

# TELLEGEN'S MULTIDIMENSIONAL PERSONALITY QUESTIONNAIRE IN VIOLENT AND NONVIOLENT WOMEN CRIMINALS

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Although crime rates have been decreasing for a number of years, crime continues to be an important problem both economically and socially. An emerging factor is the need to house an increasing number of female offenders. Although the amount of crime committed by women has increased in the last forty years, little research has been conducted with this population. The Multidimensional Personality Questionnaire (MPQ), a self-report personality inventory developed by Auke Tellegen, is a relatively new means of psychologically examining populations of interest. The MPQ measures eleven personality traits and three higher order factors. Thirty-two violent and 23 nonviolent women inmates at the Louisiana Correctional Institution for Women were administered the MPQ. A discriminant function analysis using the primary trait measures accurately classified 81.8% of the women. Thus the MPQ would seem a promising tool to use in the further study of this and possibly other criminal groups.

Crime is an important problem in the United States, in both economic and social terms. The Justice Department's Bureau of Justice Statistics (BJS) reported in 2002 that the U.S. spent \$147 billion on criminal justice operations alone in 1999. Spending on police activities, legal and judicial services, and corrections increased by approximately 8% per year from 1982 to 1999 (Gifford, 2002). During this time period, expenditures for police activities rose by 244% while the cost of judicial services rose by 314%. Although police activities continue to be the most expensive component of criminal justice activities, the cost of corrections underwent

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the largest growth during this time period, increasing by 442% (BJS, 2002, February 10). For the year 1999, federal, state, and local governments spent approximately \$539 per U.S. resident on criminal justice activities (Gifford, 2002). Research conducted to gain an understanding of those individuals who commit crimes offers the hope of reducing this growing expense.

Expenditures represent only one facet of crime. If current incarceration rates continue, it is estimated that 1 of every 20 persons in the U.S. will be incarcerated in a prison over their lifetime (BJS, 2003, January 8). Demographic trends for race indicate that from 1986-1997 the number of incarcerated blacks almost doubled while the number of whites increased by two-thirds. During the same period, the number of males in the correctional system increased by two-thirds while the number of females more than doubled (BJS, 2002, January 16). Over half of the increase in the prison population since 1990 is due to the increase in prisoners convicted of violent crimes (BJS, 2002, July 30). In addition, recidivism rates indicate that time spent in the correctional system is anything but 'corrective'. Of 272,111 prisoners released from prison in 15 states in 1994, 51.8% were arrested, convicted and returned to prison within 3 years (BJS, 2002, October 25). Thus crime is important socially as well as fiscally.

While the preceding statistics are of concern in themselves, the increasing number of women involved in crime and the criminal justice system is also troubling. Arrests of women increased from 13% of all arrests in 1975 to 22% of all arrests in 1998. Arrests of women for violent crimes increased from 10% to 17% of all violent crime arrests over the same time period (United States Department of Justice, 1998; Greenfeld & Snell, 1999). More disturbing, per capita arrest rates of young women (age 18-24) for violent offenses had risen about 80% over the 10 year period ending in 1997. As arrest rates have increased, conviction rates have also risen. The number of convicted females grew at 2 ½ times the rate of increase for male defendants between 1990-1996. This change included increases in every major crime category, including violent, property, drugs, and other felonies. Female offenders represented 16% of the total correctional population in 1998. The

number of women per capita under correctional supervision grew 48% from 1990 to 1998, compared to a 27% increase for men per capita. Of all women in state prisons, approximately 80% were either recidivists or were convicted of a violent crime (Greenfeld and Snell, 1999).

The foregoing numbers demonstrate the increasing number of women being arrested, convicted and sentenced for crimes in this country. They do not, however, indicate some social consequences of crime within this group. The Bureau of Justice Statistics (2000) estimates that 1.5 million minor children have an imprisoned parent and that at least 10 million U.S. children have experienced parental incarceration at some time. Approximately 75% of incarcerated women are mothers and about two-thirds of those have children under the age of 18. Little research has been conducted on this population of children, but an increased risk of delinquency in inmates' children is one reported effect. (Johnston, 1995).

In addition, women who are released from prison are faced with several tasks. They must simultaneously reunite with children, find housing and employment, and comply with parole or probationary conditions, among other things. Many of these women have a low level of education, few job skills, and little work experience as well as problems with substance abuse. Confronted with so many responsibilities, many of these women revert to their former lives of substance abuse, prostitution and other crimes that may eventually return them to prison. The ever-increasing cost of this cycle of crime, incarceration, and release is borne by the inmates' children, the taxpayers, and society at large (Conly, 1998). Considering the growing number of women who commit crimes and the implications of their incarceration, it is important to understand these women and the types of crime that they commit because that understanding offers the hope of improved corrective and preventive measures aimed at crime. Therefore, the purpose of this study was to examine the potential of a relatively new testing instrument, the Multidimensional Personality Questionnaire to contribute to this effort (MPQ).

Although psychologists began to study crime and criminals in the late nineteenth century, the psychological examination of women criminals was largely ignored until the 1960's. In the ensuing years, the research conducted has been both descriptive and quasi-experimental in nature. Butler and Adams (1966) attempted to develop a typology of delinquent girls in order to assign them to an appropriate type of therapy at a residential treatment facility. To this end, they used the Interpersonal Maturity Level, or I-level typology developed by Sullivan, Grant, and Warren (as cited in Butler & Adams, 1966) to assist in classification. The authors' goal was to objectify the assignment of I-level types through a Q-factor analysis of a psychological inventory.

Each subject was given a psychiatric diagnosis, assigned an I-level upon admission to the facility, and completed the Jesness Psychological Inventory (JI), a 155-item inventory that asked about attitudes toward factors such as family members, police, the school and self. Based on this analysis, three different types of girls were identified and described, accounting for 72.6% of the total sample.

