Risk Levels, Treatment Duration, and Drop Out in a Clinically Composed Outpatient Sex Offender Treatment Group

Smid, W.J.; Kamphuis, J.H.; Wever, E.C.; Verbruggen, M.C.F.M.

DOI
10.1177/0886260514536276

Publication date
2015

Document Version
Final published version

Published in
Journal of Interpersonal Violence

Journal of Interpersonal Violence
2015, Vol. 30(5) 727–743

DOI: 10.1177/0886260514536276
jiv.sagepub.com
SAGE

Risk Levels, Treatment Duration, and Drop Out in a Clinically Composed Outpatient Sex Offender Treatment Group

Wineke J. Smid,[1] Jan H. Kamphuis,[2] Edwin C. Wever,[1] and Maud C. F. M. Verbruggen[3]

Abstract

Previous research in the Netherlands documented that clinical judgment may yield a substantial amount of treatment referrals for sexual offenders that are inconsistent with actuarial risk assessment and the Risk Need Responsivity (RNR) principles. The present study tested the risk level distribution of a high-intensity, open-format outpatient treatment group. Eighty patients were enrolled during a 620-week period, and their STATIC-99R risk levels were retrospectively determined. The distribution of risk levels in this treatment group did not differ from the distribution of a representative sample of sex offenders referred to outpatient treatment in the Netherlands between 1996 and 2002 (n = 145), nor from the combined Canadian samples (n = 2011) used to assess STATIC-99R normative percentile. These findings suggest that no selection in terms of actuarial risk level occurred between conviction and treatment, leading to over-inclusion of low risk offenders in this high-intensity outpatient treatment group. It is concluded that the standard use of structured risk assessment for the compilation of treatment

[1]Forensic Care Specialists, Utrecht, The Netherlands
[2]University of Amsterdam, The Netherlands
[3]Ministry of Security and Justice, The Hague, The Netherlands

Corresponding Author:
Wineke J. Smid, Research Department, Forensic Care Specialists, P.O. Box 174, 3500 AD Utrecht, The Netherlands.
Email: wsmid@hoevenkliniek.nl

groups may improve both the effectiveness and efficiency of sex offender treatment in the Netherlands.

Keywords
sex offenders, outpatient treatment, risk assessment, risk need responsivity

Sexual offending behavior is a widespread societal problem that carries great costs and suffering for its victims. To illustrate, in the Netherlands, each year over 1% of the population reports being confronted with some form of unwanted sexual contact (Kalindien, De Heer-De Lange, & Van Rosmalen, 2011), with women being almost five times more likely to experience such behavior than men (2.4% of women vs. 0.5% of men). Prior research indicated that the majority of these incidents tend to be described as annoying or insulting behavior, and about 15% tends to be described as an actual (attempted) sexual assault or rape (Frenken, 2002).

Consistent with findings from a meta-analysis of 23 recidivism outcome studies (Hanson, Bourgon, Helmus, & Hodgson, 2009), one principal way to reduce the number of victims of sexual offending is to provide adequate treatment for apprehended sex offenders who are at risk to reoffend. Hanson et al. (2009) furthermore concluded that sex offender treatment is most effective when designed corresponding to the risk need responsivity (RNR) principles (Andrews & Bonta, 2010; Andrews, Bonta, & Hoge, 1990). The RNR principles constitute the most influential model for the assessment and treatment of all types of offenders (Blanchette & Brown, 2006; Ward, Mesler, & Yates, 2007). The risk principle dictates that the level of treatment services must be proportional to the offender's risk to reoffend, that is, high-risk offenders should receive the most intensive treatment. Prior research has shown that sex offenders' risk levels can be most accurately assessed through the use of structured actuarial risk assessment instruments (Hanson & Morton-Bourgon, 2009) and that so determined risk levels should guide treatment selection (Bonta & Andrews, 2007).

