Exploring the Risk-Dosage Relationship in Offenders Classified as Neurotic

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The risk-need-responsivity (RNR) model is widely used by correctional practitioners to execute effective correctional treatment, supervision, and policy in the field. The RNR model is based on a strong theoretical foundation and has robust empirical support spanning more than 20 years of research (Andrews & Bonta, 2010). In its simplest form, the RNR model directs practitioners and policymakers to design and deliver interventions that are consistent with the risk principle, the need principle, and the responsivity principle. This means that practitioners should (1) target higher risk offenders and provide more intensive services and supervision to higher risk offenders, (2) target criminogenic needs that are amenable to change and have been shown to correlate to criminal behavior, and (3) deliver the type of treatment that works for most offenders in the aggregate while using teaching techniques that best meet the personal learning and response styles of individual offenders. The focus of this article is on the intersection of the risk principle and the responsivity principle, in the form of specific responsivity, as it applies to assigning treatment dosage to offenders in correctional treatment programs.

Specifically, this research examines the impact of varying the dosage of treatment by risk level in a sample of high-anxiety offenders classified as neurotic by the Jesness Inventory. Because the neurotic personality type has been identified as an important responsivity consideration for offender treatment (Listwan et al., 2007), this study extends prior research by examining how increasing the amount of cognitive behavioral treatment for higher levels of risk affects recidivism in this population. It does so using a sample of offenders who received treatment in a community correctional facility in Ohio.

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The Risk Principle

Research on the risk principle confirms that correctional practitioners should differentiate services by offender risk, with higher risk offenders receiving more intensive services than lower risk offenders (see Lowenkamp et al., 2006). Findings from this line of research consistently show that programs that target higher risk offenders produce more positive recidivism outcomes (e.g., Latessa et al., 2010; Lipsey, 2009; Lovins et al., 2007; Lowenkamp & Latessa, 2004; Lowenkamp et al., 2006). Similarly, research demonstrates that correctional programming has the greatest impact on recidivism for high-risk offenders as compared to low-risk offenders. Indeed, the evidence shows that too much programming and supervision can actually lead to increases in recidivism for a low-risk population (Latessa et al., 2010; Lovins et al., 2009; Lowenkamp & Latessa, 2005).

More recently, there has been a growing interest in identifying specific dosage ranges that produce optimal reductions in recidivism based on offender risk. Consequently, researchers have recently moved from asking questions about the general efficacy of correctional treatment for higher risk offenders versus lower risk offenders to asking questions about the quantity of services needed to reduce recidivism for offenders of varying risk levels. There are now several studies that provide guidelines for quantifying treatment provision by risk for general offender populations.

For example, Bourgon and Armstrong (2005) examined the impact of varying dosage levels by offender risk and need levels for a group of 620 adult male prison inmates. There were several notable findings from the study. First, they found that 100 hours of treatment were sufficient to reduce recidivism for offenders who were moderate risk or who had few criminogenic needs. Second, they found that 200 hours of treatment were sufficient to reduce recidivism for offenders who were moderate risk with multiple needs or who were high risk with few needs. Third, they found that 300 hours did not produce significant reductions in recidivism compared to a no treatment comparison group for those offenders who were identified as high risk with multiple needs, meaning that high-risk and high-need inmates may require more than 300 hours of treatment to reduce recidivism.

Next, Sperber, Latessa, and Makarios (2013a) examined the impact of varying treatment dosage in a community-based treatment setting for a sample of 689 adult male offenders. The authors collapsed the offender sample into three risk levels based on composite risk scores produced by the Level of Service Inventory-Revised: low, moderate, and high. Similarly, they examined three levels of dosage: 0 to 99 hours, 100 to 199 hours, and 200 or more hours. The results demonstrated that recidivism was 13% lower for low-risk offenders who received 100 to 199 hours of treatment compared to low-risk offenders who received 0 to 99 hours of treatment. Recidivism was 9% lower for offenders receiving 200 or more hours of treatment compared to moderate-risk offenders receiving only 0 to 99 hours of treatment. Finally, recidivism was 24% lower for high-risk offenders receiving 200 or more hours of treatment compared to high-risk offenders receiving 100 to 199 hours of treatment, suggesting that the largest impact of increasing dosage was for the highest risk offenders in the sample.