The *disturbed-neurotic* type made up 23.7% of the sample. These subjects were characterized by concerns for procedure, order, and regularity with a willingness to accept cultural norms. They were considered to have feelings of extreme guilt and anxiety over their crimes. Staff members independently described these girls as depressive, anxious, passive, conforming and withdrawn.

The *immature-impulsive* type accounted for 21.6% of the subjects. These girls presented a picture of immaturity, impulsiveness, and lack of internal control. Staff members described them as aggressive, impulsive, immature and manipulative.

The third type of girl differed from the other two types. Their responses indicated they were emotionally healthy, normal, and non-delinquent. However, when compared to their case histories, the researchers found that this representation was suspect. They concluded that the girls were falsifying the test and giving "desirable" answers to make themselves look good. These girls

were described as self-assertive and as having a desire to control their environments. Although their overt behavior was conforming, their attitudes were thought to be at odds with their behavior. Staff members described these girls as intelligent, clever, manipulative, and as having sociopathic and aggressive tendencies. These girls were described as *covert manipulators* and accounted for 27.3% of the sample.

Butler and Adams (1966) found no relationship between psychiatric diagnosis, I-levels, and Q-types, thus failing to find an objective means of assigning delinquents to I-levels. However, they felt that the discovery of the covert manipulator type was significant. They believed that identifying these girls early in the institutionalization period could be useful in assignment to effective treatment. They concluded that the Q-analysis was a step forward in the development of an objective typology of delinquents. Despite a number of limitations, the findings of Butler and Adams served to stimulate subsequent researchers to further investigations.

Cole, Fisher and Cole conducted a descriptive study of women murderers in 1968 to determine whether women who killed could be categorized by personality descriptors and behaviors. The subjects were 111 homicide cases from the California Institution for Women. Based on a review of psychiatric interviews, crime description and prior criminal record, court outcomes, information obtained from family and acquaintances, and interviews with other mental health professionals and prison staff, Cole derived six categories of behavior for the group. The categories were the masochistic, the overtly hostile violent, the covertly hostile violent, the inadequate, the psychotic and the amoral. He then assigned each woman to one of the six groups and proceeded to examine the relationship between the six categories and 11 sociological variables (age, race, type of weapon used, etc.). These 11 variables were also used to formulate the six personality types, thus confounding the relationship, as Cole noted. Results were reported as frequencies within each personality category. Analyses of variance demonstrated that the groups differed in intelligence but not education or age. Post hoc analysis revealed that the amoral group was significantly brighter and the overtly hostile violent group was signifi-

cantly duller than the other groups. The results for these variables were reported as percentages and found to be “differentially associated with” the personality styles.

Cole’s research with female murderers was followed by further efforts to compare violent and nonviolent women offenders. Climent, Rollins, Ervin, and Plutchik (1973) sought to examine the relationship between violent behavior and several biological and psychiatric variables in 95 women prisoners at a correctional institution in Massachusetts. The biological and psychiatric variables used were: electroencephalogram; dermatoglyphic analysis of finger, palm, and footprints; the Wechsler Adult Intelligence Scale (WAIS); the Minnesota Multiphasic Personality Inventory (MMPI); the California Achievement Test (CAT); a neurological examination; a gynecological examination; and psychiatric interview. Additionally, a detailed standardized medical questionnaire was administered to the women by trained social workers. In light of their belief that a single test or observation could not adequately measure violence, Climent and his colleagues (1973) chose to use five relatively independent measures of violence. The five measures of violence were: a self-administered questionnaire that asked prisoners to rate themselves on how often they demonstrated various types of violence, the same questionnaire completed by two corrections officers who were familiar with the women, an MMPI configuration described by Davis and Sines in 1971 (as cited in Climent et al., 1973) as being significantly related to aggressive and hostile behavior in men, length of current sentence and lastly, whether the crime committed by the individual was considered violent by prison administrators. In addition, medical and institutional records were examined for relevant information.

Correlation coefficients for the five measures of violence indicated that they appeared to be independent of one another. Concurrence of all five measures of violence was the criterion for considering a relationship between violence and any given variable. Climent et al. (1973) found that nine variables were correlated with violence on all five measures. The correlated medical variables consisted of neurological disorders in the inmate and other medical disorders within the inmate’s family. Nonmedical

variables associated with violence were easy access to weapons, loss of one or both parents, self-reported homosexuality, the 'dyscontrol syndrome', and severe parental punishment. Climent et al. also considered those variables for which four out of five measures of violence were higher in either direction. These were parental divorce, family violence, suicide attempts, menstrual problems, increased use of prescribed drugs, head injury after age 10, some neurotic symptoms of childhood, and the hypomania and psychopathic deviate scales of the MMPI. Variables associated with non-violence on all five measures were clinical diagnosis of neurotic depression, a history of outpatient mental health contacts before the first conviction, and an increased number of miscarriages. Overall, the nonviolent group showed more evidence of psychiatric pathology, but also demonstrated a history of medical problems such as cancer in relatives and heart disease in the inmates. Climent et al. concluded that the finding of both medical and psychodynamic events occurring in association with violence, as well as nonviolence, point to the idea that no single variable associated with violence is most important.