Specific recommendations on treatment duration for sex offenders are scarce in the literature. One study (Marshall, Jones, Ward, Johnston, & Barbaree, 1991) indicated that two sessions a week during 3 months would suffice for low-risk offenders, whereas high-risk offenders would need three sessions a week during 9 months, thus implying a roughly four times higher dose of treatment for high-risk offenders than for low-risk offenders. Hanson (2009) described a high-intensity treatment consisting of daily group

treatment sessions amounting to 15 hr per week during 8 to 12 months, and a low-intensity treatment consisting of 2 to 5 hr of group sessions per week during 4 to 8 months, implying an at least three times higher treatment dose for high-risk offenders than for low-risk offenders. This large difference in recommended treatment dosages between low- and high-risk offenders points to practical advantages of separate treatment groups for these offender groups. Moreover, in line with the RNR principles, research regarding general offenders has demonstrated that placing low-risk offenders in intensive treatment programs may actually increase their recidivism rates (Bonta, Wallace-Capretta, & Rooney, 2000; Lowenkamp & Latessa, 2002). This adverse effect may come about by affiliation of low-risk offenders with high-risk offenders within the treatment group, and/or by the disruption of the low-risk offenders' prosocial activities and social circles (school, employment, etc.) due to the long and intensive treatment (Lowenkamp, Latessa, & Holsinger, 2006). In sum, there appears to be ample reason to assess sex offenders' risk levels accurately and to refer them to separate treatment groups of corresponding dosage.

In the Netherlands, approximately half of the offenders who are convicted for a sexual offense are referred to some form of treatment to reduce recidivism risk (Smid, Kamphuis, Wever, & Van Beek, 2013). Referral to these treatments is not guided by validated risk assessment instruments. When instruments are included in the assessment, the results serve as complementary information in overall unstructured clinical evaluations. A recent study (Smid et al., 2013) showed that this clinically guided treatment selection yielded an insufficient match between risk levels and referred treatment levels. More specifically, a substantial proportion of high-risk offenders, especially rapists, were not referred to any form of treatment. Also, a substantial number of low-risk offenders, especially child molesters, were referred to outpatient treatment. Regarding the further referral of sex offenders to specific treatment groups within treatment facilities, clinical treatment selection equally predominates, and while validated actuarial risk assessment instruments may be administered, they serve as one of several inputs for clinically guided treatment group selection. Outpatient treatment groups in The Netherlands usually have an open format with continuous enrollment, and the patients progress through the stages of treatment at their individual pace. To be in line with the risk principle, clinical referral to a specific treatment group should result in sufficient homogeneity regarding the risk levels within that treatment group.

The aim of the current study is to test whether the composition of an open-format sex offender treatment group based on clinical treatment selection is in line with the risk principle. Specifically, we first test whether the clinically

guided formation of a treatment group resulted in the selection of offenders of a specific risk level. Presumably, if clinical formation yielded a specific risk selection effect, then the distribution of risk levels within the treatment group should differ significantly from the distribution of risk levels of all offenders referred to treatment, as well as from the distribution of risk levels among all convicted sex offenders. An equal distribution of risk levels in these three offender groups is the null hypothesis we are seeking to reject.

Second, if offenders of varying risk levels are included in the open-format treatment group, we test whether the treatment duration of high-risk offenders, following the risk principle, exceeds the treatment duration of lower risk offenders. Equal treatment duration for offenders of all risk levels within the open-format treatment group is the null hypothesis we are seeking to reject.

Finally, based on the existing literature (Andrews & Bonta, 2010), we predicted that high-risk sexual offenders were more likely to drop out.