Most recently, Makarios, Sperber, and Latessa (2014) sought to extend the results of the above study by adding additional cases to the sample and by using more refined dosage categories. Rather than using dosage categories of 100-hour increments, the authors employed dosage categories based on 50-hour increments. The results of this study demonstrated that the relationship between dosage and recidivism is nonlinear and varies by offender risk level. To illustrate, continual increases in dosage ultimately resulted in increases in recidivism for both low-medium and medium-risk offenders. The ideal dosage range for low-medium-risk offenders was 100 to 149 hours, while the ideal range for medium-risk offenders was 150 to 199 hours. The ideal dosage range for medium-high-risk offenders was 250 to 299 hours of treatment. Although continued increases in dosage resulted in continued recidivism reductions for high-risk offenders, these continued reductions grew increasingly smaller.

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Existing studies on the risk-dosage relationship are beginning to provide practical guidance to practitioners, but many questions remain unanswered about the effective execution of risk-based dosage across offender populations, offender attributes, and program settings (see Sperber et al., 2013b, for a fuller discussion). One such question pertains to the potential role of responsivity characteristics in moderating the relationship between risk-based dosage and recidivism. It is unclear whether and how practitioners may need to modify risk-based dosage protocols based on such specific responsivity factors as mental illness, personality type, cognitive functioning, and motivation to produce optimal recidivism reductions. In other words, it is important to examine whether and how the risk principle and the responsivity principle intersect to affect service delivery and offender outcomes.

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The Responsivity Principle

There are two forms of responsivity: general responsivity and specific responsivity. General responsivity refers to the use of cognitive behavioral and social learning models of service delivery to affect behavior change for offenders (Andrews & Bonta, 2010). Research clearly demonstrates that these approaches are the most effective at reducing recidivism for offenders in the aggregate (Aos et al., 2006; Aos & Drake, 2013; Lipsey, 2009; Lipsey et al., 2007). Specific responsivity refers to targeting noncriminogenic needs that can either impede or facilitate response to treatment. Examples of such needs include, but are not limited to, learning style, cognitive functioning, gender, personality type, and motivation. The responsivity characteristic of interest for this study is personality type, with a specific focus on neurotic personality types, as identified by the Jesness Inventory (Jesness & Wedge, 1983). The Jesness Inventory identifies two types of neurotic offenders: the neurotic anxious offender and the neurotic acting-out offender. Both types are characterized by introversion, strong defense mechanisms, and high levels of anxiety hypothesized to be linked to their offending behaviors (Van Voorhis & Sperber, 1999).