In another study, Sutker, Allain, and Geyer (1978) also used the Minnesota Multiphasic Personality Inventory (MMPI) to examine female criminal violence and differential MMPI characteristics. Women from two prisons were identified from prison rolls as possible participants. Women who were convicted of violent crimes less extreme than murder or manslaughter were not included in the study, and in addition, women convicted of nonviolent offenses but who had a history of violent crimes were excluded from the study. The remaining sample consisted of 22 murderers and 40 women convicted of nonviolent offenses. The instruments administered were the Shipley Institute of Living Scale, Raven's Progressive Matrices, the MMPI, and a structured interview. MMPI scale elevations and profile patterns for women murderers and nonviolent offenders were compared. The violent offenders responded to the MMPI in a less deviant manner than the nonviolent women, who were distinguished by elevations on Scale 4 (Psychopathic deviate). Murderers scored significantly lower on Scale *F* (reflecting nonconventional thinking) and Scale 4, and significantly higher on Scale *K* (degree of psychological defensive-

ness) and Scale 5 (Masculinity-femininity). Prediction of group membership was very accurate (82% of violent and 78% of non-violent offenders were classified correctly) and heavily dependent on scores for Scale 4, Scale 5, Welsh's A scale, and the K scale. MMPI profile comparisons indicated that twice as many murderer profiles were classified as normal compared to the nonviolent offender profiles, while the nonviolent offenders had a much greater percentage of conduct disordered and psychotic profiles. Sutker et al. (1978) concluded that there were significant and reliable relationships between extreme criminal violence and some aspects of MMPI performance. Although limited by a small sample size, Sutker et al., using the MMPI, found that murderers appeared to be more normal than nonviolent offenders, while the nonviolent women demonstrated more pathology in their profiles.

Widom (1978) attempted to develop an empirical taxonomy of women offenders based on personality and personality pathology. The subjects were 66 women awaiting trial for various offenses in Massachusetts. Widom used the ten scale scores from a 213-item inventory, the Special Hospitals Assessment of Personality and Socialization (SHAPS). The traits measured included anxiety, extroversion, shyness, depression, impulsivity, aggression, and psychopathic deviance. Cluster analysis yielded four types that accounted for 76% (50 subjects) of the sample. The *psychopathic type* appeared to be hostile, aggressive, impulsive, poorly socialized, and relatively low in anxiety. They made up the smallest of the four groups, representing only 6.1% of the sample. The *secondary* or *neurotic psychopaths* made up 18.2% of the sample and were characterized by high scores on all of the scales except for extroversion. They tended to be somewhat more impulsive and undersocialized than the Type 1 women, but also had higher levels of anxiety and depression. The *overcontrolled* personality type made up 25.7% of the sample and appeared similar to those described by Megargee (as cited in Widom, 1978) amongst male prisoners. These women had essentially normal profiles except for elevated Lie scores, indicating some denial of psychological problems and a high degree of control. Lastly, 25.7% of the sample consisted of women identified as *normal criminals* because they had little personality pathology, although they had mildly elevated levels of



tension and hostility. Widom noted that the *psychopathic* women appeared to have the highest frequency of previous convictions for homicide, armed robbery, prostitution, theft/larceny, and narcotics violations. On the other hand, the *overcontrolled* women had the lowest frequency of the four groups for convictions on these offenses, with the exception of prostitution. Widom noted that the types identified by Butler and Adams (1966) – the *disturbed-neurotic*, the *immature-impulsive* and the *covert manipulator* – corresponded well to the *neurotic psychopaths*, *psychopaths*, and *overcontrolled* women, respectively, found in her own study.

Widom's (1978) study, also limited by a small sample, used personality traits to develop typologies of criminal women. She did not purposely attempt to examine the relationship between personality traits and the type of crimes committed by women. Widom did add to the emerging trend of reliance on self-report personality inventories, albeit with a relatively little known and specialized instrument.

Subsequent research has centered largely on the MMPI and its successor the MMPI-2, although the use of other instruments, notably, Hare's Psychopathy Checklist-Revised (PCL-R), have also been reported in the literature. Smith, Silber, and Karp (1988) sought to establish the validity of 'typing' female inmates by their MMPI scores using the typology developed by Megargee and Bohn (as cited in Smith, Silber, and Karp, 1988). Megargee and Bohn used the MMPI to produce the typology of male prisoners based on the patterns of standard scores. This yielded 10 types, each based on a different MMPI pattern. Their purpose was to provide guidance for program planning, therapeutic intervention and inmate housing decisions. Smith et al. applied this typology to the prediction of prison adjustment using the MMPI profiles of 141 female state prison inmates. Information on past and subsequent (eight months post testing) prison behavior, as well as demographic characteristics, was collected and compared to the MMPI type of each inmate. The results indicated that the typology was a poor predictor of both current and subsequent inmate behavior. Smith et al. concluded that the Megargee-Bohn MMPI typology appeared to be of limited use with female state inmates.

Hudson (1996) conducted an investigation of personality in incarcerated female sex offenders using the MMPI and compared her results to those of male sex offenders. Like the male offenders, two distinct groups emerged. One group of females had within normal profiles with a slight elevation of the Pd scale (Psychopathic deviate), while the other group had more pathological profiles, including elevated Pd and Sc (Schizophrenia) scales. Unlike the males, the female sex offenders tended to elevate scale Pa (Paranoia) as well, implying suspiciousness. Finally, another profile appeared that suggested naïve defensiveness, concrete thinking, social discomfort and introversion in some female offenders.

Salekin, Rogers, and Sewell (1997) sought to explore the validity of the psychopathy construct in female offenders. The instruments used were the Antisocial Scale of the Personality Assessment Inventory (PAI), the PCL-R, and the Antisocial Scale of the Personality Disorder Examination (PDE). They found significant convergence and divergence among the three instruments, supporting the psychopathy construct in female offenders. Although their study continued the trend of relying on self-report personality inventories, those utilized were highly focused on specific traits.

Sliger (1998) returned to the issue of whether the Megargee classification system could be used with female offenders, this time by way of the MMPI-2. A sample of female federal inmates were administered the MMPI-2 and classified into one of nine MMPI-2 based types and further measured on several demographic, criminal, and personality variables. Her results indicated that women classified by the Megargee system could be differentiated in a similar manner as the male offenders. She also found that the levels of deviance observed amongst the different types of female offenders were the same as those found in the male sample. Sliger concluded that the Megargee classification system for male inmates that utilized the MMPI-2 seemed promising as a means of classifying female offenders as well.

