow military discipline to develop, as well as trust in the psychologist who administered the questionnaire, because she also conducted mental health classes and counseling at this boot camp. Although respondents did record their DOC ID number for a recidivism study, they were assured of confidentiality by telling them that names would not be associated with ID numbers on the questionnaire and that none of the information provided by them was shared with anyone in the DOC except in aggregate form. Participation in the study was voluntary, and only 6 persons refused participation during the study period.

About 85% of the items on the questionnaires had no missing information, and most of the others were missing from 1 to 10 cases. No variable was missing in more than 5% of the cases.

PREDICTION MEASURES

The sociodemographic factors considered are race, age at the time of the interview, age criminal activities began, age when they first used alcohol or other drugs, and the reading score on the Wide Range Achievement Test (WRAT) version 3 (Jaskat, 1993), which has a test-retest reliability of .93. The WRAT is a

TABLE 1
SAMPLE CHARACTERISTICS

	<i>Number of Persons</i>		<i>Percentage</i>		
Race					
Caucasian	202		42.1		
African American	216		45.0		
Hispanic	50		10.4		
Asian	5		1.0		
Other	7		1.5		
Marital status					
Single (never married)	304		63.3		
Married	154		32.1		
Divorced	22		4.6		
Committing offense(s)^a					
Property	158		32.9		
Property/person	15		3.1		
Property/person/drugs	201		41.9		
Drugs	85		17.7		
Drugs/person	21		4.4		
Return offense(s)^b					
Property	185		38.5		
Person	15		3.1		
Property/person	24		5.0		
Property/person/drugs	80		16.7		
Drugs	80		16.7		
Parole violator	96		20.0		
Incarcerated as a juvenile					
Yes	259		56.0		
No	201		41.9		
Missing	20		2.1		
Returned to the Department of Correction after release from boot camp					
Yes	278		57.9		
No	202		42.1		
	<i>M</i>	<i>SD</i>	<i>Mode</i>	<i>%</i>	<i>Range</i>
Age	24.8	10.2	24	15	16-40
Age at first arrest	14.7	2.0	15	24	7-15
Sentence length years	5.1	2.1	5	20	1-10
Wide Range Achievement Test	6.5	2.3	7	20.7	4-12
Days survived in the community without return	725.7	309.9	1,095	42	50-1,095

a. Before first admission to boot camp.

b. After completion of the boot camp program.

screening tool and has limited construct validity, but it is considered adequate for research purposes. Also, a check of the Division of Youth Services records was made to see if inmates had been incarcerated in that system (coded 0 = no, 1 = yes). These inmates could have been incarcerated in another state or in a federal system.

The Jesness Inventory (Jesness, 1991a, 1991b) has been used for more than 30 years and was developed with 1,075 nondelinquent males, 970 delinquent males, 811 nondelinquent females, and 450 delinquent females. It consists of 155 items that measure 11 personality characteristics: (a) social maladjustment; (b) value orientation, which is a tendency to share attitudes characteristic of persons in the lower socioeconomic classes; (c) immaturity; (d) autism, which measures a tendency to distort reality according to one's desires; (e) alienation, which refers to estrangement; (f) aggression; (g) withdrawal; (h) social anxiety; (i) repression; (j) denial, which measures a reluctance to acknowledge unpleasant events; and (k) asocial index, which reflects a generalized disposition to resolve problems in ways that show disregard for social customs and rules.

Several aspects of the Jesness Inventory's reliability have been examined. For example, the odd-even correlations range from .62 to .88, indicating consistency among items. The test-retest reliabilities, over an 8-month period, across scales range from .40 to .76 (only the alienation scale is .40, with the next lowest coefficient being .55 for repression—most coefficients are in the .70s). Cronbach's (1951) alpha ranges from .61 to .87, except the .43 for immaturity, which means the latter scale must be interpreted with real caution. It also distinguishes serious offenders from those with minor offenses and is sensitive to treatment changes (Jesness, 1991a, 1991b). The psychometric properties of all scales used in the study are presented in Table 2.