Relevance of Neurotic Personality Type to Risk-Based Dosage

To date, research supports that risk should drive how much treatment an offender receives, and that responsivity should drive the type of treatment an offender receives. The current study, however, raises the question as to whether certain responsivity characteristics, such as personality, might also affect how much treatment an offender receives. To illustrate, recent studies by Van Voorhis, Listwan, and colleagues raise questions relevant to empirical inquiries regarding how the risk-dosage relationship works for different groups of offenders. The first question is whether personality type extends beyond responsivity to serve as a risk factor for certain offenders. For example, in two separate studies, offenders classified as neurotic by the Jesness Inventory demonstrated the highest recidivism rates even after controlling for such factors as race and risk to reoffend (Listwan et al., 2007; 2010). The second question is whether cognitive behavioral interventions are effective for neurotic offenders. In a 2003 study of a cognitive behavioral program, Van Voorhis, Spruance, Ritchie, Johnson-Listwan, Seabrook, and Pealer found that neurotic offenders were the only program participants to demonstrate higher post-treatment recidivism rates than their no-treatment counterparts when examining program outcomes by offender personality type. In a more recent analysis of differential treatment effects of the same cognitive behavioral program, Van Voorhis, Spiropoulos, Ritchie, Seabrook, and Spruance (2013) found evidence that participation in a cognitive behavioral program was harmful for parolees with a neurotic personality type. Neurotic personality type was also predictive of program attrition, with neurotic offenders less likely to complete the program. If offenders who are classified by the Jesness Inventory as having a neurotic personality type are higher risk for reoffending than other personality types but appear to be harmed by participation in cognitive behavioral programs, then standard evidence-based guidelines recommending that all offenders receive cognitive behavioral interventions and that all higher risk offenders receive higher amounts of dosage of such interventions may not apply for this subgroup of offenders. Given that prior studies have found estimates of neurotic offenders ranging from 18.5% in a federal prison sample (Listwan et al., 2006), to 34.6% in an outpatient sex offender sample (Sperber, 2003), to 45.3% in a community-based correctional facility sample (Hubbard & Pealer, 2009), understanding how the risk-dosage relationship affects recidivism for this population is important.

Research Question

Research on the risk principle confirms that correctional practitioners should differentiate services by offender risk, with higher risk offenders receiving more intensive services than lower risk offenders. Research also confirms that these services should be based on a cognitive behavioral modality. This is because cognitive behavioral interventions have consistently demonstrated a positive impact on recidivism for offenders in the aggregate. At the same time, there is some research to suggest that offenders with certain personality types—most notably, those classified as neurotic—are at higher risk for reoffending and may not fare as well as other personality types within cognitive behavioral programs. If this is true, increasing cognitive behavioral dosage for high-risk neurotic offenders may have a detrimental impact on recidivism for those offenders. Consequently, this study examines the risk-dosage relationship in a sample of neurotic offenders receiving cognitive behavioral treatment.

Study Methods and Sample

The sample for this study is composed of adult males who were successfully discharged from a community-based correctional facility (CBCF) in Ohio between August 30, 2006, and December 31, 2010, and who had been classified as having a neurotic personality type based on assessment results from the Jesness Inventory. The program successfully discharged a total of 980 clients during this timeframe. Of these 980 clients, 882 had Jesness Inventory results available in their program records. Of these 882 clients, 257 were classified as having

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one of two neurotic personality types; 129 were classified as neurotic anxious, and 128 were classified as neurotic acting out.

Study Setting and Measures

At the time of data collection, the CBCF in this study served as a prison diversion program. The target population for the program was adult males convicted of a felony that did not require a mandatory prison term. The program served felony probationers from three midsized counties, and the average length of stay was four months. The primary criminogenic needs addressed by the program were antisocial attitudes, anger management, substance abuse, and employment. The program used a cognitive behavioral modality to deliver treatment services, and all core treatment groups used manualized curricula. In addition, the program had a quality improvement protocol requiring clinical supervisors to monitor cognitive behavioral groups for fidelity and to report the results of observations to both program management and the agency's continuous quality improvement administrator.

Researchers collected data from three sources for the study. Researchers gathered the independent variables from the agency's electronic clinical records system as well as from the clients' paper charts. The Ohio Department of Rehabilitation and Correction provided recidivism data through use of a state database that tracks all prison admissions.

Control Variables. Table 1 presents descriptive statistics for the sample. Demographic data indicate that the sample is predominately Caucasian (91.8%) and the average age is 33.4 years. For those sent to prison post-discharge, the average time to failure was 362 days, with a range of 21 days to 1,553 days (4.25 years). Overall, the minimum follow-up period for recidivism was 18 months, with an average follow-up period of 46 months.