In 1999, Megargee, Mercer, and Carbonell presented the results of their investigation into the use of the MMPI-2 with male and female federal prison inmates. Their main goal was to analyze the results of male and female offenders on the MMPI-2 scales and then compare them with criminals' scores derived by Hathaway & McKinley (as cited in Megargee, Mercer, & Carbonell, 1999) on the original MMPI. They also sought to determine how well the MMPI-2 differentiated between criminal and noncriminal groups and to compare MMPI-2 results of male and female offenders.

They found that the MMPI validity and clinical scales most often linked to criminal behavior, Scale *F*, 4, 6, 8, and 9, were also the most elevated on the MMPI-2. For both genders, Scale 8 (Schizophrenia) was less prominent than it had been on the MMPI, but Scale 4 (Psychopathic Deviate) was the most elevated score on both the original and newer MMPI version. While Scale 6 (Paranoia) continued to be high for women offenders, the prominence of Scale 6 increased for men on the MMPI-2. The most obvious change for women was the increased prominence of Scale 5 (Masculinity-Femininity) on the MMPI-2. More women than men had high points on this scale, indicating a masculine orientation for the women. The authors concluded that there had been a probable shift in norms for this scale.

Regarding the Supplementary scales, Scale MAC-R (MacAndrew Alcoholism Scale-Revised) was the most prominent for both genders. Scale ASP (Antisocial Practices) was the most elevated scale for both men and women among the Content scales.

Megargee et al. (1999) also sought to determine how well the MMPI-2 differentiated between offenders and nonoffenders. They predicted and found significant differences on 18 of 22 comparisons using scales *F*, 4, 8, 9, MAC-R, APS (Addiction Potential), AAS (Addiction Admission), *Re* (Social Responsibility), *ANG* (Anger), *CYN* (Cynicism), and *ASP* (Antisocial Practices). Thus, they concluded that the MMPI-2 did differentiate between the two groups and that the differences were consistent with those found on the original MMPI, providing evidence of the construct validity of the MMPI-2. Lastly, they found that male and female

profile patterns on the Basic, Supplementary, and Content scales were very similar for male and female offenders. Interestingly, the women's scores deviated more from the MMPI-2 norms than the men's scores. Megargee and his colleagues concluded that new research was needed to investigate how personality characteristics and criminal behavior relate to the MMPI-2 profiles they derived.

Floyd (2000) submitted results of a study that examined the relationship between personality traits, crimes and prison rule violations committed by a sample of 100 imprisoned women. The participants were administered the MMPI-2 and rated on the PCL-R, in addition to undergoing a clinical interview and prison record review. Floyd (2000) found a clinically significant elevation on Scale 4 and a moderate elevation on Scale 9 (Hypomania). Otherwise, the sample's mean scores on the basic scales were mostly within the normal range. In general, the MMPI-2 basic clinical scales did not distinguish between first time offenders and recidivists, violent and nonviolent offenders, or those who violated prison rules. Thus, it appeared there was no MMPI-2 personality profile that is typical of any particular offender group. Floyd (2000) also obtained results that indicated that the PCL-R is more associated with some indices of female criminality and prison rule breaking than MMPI-2 scales.

Verona and Carbonell (2000) used the MMPI-2 and the Anger Expression Scale developed by Spielberger et al. (as cited by Verona and Carbonell, 2000) to explore the overcontrolled hostility construct as a means of explaining violent crime among a group of female state prison inmates. The women were classified as one-time violent (OV), repeat violent (RV), or nonviolent (NV) offenders. The Overcontrolled Hostility (O-H) scale scores on the MMPI-2 successfully differentiated the OV group from the RV and NV groups. Members of the OV group were more likely to have committed an extremely violent offense than the RV group and had significantly shorter nonviolent criminal histories than the other two groups. The RV women demonstrated more aggression within prison and reported more acting out when angered than OV and NV offenders. Verona and Carbonell concluded that the

MMPI-2 results emphasized the importance of the overcontrolled hostility construct in the analysis of violence in female offenders.

Rather than examining incarcerated women, Segal (2004) analyzed the MMPI-2 validity and clinical scale scores of pretrial women. They consisted of two groups, those charged with murder and those charged with other crimes. He found several significant differences between the two female groups and between the females and the males described in a prior study by Shea and McKee (as cited by Segal, 2004). Specifically, women charged with offenses other than murder scored significantly higher than women charged with murder on Scales 4 (Psychopathic Deviate) and 9 (Hypomania). Women charged with murder scored significantly higher on Scales 1 (Hypochondriasis) and 7 (Psychasthenia) than the men charged with murder in the Shea and McKee study. Segal found no differences in the validity and clinical scales between the males and females charged with offenses other than murder.

Although the use of the MMPI is one of the best known and widely used of the self-report personality inventories, its component scales are mental illness oriented and were based on several diagnostic populations of convenience rather than being theoretically shaped or empirically defined. It is worthy of note that in the MMPI and MMPI-2 studies cited above, the results based on the original "clinical" scales tend to be inconsistent, with interesting findings more likely on the more recently derived specialized scales.

A relatively new self-report personality inventory is the MultiDimensional Personality Questionnaire (MPQ) developed by Auke Tellegen (1982), its component scales being based on Tellegen's review of the personality research literature and his identification of empirically robust variables across studies of personality. Thus it offers promise in linking an understanding of criminal women to basic dimensions of personality.

The purpose of this study was to examine whether and how the MPQ can differentially characterize women prisoners convicted of violent and nonviolent offenses, using the 11 primary

traits. Type of criminal offense (violent or nonviolent) served as the dependent variable while the 11 primary factor traits served as predictor variables. Tellegen has recently suggested that four or even five higher order factors can be derived from the MPQ. Given the uncertain factor structure, and the demonstrated robustness of the primary scales, the latter were the focus of this study.