The Index of Self-Esteem (ISE) (Hudson, 1992) is a 25-item scale (7-point scales ranging from *none of the time* to *all of the time*) designed to measure the degree and severity, or magnitude, of a problem with self-esteem, which is an evaluation of self. The ISE has an alpha of .93 and an SEM of 3.70. It also has solid known groups and sufficient construct validity. Seven items of the Self-Efficacy Scale (Maddox, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982) are used. This scale has good construct validity and an alpha of .86. In the present study, the 7 items (5-point scale ranging from *strongly disagree* to *strongly agree*) selected had an alpha of .90 and included the most salient efficacy items such as "I make certain my plans work out" and "I am a self-reliant person." Resilience is measured by 5 items (5-point scales ranging from *strongly disagree* to *strongly agree*): (a) I am able to overcome difficulties or traumatic events quickly and move on with my life, (b) I do not allow obstacles to keep me from accomplishing what I want to do, (c) I am able to successfully deal with situations that life hands me, (d) I bounce back from failures quickly and continue until I am successful, and (e) I can endure a lot of setbacks and still try to succeed in life.

Peer association is measured with four items (4-point scale ranging from *strongly disagree* to *strongly agree*) that ask (a) if friendship is more important than breaking the law, (b) if getting into trouble with the law is a way of gaining

TABLE 2
STATISTICAL PROPERTIES OF PREDICTORS

<i>Predictor</i>	M	SD	α	<i>Factor Analysis Range</i> ^a
Jesness Inventory				
Maladjustment	72.0	12.2	.77	.65-.88
Value orientation	59.1	11.4	.83	.65-.78
Immaturity	63.2	11.2	.89	.76-.91
Autism	63.5	10.5	.85	.71-.86
Alienation	60.8	9.9	.77	.75-.93
Aggression	54.9	12.9	.87	.80-.95
Withdrawal	55.7	12.3	.82	.81-.77
Social anxiety	48.3	10.6	.78	.83-.88
Repression	59.1	10.2	.84	.84-.89
Denial	45.2	10.7	.91	.77-.93
Asocial	72.6	10.5	.92	.76-.94
Other factors				
Self-esteem	50.2	10.3	.92	.87-.96
Resilience	30.1	2.3	.88	.75-.93
Peer association	12.3	2.3	.77	.65-.80
Self-efficacy	15.2	3.3	.88	.75-.94
Peer influence	11.8	1.9	.75	.60-.84
Perception of program	30.2	4.9	.83	.77-.91
Feel safe	6.1	1.1	—	—
Staff support	21.9	3.0	.79	.70-.86
Stimulated	15.1	2.7	.80	.83-.91
Perception of help	9.8	2.2	—	—
Future expectations	9.9	3.1	.93	.88-.96
Expedience	12.1	2.2	.88	.86-.93

a. Maximum likelihood factor analyses, with oblimin rotation, ranges.

respect from friends, (c) if you choose friends who are not afraid of getting into trouble with the law, and (d) if loyalty to friends is more important than obeying laws. Peer influence also is measured by four items (same 4-point scale) asking if your friends (a) influence you to steal, (b) influence you to use illegal drugs, (c) influence you to sell drugs, and (d) influence you a lot in breaking the law.

Perception of the boot camp program is seven items (same 4-point scale) asking if the program is (a) helping you, (b) making you a better person, (c) useless, (d) causing you to learn about yourself, (e) an experience that will not change you, (f) giving you insight to be more mature, and (g) causing you to become more criminal.

Feeling safe is measured by two items (same 4-point scale) that ask (a) if you feel safe in boot camp and (b) if you feel you will be hurt in this place. Staff support is measured with seven items asking if (a) you would ask staff for help, (b) staff try to hurt inmates, (c) staff are fair, (d) you try to talk to staff, (e) you like some of the staff, (f) you think staff are stupid, and (g) staff are trying to help you. Stimulation is measured by five items (same 4-point scale) asking if (a) the boot camp is depressing, (b) the boot camp is making you feel you cannot take it anymore, (c) the program is boring, (d) if the program is doing more harm than good, and (e) the program is a challenging experience. Perception of help from the boot camp experience is measured by three items (same 4-point scale) asking if (a) this incarceration will keep you from drugs, (b) this incarceration will stop your criminal behavior, and (c) this incarceration has made you think about better options in life.