Risk Level. During intake into the program, program staff used the Level of Service Inventory-Revised (Andrews & Bonta, 1995) to assess the risk and needs of new clients. The LSI-R is a standardized actuarial assessment instrument that helps staff to identify criminogenic needs and to produce a composite risk score indicating an individual offender's probability of reoffending. The instrument classifies the probability of reoffending into five groups: low, low-medium, medium, medium-high, and high. Research has consistently demonstrated the instrument's predictive validity across correctional settings and offender populations (for a review, see Gendreau et al., 2002; Lowenkamp & Bechtel, 2007; Lowenkamp et al., 2009). Because there were few offenders designated as either low risk or high risk in the current sample, we collapsed the data into three risk categories: low-medium, medium, and medium-high. There were three low-risk offenders in the sample. They were combined with the low-medium-risk offenders to create the low-medium-risk group. There were 13 high-risk offenders in the sample, and they were combined with the medium-high-risk offenders to create the medium-high-risk group; it should be noted that analyses were conducted with the low- and high-risk offenders removed and the results did not substantively change. Table 1 indicates that 12.8% of the current sample were low-medium risk, 60.3% were medium risk, and 26.8% were medium-high risk.

Table 1: Sample Characteristics (N = 257)

Characteristics	N	%
Race		
White	236	91.8
Non-white	21	8.2
Neurotic personality type		
Neurotic anxious	129	50.2
Neurotic acting out	128	49.8
Risk level		
Low-medium	33	12.8
Medium	155	60.3
Medium-high	69	26.8
Dosage categories		
0–99	39	15.2
100–199	107	41.6
200+	111	43.2
Recidivism		
Yes	111	43.2
No	146	56.8
	M (SD)	**Range**
Age	33.4 (9.1)	18.7–63.5
Months at risk	46.5 (13.4)	20.9–67.6
Months to incarceration	10.5 (7.6)	1.0–41.1

Personality Type. Program staff used the Jesness Inventory to assess personality type of new admissions into the program. The Jesness Inventory is a paper-and-pencil test taken by the offender. The test requires approximately 30 minutes to complete (Jesness, 1988, 1996). This assessment procedure measures the interpersonal maturity level of the offender. Interpersonal maturity reflects one's understanding of what is happening between others as well as what is happening between others and oneself (Warren, 1966). The assessment also classifies the offender as having one of nine personality types: asocial aggressive, asocial passive, immature conformist, cultural conformist, manipulator, neurotic acting-out, neurotic anxious, cultural identifier, and situational-emotional reaction. Research has demonstrated that the Jesness Inventory is both a reliable and a valid measure of personality for adolescent and adult male offenders (Jesness, 1988; Jesness & Wedge, 1984; Kunce & Hemphill, 1983; Martin, 1981; Olver & Stockdale, 2016; Van Voorhis, 1994) and that the nine types identified by the instrument can be collapsed into four types: aggressive, situational, neurotic, and dependent. Consistent with this prior research, we combined the neurotic anxious offenders and the neurotic acting-out offenders into a single group labeled neurotic (Van Voorhis, 1994).

Treatment Dosage. This study defined treatment dosage as the number of group treatment hours each participant

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received during his stay in the program. Consistent with prior research, we did not count other activities, such as case management or mental health treatment, as dosage (Sperber et al., 2013a). The low-dosage group of offenders received 0 to 99 hours of treatment. There were 39 cases in the low-dosage group. The moderate-dosage group received 100 to 199 hours of treatment, and the high-dosage group received 200 or more hours of treatment. These two latter groups had 107 and 111 offenders, respectively.

Recidivism. Recidivism was defined as being sent to prison during the follow-up period. We chose this measure because the goal of this program was to reduce admissions to prison. As a result, whether participants are sent to prison is the most valid measure of whether the program is achieving its goals. Furthermore, the Ohio Department of Rehabilitation and Correction consistently tracks prison admissions statewide and can easily retrieve the data from a state database. In addition, incarceration data provide a more reliable and valid indicator of recidivism than arrest data because arrest data were available only at the county level and typically available only through manual checks of county clerks of court websites. Problems with offenders moving out of county and with delays in updating website records serve to lessen the accuracy of these data. Although incarceration data can include admissions for technical violations, they still provide a valid measure of recidivism for the current study because the study site was operating as a prison diversion program at the time of the study. In other words, incarceration for any reason is a valid indicator of whether the CBCF achieved its goal of reducing prison admissions.