## METHOD

### *Participants*

The sample consisted of 32 violent and 32 nonviolent women offenders incarcerated at the Louisiana Correctional Institute for Women (LCIW) in St. Gabriel, LA. Because prison inmates constitute a population whose freedom to choose might be compromised, a full review of the consent procedures was carried out by the Institutional Review Board of Southeastern Louisiana University as well as by LCIW administrators and the State Bureau of Prisons. Prisoners were contacted and asked to volunteer for the study by LCIW personnel who explained the procedure and time requirements for participation in the study. The inmates were free to accept or decline participation without penalty. Subjects who agreed to participate were required to sign an informed consent form approved by both the Bureau of Prisons and the Institutional Review Board of Southeastern Louisiana University. The purpose of the study was described on the consent form, as well as explained to participants by LCIW administrators, as an investigation of the psychology of incarcerated women. Participants signed an LCIW consent form as well. Of the original 64 subjects, 55 completed the MPQ and were the subjects of this study. Eight participants did not complete the study due to the awarding of parole. One subject was judged unable to complete the test due to poor reading skills and was therefore excused from participation. These nine women were all part of the original 32 nonviolent women. Offenders were labeled as violent or nonviolent on the basis of the crime for which they were incarcerated, along definitions outlined by the Bureau of Justice Statistics (BJS, 2004, March 24). Violent offenders had been convicted of crimes such as murder (31) or kidnapping and rape (1). Nonviolent offenders had been convicted of property crimes such as theft and burglary (9) or of drug of-

fenses such as possession or intent to distribute (14). Of the 55 subjects, 27 were Black, 1 was Hispanic, and 27 were White. Their ages ranged from 25 years to 73 years ( $M = 41.40$ ,  $SD = 9.34$ ). Their educational levels ranged from 5 years to 17 years ( $M = 11.71$ ,  $SD = 2.42$ ). The number of prior convictions held by the inmates ranged from 0 to 12 ( $M = .98$ ,  $SD = 2.03$ ) (see Table 1).

Table 1  
Descriptive Statistics for Demographic Variables and Prior Convictions

Variable	Mean	SD	Range	Minimum	Maximum
Nonviolent ( $n = 23$ )					
Age	40.30	7.19	27	26	53
Education	11.44	1.90	8	6	14
Pr Convict	2.22	2.70	12	0	12
Violent ( $n = 32$ )					
Age	42.19	10.67	48	25	73
Education	11.91	2.74	12	5	17
Pr Convict	.09	.30	1	0	1
Total ( $N = 55$ )					
Age	41.40	9.34	48	25	73
Education	11.71	2.42	12	5	17
Pr Convict	.98	2.03	12	0	12

### Materials

Participants were administered the Multidimensional Personality Questionnaire (MPQ), developed by Auke Tellegen (1982). Tellegen's approach to personality assessment began with a thorough review of the personality research literature identifying 11 traits that had been productive over the years, across many experimenters and many studies. He went on to develop a psychometrically sophisticated, 300-item T-F self-report instrument, the MPQ, assessing these 11 traits. The MPQ subsequently became one of the main psychological tests used in the Minnesota Twin Studies (Tellegen, Lykken, Bouchard, Wilcox, Segal & Rich, 1988).

The 11 scales that make up the MPQ (including descriptions of high scorers) are the following: (1) Wellbeing – has a

happy disposition, cheerful, sees a bright future ahead; (2) Social Potency – is forceful and decisive, enjoys leadership, is persuasive; (3) Achievement – works hard, persistent, perfectionist, enjoys demanding projects; (4) Social Closeness – is sociable, values close interpersonal ties, affectionate; (5) Stress Reaction – is nervous, prone to worry, moody, sensitive; (6) Alienation – feels mistreated, believes others wish him/her harm, is a victim of bad luck; (7) Aggression – physically aggressive, vindictive, likes to frighten others; (8) Control – is reflective, cautious, likes to plan her/his activities, rational and sensible; (9) Harmavoidance – prefers safe activities, does not enjoy adventure or danger; (10) Traditionalism – endorses high moral standards, deplors permissiveness, values a good reputation; (11) Absorption – is emotionally responsive to engaging sights and sounds, experiences episodes of expanded awareness and other altered states. In addition to these 11 trait scales, the MPQ includes six validity scales.

Tellegen (1982) also reported three higher order factors that were indicated by factor analysis of the 11 primary scales. The first factor is Positive Affectivity and is related to Wellbeing, Social Potency, and Achievement. Factor two is Negative Affectivity and is associated with Stress Reaction, Alienation, and Aggression. The third factor is linked to Control, Harmavoidance, and Traditionalism and is labeled Constraint.

Regarding its psychometric qualities, the MPQ has low intercorrelations between the 11 scales. For college females, correlations ranged from .00 to -.48, with the majority of correlations in the .10 to .30 range. Alpha coefficients for the 11 scales ranged from .76 to .89, indicating acceptable internal reliability. Test-retest reliability ranged from .82 to .92 for the 11 scales over a 30-day interval for a sample of 75 college males and females (Tellegen & Waller, in press). In addition, the MPQ is written for readers who have attained a 3.5 grade level in reading, making it useful for testing most individuals in adult populations.

The MPQ has also been correlated with other personality inventories using the higher order factors. Tellegen (1982) reports substantial relationships between the MPQ, Eysenck Personality



Questionnaire (EPQ) and California Psychological Inventory (CPI) scale correlations in a study of 55 male and 99 female college students. Each of these tests has three higher order factor measures (three groups of three) which were computed, intercorrelated and factor analyzed. Even though the three tests are different in many respects, the three triads of factor scores were very congruent. Similar results were found in a different sample using the MPQ, the 16-PF and the Personality Research Form (PRF) (Tellegen & Waller, in press). These results indicate that the MPQ and other multiple scale inventories measure comparable higher order factors, reinforcing Tellegen's view of the robustness of the 11 primary trait measures.