Method

Description of Samples

The study sample consisted of three separate samples: the treatment group and two comparison samples. The treatment sample consisted of 80 men who were charged or convicted for a contact sexual offense and entered a specific treatment group between January 1999 and March 2011. The large majority (71%) of the offenders exclusively victimized children under the age of 16 (i.e., the age of consent in the Netherlands). Eight percent of the offenders had victims of 16 years or older, and 21% had victims both below and above the age of 16. The open-format treatment group involved four 6-hr treatment sessions per week, thus representing high-intensity outpatient treatment. The program consisted of cognitive behavioral group therapy regarding personal history, psychosexual problems, offense behaviors, cognitive distortions, emotion regulation, victim empathy, social circle, and positive life goals. A more extensive description of treatment goals and means can be found in Verschuur (2012). There was a script and time schedule for some aspects of the treatment, but other modules continued until a satisfying result was achieved. The general aim was to not exceed the duration of 2 years because the added value of the treatment beyond 2 years was regarded as doubtful (Verschuur, 2012).

The first comparison sample consisted of a random selection of 25% of all Dutch males convicted for a contact sexual offense who were discharged from prison or jail between 1996 and 2002 and were referred to outpatient treatment (n = 145). This first comparison sample was obtained by selecting

half of all Dutch jurisdictions, stratified for urban and rural areas, and subsequently randomly selecting half of the obtainable files from each selected jurisdiction. There was no overlap between the treatment group sample and the random Dutch comparison sample (a subsample from the Smid et al., 2013 study).

The second comparison sample consisted of four combined Canadian subsamples (1990 to 2005; $n = 2{,}011$) that were used to develop normative percentile ranks for the STATIC-99R scores (Hanson, Lloyd, Helmus, & Thornton, 2012). These four Canadian subsamples of the second comparison sample consisted of sexual offenders released between 1990 and 2005 from the three major divisions of the Canadian criminal justice system: (1) community, (2) provincial prison (sentences of less than 2 years that are administered by the provinces), and (3) federal prison (sentences of 2 years or more that are administered federally by the Correctional Service of Canada). None of these four Canadian subsamples of the second comparison sample had been explicitly pre-selected on risk relevant criteria (e.g., need for treatment). Hanson et al. (2012) used standard survey sampling statistics (Kalton, 1983) to estimate a representative normative sample from the four Canadian subsamples.

Setting

The study was conducted at a forensic outpatient treatment center in the eastern region of the Netherlands. The institution admitted approximately 40 contact sex offenders per year, and referred approximately 1 in 10 offenders to the high-intensity outpatient treatment group used in this study. Most of the remaining offenders were referred to "outpatient prevention groups" consisting of two weekly 1-hr sessions, or to individual treatment.

Inclusion criteria for the referral of offenders to the high-intensity outpatient treatment group were a perceived moderate to high recidivism risk for serious offenses like (incestuous) child abuse. Furthermore, offenders had to be deemed suitable for group treatment and any present personality problems had to be perceived as manageable (Verschuur, 2012). Individual treatment was reserved for offenders who were deemed incapable of following treatment in groups, due to Pervasive Developmental Disorder, mild brain damage, a threatening/aggressive attitude, or serious psycho trauma (Verschuur, 2012). Exclusion criteria for entering any of the treatment programs at this facility were acute psychosis, decreased mental functioning due to a medical or physical disease (e.g., delirium, dementia, amnesia), serious and acute substance abuse, serious developmental disorder, and (clinically assessed) acute high risk of reoffending (Verschuur, 2012).

Initial referral to the high-intensity outpatient treatment group was based on clinical considerations/case-conceptualization by a multi-disciplinary team, including a psychiatrist, psychologist, and therapist, and determined without the use of structured risk assessment. Starting 2010, offenders underwent a more specific assessment before entering the high-intensity outpatient treatment group, which included risk assessment by means of the Sexual Violence Risk-20 (SVR-20; Boer, Hart, Kropp, & Webster, 1997), careful examination of the nature of the sexual offending behavior, and assessment of the offender's social system. The results of the structured risk assessment, however, served only as one input for the multi-disciplinary team that decided on the final allocation to the treatment group (Verschuur, 2012).