Future expectations is measured with six items (1 = *poor*, 2 = *fair*, 3 = *good*) that ask (a) what the chances are of you getting the job you like, (b) what the chances are of persons like you getting a good-paying, honest job in your town or city, (c) what your chances are of finding good, steady employment that lasts a long time, (d) what your chances are of finding a good job that pays really well, (e) what your chances are of getting ahead and being successful in the future, and (f) if you have the same chances to get ahead as others in America.

Finally, expedience pertained to whether inmates chose boot camp instead of prison because it was expedient in terms of time incarcerated, because the 105-day boot camp program was a shorter—albeit a more regimented and demanding experience—period of incarceration than serving their sentence in prison. Expedience is measured with four items (4-point scale ranging from *strongly disagree* to *strongly agree*) that ask (a) if boot camp was chosen because it is an easy way to do time, (b) if boot camp was chosen because it is safer than prison, (c) if boot camp is a game you will play to get out of prison sooner, and (d) if boot camp seemed like less work than prison.

All of the measures concerning the boot camp environment were adapted from items generally used to measure Toch's (1977) needs and have been used to measure the boot camp experience (e.g., Camp, 1991). An examination of skewness and kurtosis of all factors indicates that they were within the normal range. A correlational matrix of all study factors, using Pearson product-moment correlations, was examined prior to conducting the discriminant analyses: The only correlations above .20 were between staff support and stimulation (.44) and between perception of the boot camp program and perception of help (.39). Hence, tolerance tests and variance inflation factors also were examined for multicollinearity (Freund & Wilson, 1998). These tests did not indicate that there was a problem with multicollinearity. Maximum likelihood factor analyses, with an oblique (oblimin) rotation, clearly indicated items loaded on hypothesized factors using criteria of an eigenvalue of at least 1 and loadings of .40 on factors and of .15 between factors.

TABLE 3
 DISCRIMINANT ANALYSIS OF RECIDIVISTS,
 PAROLE VIOLATORS, AND NONRECIDIVISTS

<i>Group</i>	<i>Function 1</i>	<i>Function 2</i>
Canonical discriminant function evaluated		
at the group mean		
Nonrecidivists	-.79899	-.25354
Recidivists	.73491	.22234
Parole violator	-.57139	.24461
Pooled within-groups correlation between		
discriminant functions		
Present age	-.7264*	.2202
Age at first crime	-.7116*	.2076
Age first used drugs	-.7012*	.2041
Peer influence	.6571*	.2005
Peer association	.6043*	.1989
Maladjustment	.5478*	.1578
Aggression	.5401*	.1423
Denial	.5001*	.1299
Alienation	.4421*	.0928
Immaturity	.4056*	.0776
Asocial	.3879*	.0327
Expedience	.3774*	.0320
Juvenile incarceration	.3487*	.0285
Autism	.3289*	.0243
Self-efficacy	-.2723	.7032*
Resilience	-.2622	-.6888*
Perception of program	-.2011	-.6624*
Perception of help	-.2236	-.6329*
Staff support	-.2139	-.6006*
Future expectations	-.2002	-.5661*
Stimulated	-.1923	-.3321*
Self-esteem	-.1774	-.3224*

* $p < .01$.