#### *Procedure*

Participants were tested at times agreeable to both the prison administration and the examiners. They were tested in groups of 9 to 21 individuals during three testing sessions. At each session, MPQ testing materials were distributed and explained to the groups, after which testing began and participants worked until they completed the questionnaire.

### **Results and Discussion**

A discriminant function analysis was conducted with the 11 MPQ traits as predictor variables. The type of crime was the dependent variable, coded as nonviolent = 0 and violent = 1 for the purposes of the analysis. Hence, negative correlations are associated with nonviolent criminals and positive correlations with violent criminals. A total of 55 cases were analyzed. The value of the discriminant function was significantly different for violent and nonviolent offenders,  $X^2(11, n = 55) = 21.15, p = .03$ . The significant correlations between the predictor variables and the discriminant function, as revealed in the structure matrix, were highest for Alienation ( $r = .65$ ), Social Closeness ( $r = -.50$ ), Absorption ( $r = .50$ ), Wellbeing ( $r = -.43$ ), Stress Reaction ( $r = .42$ ), and Achievement ( $r = .40$ ). Overall, the discriminant function successfully predicted group membership for 81.8% of the offenders. Accurate

predictions were made for 82.6% of the nonviolent women and for 81.3% of the violent women (see Table 2).

Table 2  
Structure Matrix and Classifications Results for Discriminant Function Analysis of 11 MPQ Trait Variables

Variable	Function 1
Alienation	.65
Social Closeness	-.50
Absorption	.50
Wellbeing	-.43
Stress Reaction	.42
Achievement	.40
Control	.32
Tradition	.31
Social Potency	-.30
Aggression	-.18
Harm Avoidance	.14

Note. Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

Table 2, continued  
Structure Matrix and Classifications Results for Discriminant Function Analysis of 11 MPQ Trait Variables

Classification Results

	CRIME	Predicted Group Membership	
		Nonviolent	Violent
Count	Nonviolent	19	4
	Violent	6	26
%	Nonviolent	82.6	17.4
	Violent	18.8	81.3

Note. 81.8% of original grouped cases correctly classified.

A post hoc discriminant function analysis was conducted by adding the demographic variables of race, age, educational attainment, and prior convictions to the 11 variables used in the previous analysis. Once again, the value of the discriminant function was significantly different for violent and nonviolent offenders,  $X^2(15, n = 55) = 34.60, p = .003$ . The significant correlations between the predictor variables and the discriminant function were prior convictions ( $r = -.57$ ), Alienation ( $r = .45$ ), Social Closeness ( $r = -.35$ ), Absorption ( $r = .35$ ), Wellbeing ( $r = -.30$ ), Stress Reac-

tion ( $r = .29$ ), and Achievement ( $r = .28$ ). The variables age, race, and educational attainment were nonsignificant and did not improve the discriminative ability of the model. The addition of prior convictions as a predictor increased the overall predictive ability of the discriminant function to 85.5%. The accuracy of the predictions for each group changed to 78.3% for nonviolent offenders and 90.6% for violent offenders (see Table 3).

Table 3  
Structure Matrix and Classification Results for Discriminate Function Analysis of 11 MPQ Trait Variables, Prior Convictions, and Demographic Variables

Variable	Function 1
Prior Convictions	-.57
Alienation	.45
Social Closeness	-.35
Absorption	.35
Wellbeing	-.30
Stress Reaction	.29
Achievement	.28
Control	.23
Tradition	.22
Social Potency	-.21
Aggression	-.10
Race	.10
Harm Avoidance	.10
Age	.09
Education	.09

Table 3, continued  
Structure Matrix and Classification Results for Discriminate Function Analysis of 11 MPQ Trait Variables, Prior Convictions, and Demographic Variables

		<u>Predicted Group Membership</u>	
		<u>CRIME</u>	
Count	Nonviolent	18	5
	<u>Violent</u>	3	29
%	Nonviolent	78.3	21.7
	Violent	9.4	90.6

Note. Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function. 85.5% of original grouped cases correctly classified.

In addition, descriptive statistics, an intercorrelation table, and univariate ANOVA table were obtained to examine the relationships between type of crime, the 11 MPQ trait variables and the demographic variables. These are provided in Tables 4, 5, and 6 respectively. Notably, crime was significantly correlated with prior convictions, Wellbeing, Social Potency, Achievement, Social Closeness, Alienation, and Absorption (see Table 5). Univariate ANOVAs revealed a significant difference in these same variables between the two groups of women (see Table 6).

The results obtained for this sample using discriminant function analysis demonstrate that the Multidimensional Personality Questionnaire differentiated violent and nonviolent offenders, suggesting that there are important differences in psychological traits between the two groups. In addition, post hoc analyses determined that the number of prior convictions improved the function somewhat although the demographic factors of race, age, and educational level did not contribute any further to the discriminating power of the function. The traits of Wellbeing, Social Potency, Achievement, Social Closeness, Alienation, and Absorption were significantly correlated with type of crime (see Table 5) and differed significantly between the two groups (see Table 6).