Data Analysis and Results

This study sought to examine the impact of treatment dosage on recidivism for neurotic offenders. To answer the research question, the authors used Cox regression to examine whether the level of treatment dosage predicts recidivism for neurotic offenders while controlling for the level of risk, time to failure, and age. It also examined the interaction between treatment dosage and risk to determine whether increasing dosage has larger effects on higher risk clients.

Figure 1 presents a graphic illustration of the relationship between risk, dosage, and recidivism for the sample. The figure illustrates that increasing dosage from fewer than 100 hours to 100 to 199 hours appears to have a positive impact on recidivism for both low-medium-risk offenders and medium-risk offenders. Note that there were no medium-high-risk offenders who received fewer than 100 hours of treatment in the sample, so we cannot examine the impact of increasing dosage from fewer than 100 hours to 100 to 199 hours. Increasing dosage to 200 or more hours has further positive impacts on recidivism for neurotic offenders assessed as medium or medium-high risk. Although higher dosage appears to affect recidivism reductions for all risk groups, the largest reductions are seen for medium-high-risk neurotic offenders, with recidivism dropping from 85% to 45% when dosage increases from 100 to 199 hours to 200 or more hours. Conclusions about the impact of providing more than 200 hours of treatment to lower risk neurotic offenders could not be drawn as there were no lower risk offenders in the sample who received more than 200 hours of treatment.

Figure 1: Rates of Recidivism by Defined Categories of Risk and Dosage for Neurotics (N = 257)

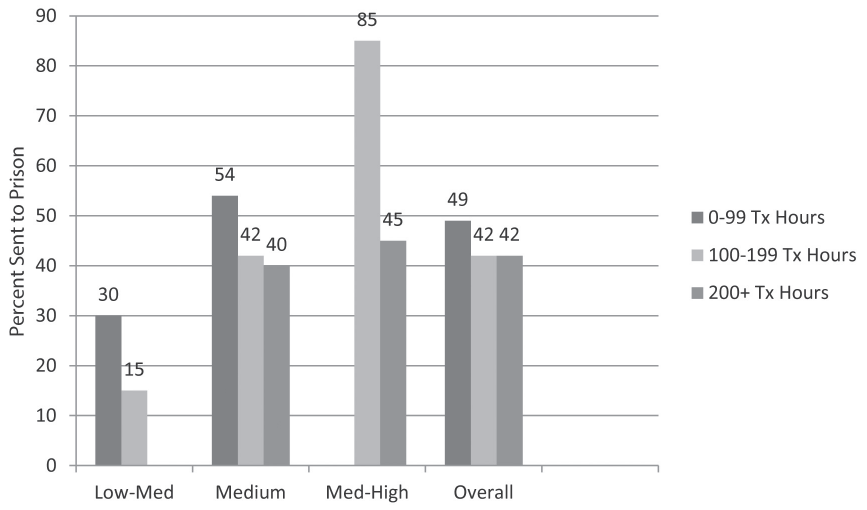

Table 2 presents the results from the Cox regression analyses for the sample. The first series examines the predictive power of only the control variables of risk and age. The control variables demonstrate a significant model fit ($\chi^2 = 12.50$), and the coefficients were in the expected direction. The results show that both risk levels were associated with increases in the hazard ratio of recidivism, with medium-risk offenders being 107% more likely to be incarcerated post-treatment than low-medium-risk offenders, and medium-high-risk offenders being 188% more likely to be incarcerated. Similarly, older offenders were less likely to be incarcerated post-release than their younger counterparts. The exponent (B) for age demonstrates a 2% decrease in the likelihood of incarceration for each one-year increase in age.