FINDINGS

The discriminant analysis (Klecka, 1980) shown in Table 3 indicates that the majority of discriminators studied are statistically significant ($\alpha = .05$) and that they discriminate between the three outcomes as expected (scaled: 1 = non-recidivists, 2 = parole violators, 3 = recidivists). Indeed, the analysis reveals there are two functions, as anticipated, and 80% of the variance in the three groups is in the first function, leaving 20% in the second function. It may be noted that the first

TABLE 4
CLASSIFICATION TABLE OF DISCRIMINANT ANALYSIS

<i>Observed Group</i>	<i>Number of Cases</i>	<i>Predicted Group Membership</i>		
		<i>1</i>	<i>2</i>	<i>3</i>
Nonrecidivists (Group 1)	202	162 (80.2%)	27 (13.4%)	13 (6.4%)
Parole violators (Group 2)	57	8 (14.0%)	9 (15.8%)	40 (70.2%)
Recidivists (Group 3)	221	32 (14.5%)	168 (76.0%)	21 (9.5%)

NOTE: Percentage of cases correctly classified was 77.08.

function discriminates between recidivists and other graduates of boot camp (i.e., nonrecidivists and parole violators), whereas the second function discriminates between nonrecidivists and the other two groups (note signs of canonical coefficients). Comparing recidivists to the other two groups of graduates, the discriminators in the first function show that recidivists are younger, begin crime at an earlier age, start using drugs earlier in life, are more influenced by peers who engage in unlawful behavior, associate with these peers more frequently, have higher scores on the Jesness Inventory, see boot camp more as expedient to release, and are more likely to have a history of incarcerations in juvenile justice.

In contrast, nonrecidivists have higher self-efficacy, have more resilience, rate the overall effectiveness of the boot camp program higher, perceive more help at the boot camp, rate staff support higher, have more expectation of the future, find the boot camp experience more stimulating, and have higher self-esteem than recidivists or parole violators. All of the within-group correlation coefficients are above the conventional .30 used to indicate a noteworthy discriminator. However, withdrawal, social anxiety, repression, feeling safe at the boot camp, and the WRAT scores are not significant discriminators. Stated succinctly, the findings, with isolated exceptions, are very much in accord with those expected based on prior research in other populations of criminal groups (see reviews, Andrews & Bonta, 1998; Harland, 1996; Hill et al., 1999; Sherman et al., 1997).

Before the analysis shown in Table 3, separate discriminant analyses were conducted with these clusters of factors because the sample size did not permit a simultaneous analysis of all variables in the study: (a) sociodemographic variables (i.e., all age factors, WRAT scores), (b) Jesness scales (see Table 2), and (c) other factors (see Table 2). Factors that were not statistically significant in these separate analyses were not considered in the final analysis shown in Table 3. Table 4 shows that the analysis in Table 3 classifies 77% of the cases in the study correctly. The discriminant analysis classifies 80% of the nonrecidivists, 70% of the parole violators, and 76% of the recidivists correctly. The 20 inmates who

dropped out of boot camp are not included in the analyses because they received a different and lengthier intervention (i.e., prison).

DISCUSSION

This is a study of 480 boot camp graduates designed to examine the discrimination of several sociodemographic variables, personality traits, criminal history factors, personal attributes, and perceptions of the boot camp environment. This is a broader range of discriminators than has been considered in previous research, and the study examines the outcomes of nonrecidivism, parole violation, and recidivism with crime involved in a 3-year follow-up period. There is a paucity of research on boot camps that distinguishes between recidivism with crime involved and parole violation, and yet I think this is a very important distinction. Although a few parole violators likely have committed undetected offenses or crimes that are not prosecuted, experience suggests that the vast majority of parole violations are for failure to report to aftercare workers required of all graduates of the boot camp. The aftercare following the boot camp studied requires all graduates to have face-to-face meetings with the aftercare worker to report on school or employment and other activities for 6 months, and there are random drug screens and contacts at schools and places of employment. Additionally, all graduates are on parole for the duration of their original sentence and must report to the parole officer at least monthly after the initial 6-month intensive supervision.

A serious limitation of the present study is that there is no information about why persons received a parole violation, and certainly this should be investigated in future studies. Other salient limitations include single self-report measures and sources of information and the cross-sectional design, which does not permit a test of developmental sequences. Moreover, this is a study of one boot camp, and these programs vary regarding components, length, staff, admission criteria, and aftercare. Hence, the findings of this study need to be verified in future research.