Procedure

All participants' files were studied by trained coders to retrospectively code the items of the STATIC-99R (Hanson & Thornton, 2000; Helmus, Thornton, Hanson, & Babchishin, 2012). Of note, none of the offenders were assessed for risk level with a structured actuarial risk assessment instrument at their conviction, nor at the start of their treatment. All items were coded as if the assessment had taken place at the start of treatment. For instance, items referring to the age of the offender were coded by their age at the start of treatment.

Treatment completion and duration was assessed for the participants in the treatment group. Treatment duration was defined as the number of weeks between the start- and the end date of participation in the treatment group. When the record indicated that the patient had dropped out of the treatment group, the patient was indicated as a non-completer. Treatment was regarded as completed when the record indicated official discharge from treatment. Generally, dismissal was granted on account of clinically assessed sufficient improvement. However, due to quality of record keeping, we cannot rule out that a number of offenders left treatment because their probation expired and treatment was no longer mandatory. To examine this possibility, the exact end dates of probation were retrieved for 65% of the offenders ($n = 52$) and this information indicated that 10% of the offenders ($n = 5$) ended their treatment between 5 weeks before and 5 weeks after the end date of their probation. Three of these offenders were of low, one of low-to-moderate, and one of moderate-to-high risk levels. These numbers suggest it is unlikely that treatment duration was strongly influenced by the expiration of probation, or that this influence would specifically apply to a subset of offenders of a certain (higher) risk level.

In total, 19 offenders had not completed their treatment in the high-intensity outpatient treatment group at the time of data collection: 9 offenders dropped out of treatment, 6 were transferred to individual treatment, and 4 offenders were still in treatment at the time of data collection. A final sample of 61 offenders who completed their treatment was thus included in the comparison regarding treatment duration. All but the 4 offenders, who were still in treatment at the moment of data collection, were included in the comparison regarding completion rates.

Instruments

The STATIC-99(R). The STATIC-99 is the most commonly used actuarial risk assessment instrument for sex offenders (Hanson & Morton-Bourgon, 2005). It was developed by Hanson and Thornton (2000) as a combination of extant instruments, specifically the RRASOR (Rapid Risk Assessment for Sex Offence Recidivism; Hanson, 1997) and SACJ-Min (Structured Anchored Clinical Judgment Scale- Minimum;Grubin, 1998). The STATIC-99 consists of 10 items referring to individual risk factors. The first item refers to the number of charges and/or convictions for previous sexual offenses and produces a score between 0 and 3. All remaining risk items follow binary scoring (0 for absence and 1 for presence). The total score is calculated by adding up the scores of the individual items. The total score refers to any of four different risk categories: low (total score 0 or 1), low to medium (total score 2 or 3), high to medium (total score 4 or 5), or high (total score 6 or higher). The STATIC-99 has been widely validated (42 studies, comprising a total of 14,160 subjects) for sex offender risk assessment (sexual recidivism), and yielded an average AUC (Area Under the Curve) of .70, median .74 (Hanson & Morton-Bourgon, 2009). Recent research found age to add incrementally to the predictive validity to the Static-99, resulting in a revised scoring system for Static-99 that more accurately describes older offenders' risk of recidivism (Helmus et al., 2012). In the current study, the revised scales with the new age weights are used: the STATIC-99R.

Statistical Analyses

The distribution of risk levels within the high-intensity outpatient treatment group was compared with the distribution of risk levels of the random sample of all offenders referred to outpatient treatment in the Netherlands (n = 145) and the distribution of the observed percentages of risk levels in a large combined Canadian samples (Hanson et al., 2012) by means of two 4 × 2 Pearson chi-square analyses including four risk levels (low, medium

to low, medium to high, high) and two sets of samples. Differences between the average duration of treatment between patients (completers) from different risk levels was compared by means of a univariate ANOVA with risk level as the independent variable with four levels (low, medium to low, medium to high, high), and treatment duration as the continuous dependent variable. Finally, the relationship between risk level and drop out was assessed by means of a Mann−Whitney *U*-test, comparing the mean rank of the risk levels of completers with the mean rank of the risk levels of non-completers.