In examining the six traits on which violent and nonviolent women differed significantly (see Table 6), it appears that the nonviolent women were quite similar to the standardization sample on Wellbeing, Achievement, and Stress Reaction (see Table 7). The violent group was similar to the standardization sample on Absorption. In other words, the violent group seemed notably lower than the nonviolent group (and standardization sample) on Wellbeing and higher than both on Achievement and Stress Reaction. Conversely, the nonviolent group appeared lower than both the violent group and standardization sample on Absorption. Both prison groups seemed lower than the standardization sample on Social Closeness, but the violent group to a much greater degree. Both groups of offenders appeared notably higher on Alienation, but the violent group significantly more so. In other words, one could consider the

Table 4  
Descriptive Statistics for 11 MPQ Trait Variables

Variable	Mean	SD	Range	Minimum	Maximum
Nonviolent ( <i>n</i> = 23)					
Wellbeing	18.39	4.14	13	10	23
Soc Potenc	12.13	5.56	21	4	25
Achievem	11.96	3.76	19	1	20
Soc Close	13.61	3.70	12	8	20
StressRea	11.48	5.75	22	0	22
Alienation	7.26	4.34	14	1	15
Aggress	5.13	3.91	12	1	13
Control	13.56	5.15	20	1	21
Harmavoid	19.00	4.17	16	10	26
Traditional	18.22	3.15	12	10	22
Absorption	15.04	6.89	24	4	28
Violent ( <i>n</i> = 32)					
Wellbeing	15.31	5.26	21	3	24
Soc Potenc	9.62	5.57	19	0	19
Achievem	14.31	4.01	16	5	21
Soc Close	10.34	4.77	19	2	21

Table 4, continued  
Descriptive Statistics for 11 MPQ Trait Variables

StressReac	15.44	6.81	26	0	26
Alienation	12.03	5.34	17	1	18
Aggress	4.00	4.42	18	0	18
Control	15.84	4.43	18	6	24
Harmavoid	20.03	5.43	23	5	28
Traditional	19.69	3.15	13	12	25
Absorption	19.94	6.44	26	6	32
Total ( <i>N</i> = 55)					
Wellbeing	16.60	5.02	21	3	24
Soc Potenc	10.67	5.02	25	0	25
Achievem	13.33	4.05	20	1	21
Soc Close	11.71	4.61	19	2	21
StressReac	13.78	6.63	26	0	26
Alienation	10.04	5.45	17	1	18
Aggress	4.47	4.22	18	0	18
Control	14.89	4.83	23	1	24
Harmavoid	19.60	4.93	23	5	28
Traditional	19.07	3.20	15	10	25
Absorption	17.89	7.01	28	4	32

Table 5  
Correlations for Demographic Variables, Prior Convictions and 11 MPQ Trait Variables

	Crime	Race	Age	Educa	Pr Conv	Wellbe	SoPoten	Achieve
Crime	-	.11	.10	.10	-.52**	-.30*	-.22	.29*
Race		-	.01	.28*	.13	-.19	-.15	.16
Age			-	.23	-.12	.03	-.12	-.08
Educa				-	.00	.09	.18	.23
Pr Conv					-	.28*	.29*	.04
Wellbe						-	.50**	-.02
SoPoten							-	-.13
Achieve								-
SoClose								
StressR								
Alienat								
Aggress								
Control								
HarmAv								
Traditio								
Absorpt								

Table 5, continued  
Correlations for Demographic Variables, Prior Convictions and 11 MPQ Trait Variables

	So-Close	Stress R	Alienat	Ag-gress	Control	HarmAv	Traditio	Ab-sorpt
Crime	-.35**	.30*	.44**	-.13	.24	.10	.23	.35**
Race	.09	-.04	-.35**	-.28*	.03	.00	-.09	-.10
Age	-.08	-.07	.02	-.16	.30*	.21	.26	.02
Educa	.28*	-.14	-.30*	-.31*	.17	.06	-.05	.16
Pr Conv	.40**	-.22	-.42**	-.07	.02	.08	.02	-.15
Wellbe	.41**	-.44**	-.40**	-.04	-.07	-.07	.00	-.01
SoPoten	.19	-.34*	-.26	.27*	-.19	-.33*	-.08	.15
Achieve	-.05	.05	.01	-.32*	.58**	-.05	.18	.27*
SoClose	-	-.43**	-.53**	-.23	.09	.14	.12	-.32*
StressR		-	.57**	.20	-.17	-.01	.11	.39**
Alienat			-	.25	-.02	.04	.29*	.53**
Aggress				-	-.43**	-.42**	-.31*	.32*
Control					-	.19	.32*	.05
HarmAv						-	.43**	-.16
Traditio							-	.14
Absorpt								-

\*  $p < .05$ . \*\*  $p < .01$ .

Table 6  
 Tests of Equality of Group Means by Univariate ANOVA for Demographic Variables,  
 Prior Convictions and 11 MPQ Trait Variables

Variable	<i>F</i> (1,53)
Race	.67
Age	.54
Education	.50
Pr Convict	19.67***
Wellbeing	5.45*
SoPotency	2.71
Achieve	4.86*
So Close	7.51**
StressReac	5.14*
Alienation	12.44**
Aggress	.96
Control	3.09
Harmavoid	.58
Tradition	2.92
Absorption	7.29**

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

violent group to be relatively less optimistic (Wellbeing), less sociable (Social Closeness) and less disinclined to compartmentalization (Absorption), as well as more ambitious (Achievement) and more anxious (Stress Reaction) than the nonviolent group. Both groups were remarkably more likely to see themselves as victims (Alienation) than the standardization sample, but the violent women to a much greater degree (see Table 7).

Some limited comparisons of our findings can be made with those of earlier studies. The violent women in the present study appear to have some qualities in common with the juveniles Butler and Adams (1966) classified as *disturbed-neurotics* (Type 1). Both groups are reported to experience feelings of pessimism, guilt and anxiety. Unfortunately, Butler and Adams did not report the type of offense committed by the juvenile delinquents in their study and did not follow them over time to see what future crimes

they might commit. These limitations make comparisons problematic.