Meanwhile, the congruence between what was expected and the findings lends creditability to the results. All significant discriminators distinguish between outcomes exactly as expected, albeit some hypothesized discriminators are not statistically significant. That withdrawal, social anxiety, repression, and feeling safe at the boot camp are not significant discriminators is plausible on hindsight: The personality attributes are no longer associated with offenders in most studies, despite their use in the Jesness Inventory (Andrews & Bonta, 1998). Also, the boot camp studied has more surveillance and monitoring than prisons, and, therefore, safety is likely less of an issue than in regular prisons. It is somewhat surprising that the WRAT is not a predictor but rather is only a screening device that relies only on word recognition and, therefore, is not a solid measure of reading level.

Taken together, the findings should be useful to policy and practices of boot camps. Indeed, the profile of discriminators between recidivists and other graduates clearly reveals that individuals who return to the DOC after graduation from

boot camp because of additional crime(s), are younger, begin unlawful behavior earlier, associate with peers who engage in crime, have several personality deficits, and view boot camp as merely an expedient means of release. This profile should resonate with veteran administrators' observations of who returns to the DOC, although their observations are less systematic and more subject to idiosyncratic biases (D. M. Gottfredson & Tonry, 1987; Jones, 1996). These findings should stimulate a renewed interest in investigating the efficacy of alternative intervention on recidivism among young offenders with this familiar profile. Existing boot camp programs may be too brief in duration and lack the necessary services to properly treat the interrelated criminal proclivities, personality deficits, lack of receptivity to assistance, and peer associations that appear to underlie persistence in crime. Moreover, this study suggests that these young offenders are not motivated to respond to programmatic efforts in boot camps. It would seem that a more intensive intervention in terms of time and psychological services are needed for these younger offenders, and this study offers some clues about what psychological problems should be addressed.

There are interpersonal cognitive problem-solving interventions that aim to decrease impulsivity and instantaneous anger or low frustration tolerance characteristic of young persons who have the personality deficits discussed. Efforts are focused on alternative solutions to interpersonal problems, consequential thinking, and recognition of and sensitivity to feelings of others. The Brainpower program (Hudley, 1994), for example, focuses on reduction of negative attributions, especially hostile attributions. People are taught to search for, interpret, and properly classify the verbal, physical, and behavioral cues from others in social situations. The Pact program (Brewer, Hawkins, Catalano, & Neckerman, 1995) is based largely on social competence training. Persons are trained in giving and receiving positive comments, resisting peer pressure, problem solving, and negotiation. In addition, young persons with the personality deficits studied need to receive, to the extent possible, individual and group counseling directly aimed at correcting these deficits (Andrews & Bonta, 1998; Harland, 1996; Sherman et al., 1997).

In addition, interventions designed to raise awareness of how much influence peers exercise over persons is imperative. For many years, studies have shown that peer influence is one of the strongest predictors of persistent crime (see reviews, Agnew, 1995; Akers, 2000; Empey et al., 1999). Offenders must become more conscious of the processes of how peers influence them and how to eschew their sway. Aside from gaining a clearer understanding of the processes of influence and of how to avoid them, offenders need insight into why they are influenced so heavily by peers. This will mean teaching them that all of us have desires to belong and to feel accepted, secure, and respected, and that we seek relationships to meet these desires (Hawkins, Arthur, & Catalano, 1995). Simultaneously with insight into why peer groups are sought should be discussions of how to seek interactions with persons who will encourage and reinforce more prosocial behavior. This will often mean teaching persons how to relate in a more socially skilled fashion.

This study found that nonrecidivists have a sense of self-efficacy, are resilient, and they perceive programmatic benefits, staff support, stimulation, and overall help at the boot camp. In addition, they have high self-esteem and are optimistic about their future. In short, these are persons with strong inner resources for altering their lives who perceive the boot camp program overall to be a beneficial experience instead of merely an expedient avenue to release from a secured facility. Persons with this profile may well be good candidates for the current boot camp programs, with their brevity and minimal resources. Certainly, more thought should be given to which offenders are likely to benefit from “shock” incarceration, which is the essence of most existing boot camps.

In conclusion, this study, regrettably, did not find what factors discriminate between recidivists who committed additional crime from parole violators. Clearly, studies are needed that distinguish between these types of recidivists because they are likely different in their needs and responsiveness to intervention.