The second series in Table 2 includes the treatment dosage variables. The results show that both dosage levels were associated with decreases in the hazard ratio of recidivism. Controlling for age and risk level, we see that offenders receiving 100 to 199 hours of treatment are 18% less likely to be incarcerated post-treatment than offenders receiving fewer than 100 hours of treatment, while offenders receiving 200 or more hours of treatment are 42% less likely to be incarcerated post-release. Although the model chi-square ($\chi^2 = 16.10$) is significant, the step chi-square ($\chi^2 = 3.77$) is not.

Given the substantial decrease in recidivism for medium-high-risk offenders receiving high levels of dosage illustrated in Figure 1, the last series in Table 2 examines the interaction between treatment dosage and risk to reoffend. The interaction term ($b = -0.74$) is significant and suggests larger reductions in the hazard ratio of recidivism when higher risk neurotic offenders are given higher levels of cognitive behavioral treatment dosage. Again, the model chi-square ($\chi^2 = 21.96$) is significant as is the step chi-square ($\chi^2 = 2.82$), suggesting improvement in overall model fit when the interaction term is included as a predictor.

Limitations

While the current study produced some interesting results, it does have two primary

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Table 2: Cox Regression Models Examining Relationship Between Risk, Dosage, and Recidivism for Neurotics (N = 257)

Variable	b	se	Wald	Exp(B)	b	se	Wald	Exp(B)	b	Se	Wald	Exp(B)
Age	–0.02	0.01	3.56*	0.98	–0.02	0.01	3.98**	0.98	–0.02	0.01	4.02**	0.98
Medium risk	0.73	0.40	3.31*	2.07	0.84	0.40	4.30**	2.31	0.78	0.40	3.72*	2.18
Medium-high risk	1.06	0.42	6.46**	2.88	1.35	0.44	9.36**	3.87	1.72	0.47	13.07****	5.58
100–199 treatment hrs	—	—	—	—	–0.19	0.28	0.50	0.82	–0.22	0.28	0.68	0.80
200+ treatment hrs	—	—	—	—	–0.54	0.30	3.28*	0.58	–0.31	0.32	0.95	0.73
High dose x high risk	—	—	—	—	—	—	—	—	–0.74	0.43	2.95*	0.48
Model chi-square				12.50***				16.10***				21.96***
Step chi-square				—				3.77				2.82*
N				257				257				257

*p < 0.10; **p < 0.05; ***p < 0.01; ****p < 0.001.

limitations. The first limitation involves the generalizability of the findings. The study used a small sample drawn from a single residential treatment program serving only male offenders in a specific geographic location. Researchers seeking to replicate this study should seek to incorporate larger samples, female offenders, different treatment settings (e.g., outpatient), and different geographic settings.

The second limitation of this study is that it relied on a definition of recidivism that included both new criminal behaviors and technical violations. Given that these represent substantively different behaviors and harm to public safety, it is preferable to base recidivism estimates on only new criminal behaviors. Researchers did not have access to reliable measures of new arrests for this study, however. Rather, we used incarceration data because the data were reliable and because a post-release prison sentence was an appropriate outcome measure for a prison diversion program. In other words, an outcome measure of a new prison sentence allows the program to know whether it is achieving its mission of prison diversion.

Conclusions and Recommendations

This was the first study to explore the impact of providing high levels of treatment dosage to higher risk, high-anxiety offenders classified as neurotic by the Jesness Inventory. Although this study was exploratory and not without its limitations, the results suggest that high-risk neurotic offenders attending a cognitive behavioral program were not harmed by high levels of treatment dosage. On the contrary, higher risk neurotic offenders receiving higher levels of dosage demonstrated the greatest reductions in recidivism compared to lower risk neurotic offenders. This is consistent with prior dosage studies on general population samples.