Table 7  
Comparison of MPQ Trait Mean Values in Nonviolent Women, Violent Women and College Standardization Sample

Variable	Nonviolent Women Mean (SD)	College Women <sup>a</sup> Mean (SD)	Violent Women Mean (SD)
Wellbeing*	18.4 (4.1)	18.9 (5.1)	15.3 (5.3)
Social Potency	12.1 (5.6)	11.2 (6.3)	9.6 (5.6)
Achievement*	12.0 (3.8)	11.8 (4.7)	14.3 (4.0)
Social Closeness*	13.6 (3.7)	16.1 (4.5)	10.3 (4.8)
Stress Reaction*	11.5 (5.8)	12.3 (6.5)	15.4 (6.8)
Alienation*	7.3 (4.3)	2.0 (2.7)	12.0 (5.3)
Aggression	5.1 (3.9)	4.4 (3.3)	4.0 (4.4)
Control	13.6 (5.2)	14.3 (5.4)	15.8 (4.4)
Harmavoidance	19.0 (4.2)	17.0 (5.7)	20.0 (5.4)
Tradition	18.2 (3.2)	13.0 (5.8)	19.7 (3.2)
Absorption*	15.0 (6.9)	21.4 (6.9)	19.9 (6.4)

<sup>a</sup>  $n = 500$

Note. \* Variables with significant mean differences between violent and nonviolent samples as determined by univariate ANOVAs.

The results of this study appear to contradict the findings of Climent et al. (1973). The violent offenders in the present study can be described as more psychologically pathological (more socially distant, pessimistic, and anxious) than the nonviolent women. Climent and his colleagues found the nonviolent group in their study to show more evidence of psychiatric and medical pathology defined as the presence of more psychiatric hospitalizations, psychiatric outpatient contacts before initial conviction, drug addiction, and alcoholism. The emphasis Climent and his colleagues placed on pathology thus defined have only very limited congruence with the present analysis of personality variables.

Sutker et al., (1978) found that the violent offenders in their study responded to the MMPI in a less deviant manner than nonviolent offenders. In fact the violent group mean profiles fell within the normal range. Their nonviolent group MMPI profiles



were classified predominantly as conduct disordered (42.5%) or psychotic (30%). These results are counter to those found in the present study, wherein violent women appeared to be more psychologically unhealthy than nonviolent women appeared to be. In addition, the results on the two groups in the present study can not be directly compared to the four types found by Widom (1978). The characteristics of violent and nonviolent offenders found here do not fall cleanly into the *psychopathic*, *neurotic psychopathic*, *overcontrolled*, or *normal criminal* groups. Widom did note that the *psychopathic* group had the highest frequency of both violent (homicide, armed robbery) and nonviolent (prostitution, theft, narcotics violations) convictions for the four groups. However, she did not go further and examine whether there were any differences between these two types of offenders within the *psychopathic* group.

Verona & Carbonell's (2000) finding that the O-H Supplementary scale of the MMPI-2 significantly differentiated the one-time violent offenders from the repeat violent and nonviolent offenders. This suggests that there is an important distinction between career criminals and one time offenders, and that this relationship and that of violence should be further explored.

There are important limitations to the current study, some of which may also apply to earlier studies. One such limitation is that of the method used to collect the sample. Inmates at LCIW volunteered for the study, thus some inmates were self-excluded. Those inmates who were most dangerous or in isolation for institutional infractions were excluded from participating by prison staff, thus limiting the study to those inmates who were less difficult to manage and perhaps less violent. This may also have excluded the most psychologically pathological of the inmate population. In addition, it is possible that some offenders, through plea bargaining, were serving time for a lesser offense than that for which they were originally arrested. This could result in somewhat 'violent' individuals being included in the nonviolent group. Further, prison social workers insisted on interviewing volunteers to make sure they understood the terms of the study. It is possible that this unintentional 'screening' process resulted in the selection of inmates who

would be the most cooperative participants for both staff and researchers. The focus on “good” subjects may have muted differences between those convicted of violent vs. nonviolent crimes.

Unmeasured variables may also have influenced the results. For instance, this study did not examine variables such as length of sentence, total time incarcerated, or age at first incarceration. This was due in some part to the challenges of working within the prison institution. Although the researchers had the approval of the prison system to conduct the research, there were understandable difficulties functioning within the rules laid out by the staff of this maximum-security institution. Staff members were responsible for the researchers’ security, arranging for inmates to attend testing sessions, and accompanying the researchers as they moved around the prison. This made it imperative that the study be conducted in a short period of time and in a manner that inconvenienced staff as little as possible. As a result, some information that could have been useful was not obtained. Any of the variables mentioned could have influenced the study and should be included in future research.

More importantly from the point of view of personality study, it is not known whether personality traits could be influenced by institutionalization within a prison system. Although personality traits are thought by many to be relatively stable over time and across situations, it is possible that the influence of the prison experience could have some effect on trait measurement. Without a prior measure of this variable, it is difficult to know whether the present findings could have been influenced by the prison experience itself.

Finally, the MPQ was standardized on a sample of 500 college females and 300 college males. There are no normative values for criminal women available. Issues such as what constitutes normal and abnormal profiles, whether outliers are truly abnormal or part of normal variance for a group, and even whether a given participant submitted a valid test cannot be fully specified for this reason. In addition, the MPQ is a self-report instrument. Its use brings the same risks of impression management inherent in all self-report

instruments. Therefore, optimal research studies would be multi-method in approach.

Even given the limitations, or perhaps especially in the light of them, the success of the MPQ in successfully discriminating between the groups and the demonstrated robustness of its component variables argue strongly for exploring its potential for contributing to the psychological study of crime and criminals.

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Received: February 2005

Accepted: July 2005

Suggested Citation:

Kenna, C. E., & Burstein, A. G. (2005). Tellegen's multidimensional personality questionnaire in violent and nonviolent women criminals [Electronic Version]. *Applied Psychology in Criminal Justice*, 1(2), 110-137.