REFERENCES

- Abnerthy, T. J., Massad, L., & Romano-Dwyer, L. (1995). The relationship between smoking and self-esteem. *Adolescence*, 30, 899-907.
- Agnew, R. (1995). Testing the leading crime theories: An alternative strategy focusing on motivational processes. *Journal of Research in Crime and Delinquency*, 32, 363-399.
- Akers, R. L. (2000). *Criminological theories: Introduction and evaluation* (3rd ed.). Los Angeles: Roxbury.
- Anderson, J. F., Dyson, L., & Burns, J. C. (1999). *Boot camps: An intermediate sanction*. New York: University Press of America.
- Andrews, D. A., & Bonta, J. (1998). *The psychology of criminal conduct* (2nd ed.). Cincinnati, OH: Anderson.
- Aroian, K. J., & Norris, A. E. (2000). Resilience, stress, and depression among Russian immigrants to Israel. *Western Journal of Nursing Research*, 22, 54-67.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman & Co.
- Benda, B. B. (1999). Testing the problem syndrome among young males in boot camp: Use of theoretical elaboration with reciprocal relationships. *Social Work Research*, 23, 28-41.
- Benda, B. B., Corwyn, R. F., & Toombs, N. J. (2001). From adolescent “serious offender” to adult felon: A predictive study of offense progression. *Journal of Offender Rehabilitation*, 32, 79-106.
- Benda, B. B., Corwyn, R. F., & Toombs, N. J. (in press). Recidivism among adolescent serious offenders: Prediction of entry into the correctional system. *Criminal Justice and Behavior*.
- Benda, B. B. & Tollett, C. L. (1999). A study of recidivism of serious and persistent offenders among adolescents. *Journal of Criminal Justice*, 27, 111-126.
- Benda, B. B., & Toombs, N. J. (1999). Testing theoretical models with reciprocal effects of drug use among boot camp participants using a developmental perspective. *Journal of Social Service Research*, 26, 1-35.
- Benda, B. B., Toombs, N. J., & Whiteside, L. (1996). Recidivism among boot camp graduates: A comparison of drug offenders and other offenders. *Journal of Criminal Justice*, 24, 241-254.
- Blumstein, A., Cohen, J., Roth, J. A., & Visser, C. A. (Eds.) (1986). *Criminal careers and career criminals* (Vol. 1). Washington, DC: National Academy Press.
- Bonta, J. (1996). Risk-needs assessment and treatment. In A. Harland (Ed.), *Choosing correctional options that work: Defining the demand and evaluating the supply* (pp. 18-68). Thousand Oaks, CA: Sage.