Although our results are consistent with previous dosage research for a general offending population, they do appear to be in conflict with previous studies examining the impact of cognitive behavioral programs for this population of neurotic offenders. Consequently, it is worth discussing the current findings in light of the most recent study conducted by Van Voorhis et al. (2013), which found detrimental effects for neurotic offenders participating in cognitive behavioral programming in the form of the Reasoning and Rehabilitation (R&R) curriculum.

First, the Van Voorhis et al. (2013) study used an intent-to-treat analysis requiring that program non-completers be included in the analyses, whereas our study included only successful completers so as to assess only those offenders who were available to receive dosage. This is an important distinction because the neurotic personality type was predictive of both program dropout and recidivism in the Van Voorhis et al. study. It is also worth noting that the overall attrition rate of the CBCF used in our study was low (approximately 6%).

Second, the program in the current study did not use the R&R curriculum. Rather, the two primary curricula used by the current study site were Charting a New Course (Truthought, 1999) and Strategies for Self-Improvement and Change (Wanberg & Milkman, 2007). Findings from a previous meta-analysis conducted by Lipsey et al. (2007) lessen concerns about the use of specific "brands" of curricula, however. Their review found no significant relationship between the brand of the curriculum and recidivism. In other words, the brand of the curriculum did not matter provided that the curriculum was a cognitive behavioral curriculum. They did, however, find a significant relationship between quality implementation and fidelity monitoring of the curriculum.

Third, although overall fidelity to the R&R model was rated as high, Van Voorhis et al. (2013) did note some concerns with fidelity, particularly in the area of class size. Requirements to disclose private information and to engage in such activities as role play in a large group environment may have been particularly stressful for the neurotic participants. It also could be that neurotic offenders experience more harm from poor fidelity to evidence-based treatment than other personality types, because there is some research to suggest that certain types of offenders are differentially affected by lack of fidelity. For example, Schoenwald, Chapman, Sheidow, and Carter (2007) found that substance-abusing youth experienced worse criminal outcomes from poor fidelity to the multisystemic therapy (MST) model than did non-substance-abusing youth. Although we did not code treatment fidelity as a variable for the current study, previous fidelity reviews of the program at the research site that were conducted by the first author suggest a relatively high level of treatment fidelity, and group sizes were within accepted standards for cognitive behavioral treatment.

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Fourth, Van Voorhis et al. (2013) posited that this population of offenders may require treatment delivered by trained clinicians rather than by supervision staff. In our study, the offenders received treatment from trained clinicians who received regular clinical supervision and feedback.

Finally, our analysis goes beyond the analyses employed by Van Voorhis et al. by examining the impact of increasing dosage by risk level for neurotic offenders. That is, although our findings appear to be at odds with the Van Voorhis et al. study, the discrepancy could be influenced by the manner in which treatment was delivered at the two treatment sites. For example, it appears as though the R&R participants in the Van Voorhis et al. study all participated in a program composed of a standardized number of sessions and overall length of stay, whereas participants in the current study participated in a program composed of a variable number of sessions and length of stay. It is likely, then, that all successful completers of the R&R program received the same level of dosage regardless of risk to reoffend. Therefore, it is unclear how much of the negative effect is due to the program model versus the possible inappropriate application of program dosage. Stated differently, it is possible that a generic approach that applies equal levels of dosage to all offenders is ineffective with neurotic offenders, but that more promising effects are seen when dosage varies with risk level.

It is important to note that this study is the first to examine the role of varying treatment dosage for high-risk neurotic offenders. Although our findings suggest that the dosage protocols proposed by previous studies appear to fit this population, this study was exploratory in nature. More research is clearly warranted on this topic, especially in light of previous findings suggesting a detrimental effect of cognitive behavioral treatment on this group of offenders. Future research should focus not only on investigating the proper amount of treatment required to reduce recidivism for this population, but also on the methods and content of service delivery most conducive to success with this population.

It is possible that a generic approach that applies equal levels of dosage to all offenders is ineffective with neurotic offenders, but that more promising effects are seen when dosage varies with risk level.

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