- Brewer, D. D., Hawkins, J. D., Catalano, R. F., & Neckerman, H. J. (1995). Preventing serious, violent, and chronic juvenile offending: A review of evaluations of selected strategies in childhood, adolescence, and the community. In J. C. Howell, B. Krisberg, J. D. Hawkins, & J. J. Wilson (Eds.), *Sourcebook on serious, violent, and chronic juvenile offenders* (pp. 61-141). Thousand Oaks, CA: Sage.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1986). Ecology of the family as context for human development: Research perspectives. *Developmental Psychology*, 22, 723-735.
- Burton, V., Marquart, J., Cuvelier, S., Alarid, L., & Hunter, R. (1993). A study of attitudinal change among boot camp participants. *Federal Probation*, 57, 46-52.
- Byrne, J. M., Lurigio, A. J., & Petersilia, J. (Eds.) (1992). *Smart sentencing: The emergence of intermediate sanctions*. Newbury Park, CA: Sage.
- Camp, D. D. (1991). Shock incarceration in Georgia: An analysis of task performance and training needs among corrections officers. *Journal of Offender Rehabilitation*, 16, 153-176.
- Cronbach, L. J. (1951). Coefficient alpha and internal structure of tests. *Psychometrika*, 16, 297-334.
- Cronin, R. C. (1994). *Boot camps for adult and juvenile offenders: Overview and update*. Washington, DC: Department of Justice.
- Empey, L. T., Stafford, M. C., & Hay, C. H. (1999). *American delinquency: Its meaning and construction* (4th ed.). Belmont, CA: Wadsworth.
- Freund, R. J., & Wilson, W. J. (1998). *Regression analysis: Statistical modeling of a response variable*. New York: Academic Press.
- Gendreau, P. (1996). Offender rehabilitation: What we know and what needs to be done. *Criminal Justice and Behavior*, 23, 144-161.
- Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: What works! *Criminology*, 34, 575-607.
- Gottfredson, D. M., & Tonry, M. (Eds.). (1987). *Prediction and classification: Criminal justice decision making*. Chicago: University of Chicago Press.
- Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Palo Alto, CA: Stanford University Press.
- Gover, A. R., MacKenzie, D. L., & Armstrong, G. S. (2000). Importation and deprivation explanations of juveniles' adjustment to correctional facilities. *International Journal of Offender Therapy and Comparative Criminology*, 44, 450-465.
- Gutman, L. M., & Midgley, C. (2000). The role of protective factors in supporting the academic achievement of poor African American students during the middle school transition. *Journal of Youth and Adolescence*, 29, 223-248.
- Hanson, R. K., & Harris, A.R.J. (2000). Where should we intervene? Dynamic predictors of sexual offense recidivism. *Criminal Justice and Behavior*, 27, 6-35.
- Harland, A. T. (Ed.). (1996). *Choosing correctional options that work*. Thousand Oaks, CA: Sage.
- Hawkins, J. D., Arthur, M. W., & Catalano, R. F. (1995). Preventing substance abuse. In M. Toney & D. P. Farrington (Eds.), *Building a safer society: Strategic approaches to crime prevention: Vol. 19. Crime and justice: A review of research* (pp. 343-427). Chicago: University of Chicago Press.
- Hill, K. G., Howell, J. C., Hawkins, J. D., & Battin, S. R. (1999). Childhood risk factors for adolescent gang membership: Results from the Seattle Social Development Project. *Journal of Research in Crime and Delinquency*, 36, 300-322.
- Hoge, R. D. (1999). An expanded role for psychological assessments in juvenile justice systems. *Criminal Justice and Behavior*, 26, 251-266.
- Hudley, C. C. (1994). The reduction of childhood aggression using the brainpower program. In M. Furlong & D. Smith (Eds.), *Anger, hostility, and aggression: Assessment, prevention, and intervention strategies for youth* (pp. 313-344). Brandon, VT: Clinical Psychology Publishing.
- Hudson, W. W. (1992). *The WALMYR assessment scales scoring manual*. Tempe, AZ: WALMYR.
- Jastak, S. (1993). *Wide Range Achievement Test* (Rev. ed.). Wilmington, DE: Jastak Associates Inc.

- Jesness, C. F. (1991a). *Classifying juvenile offenders: The sequential I-level classification manual*. North Tonawanda, NY: Multi-Health Systems.
- Jesness, C. F. (1991b). *The Jesness Inventory* (Rev. ed.). North Tonawanda, NY: Multi-Health Systems.
- Jessor, R., & Jessor, S. L. (1977). *Problem behavior and psychosocial development: A longitudinal study of youth*. New York: Academic Press.
- Jones, J. (1996). Risk prediction in criminal justice. In A. T. Harland (Ed.), *Choosing correctional options that work* (pp. 33-68). Thousand Oaks, CA: Sage.
- Klecka, W. R. (1980). *Discriminant analysis*. Beverly Hills, CA: Sage.
- Kroner, D. G., & Loza, W. (2001). Evidence for the efficacy of self-report in predicting nonviolent and violent criminal recidivism. *Journal of Interpersonal Violence, 16*, 168-177.
- Loza, W., Dhaliwal, G., Kroner, D. G., & Loza-Fanous, A. (2000). Reliability, construct, and concurrent validities of the self-appraisal questionnaire: A tool for assessing violent and nonviolent recidivism. *Criminal Justice and Behavior, 27*, 356-374.
- Loza, W., & Loza-Fanous, A. (2001). The effectiveness of the self-appraisal questionnaire in predicting offenders' postrelease outcome: A comparison study. *Criminal Justice and Behavior, 28*, 105-121.
- Lutze, F. E. (1996). Are shock incarceration programs more rehabilitative than traditional prisons? A survey of inmates. *Justice Quarterly, 15*, 547-566.
- MacKenzie, D. L. (1997). Criminal justice and crime prevention. In L. W. Sherman, D. Gottfredson, L. M. MacKenzie, J. Eck, P. Reuter, & S. Bushway (Eds.), *Preventing crime: What works, what doesn't, what's promising* (pp. 9-75). Washington, DC: U.S. Department of Justice, Office of Justice Programs.
- MacKenzie, D. L., Brame, R., McDowall, D., & Souryal, C. (1995). Boot camp prisons and recidivism in eight states. *Criminology, 33*, 327-357.
- MacKenzie, D. L., & Parent, D. (1991). Shock incarceration and prison crowding in Louisiana. *Journal of Criminal Justice, 19*, 225-237.
- MacKenzie, D. L., & Piquero, A. (1994). The impact of shock incarceration programs on prison crowding. *Crime & Delinquency, 40*, 222-249.
- MacKenzie, D. L., & Shaw, J. W. (1990). Inmate adjustment and change during shock incarceration: The impact of correctional boot camp programs. *Justice Quarterly, 7*, 125-150.
- MacKenzie, D. L., & Souryal, C. (1995). Inmates' attitude change during incarceration: A comparison of boot camp with traditional prison. *Justice Quarterly, 12*, 324-353.
- Maddox, S. M., Mercandante, J. E., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports, 51*, 663-671.
- Maltz, M. (1984). *Recidivism*. Orlando, FL: Academic Press.
- McCorkle, R. (1995). Correctional boot camps and change in attitude: Is all this shouting necessary? A research note. *Justice Quarterly, 12*, 365-375.
- Morris, N., & Tonry, M. (1990). *Between prison and probation: Intermediate punishments in a rational sentencing system*. New York: Oxford University Press.
- Palmer, T. (1992). *The re-emergence of correctional intervention*. Newbury Park, CA: Sage.
- Piquero, A. R., Blumstein, A., Brame, R., Haapanen, R., Haapanen, R., Mulvey, E. P., Nagin, D. S. (2001). Assessing the impact of exposure time and incapacitation on longitudinal trajectories of criminal offending. *Journal of Adolescent Research, 16*, 54-74.
- Scheier, L. M., Botvin, G. J., Griffin, K. W., & Diaz, T. (2000). Dynamic growth models of self-esteem and adolescent alcohol use. *The Journal of Early Adolescence, 20*, 178-209.
- Sherman, L. W., Gottfredson, D., MacKenzie, D. L., Eck, J., Reuter, P., & Bushway, S. (Eds.). 1997. *Preventing crime: What works, what doesn't, what's promising*. Washington, DC: U.S. Department of Justice, Office of Justice Programs.
- Toch, H. 1977. *Living in prison: The ecology of survival*. New York: Free Press.
- Uggen, C. (2000). Work as a turning point in the life course of criminals: A duration model of age, employment, and recidivism. *American Sociological Review, 65*, 529-546.

- Vega, W. A., Apospori, E., Gil, A. G., Zimmerman, R. S., & Warheit, G. J. (1996). A replication and elaboration of the esteem-enhancement model. *Psychiatry, 59*, 128-144.
- Wills, T. A. (1994). Self-esteem and perceived control in adolescent substance use: Comparative tests in concurrent and prospective analyses. *Psychology of Addictive Behaviors, 8*, 223-234.
- Zhang, S. X. (1998). In search of hopeful glimpses: A critique of research strategies in current boot camp evaluation. *Crime & Delinquency, 44*, 314-334.

Brent B. Benda, Ph.D.

Professor

School of Social Work

University of Arkansas at Little Rock

Little Rock, Arkansas 72204

USA