Results

Preliminary Reliability Analyses

Fifty-four files were assessed by two coders independently to establish inter-rater reliability. Strong inter-rater reliability (Cicchetti, 1994) was observed for the Static-99R items, with an average kappa of .85, ranging from .66 (Item 7, hands-off conviction) to 1.00 (Item 8, unrelated victim and Item 9, stranger victim).

Demographic and Penal Comparison of Samples

Table 1 provides an overview of the demographic variables for the high-intensity outpatient treatment sample and the Dutch random comparison sample. Offenders in the high-intensity outpatient treatment sample were significantly more often in a relationship (67.5% vs. 49.7%), $\chi^2(1, n = 225) = 6.66$, $p = .01$; were less likely to be without education (5.0% vs. 19.8%), $\chi^2(1, n = 225) = 8.98$, $p = .003$; and were more often employed (17.5% vs. 30.3%), $\chi^2(1, n = 225) = 4.45$, $p = .03$. The marginally higher sentences imposed for the sexual offense in the high-intensity outpatient treatment sample, 18.6 months versus 16.4 months ($z = -1.74$, $p = .08$) were likely due to the fact that the treatment sample was of more recent date and it is generally assumed that sentences have increased in the Netherlands in recent years (Van den Eerenbeemt & Van Hoorn, 2002). However, after deduction of the suspended part of the sentences, the unsuspended prison time did not significantly differ between both groups ($z = -.43$, $p = .67$).

Composition of Risk Levels

Figure 1 depicts the constellation of the high-intensity outpatient treatment group in terms of offenders' risk levels over the course of 620 weeks. Table 2 shows the distribution of the risk levels of all participants of the high-intensity outpatient treatment group, compared with the random sample of 25% of

Table 1. Demographic Variables and Sentencing Information for The High-Intensity Outpatient Treatment Group and a Dutch National Sample of Offenders Referred to Outpatient Treatment.

	Outpatient Treatment Group (n = 80)	Dutch National Sample (n = 145)	Phi
Demographics			
Age at conviction *M* (*SD*)	41.8 (11.4)	40.4 (13.0)	
Ethnicity Caucasian %	92.5 (74)	89.7 (130)	.05
Religious† %	37.5 (30)	26.2 (38)	.12
Marital status single* %	32.5 (26)	50.3 (73)	.17
No education (beyond elementary school)** %	5.0 (4)	19.8 (26)	.21
Unemployed* %	20.5 (15)	33.6 (46)	.14
			Cohen's *d*
Sentencing			
Months sentence, *M* (*SD*)†	18.6 (10.8)	16.4 (9.6)	.22
Months suspended, *M* (*SD*)**	6.9 (3.2)	5.7 (3.0)	.39
Net sentence (minus suspended)	11.7 (10.7)	10.4 (8.2)	.14
Months probation, *M* (*SD*)*	28.1 (9.3)	24.8 (9.6)	.35

†p< .10. *p< .05. **p< .01.

sex offenders referred to outpatient treatment in the Netherlands between 1996 and 2002 and the combined Canadian samples used for the STATIC-99R percentile ranks (Hanson et al., 2012). No significant difference between the treatment sample and the Dutch random sample was found in terms of the distribution of risk levels, $\chi^2(3, n = 225) = 1.67$, $p = .64$. Likewise, no significant difference in the distribution of risk level was found between the high-intensity outpatient treatment sample and the combined Canadian samples used for the STATIC-99R percentile ranks (Hanson et al., 2012), $\chi^2(3, n = 2{,}091) = 2.56$, $p = .47$.

Treatment Duration and Drop Out

The average treatment duration for participants of the high-intensity outpatient treatment group at each risk level as well as the percentage of non-completers at each risk level is presented in Table 3. No statistically significant difference in treatment duration was observed across participants of different

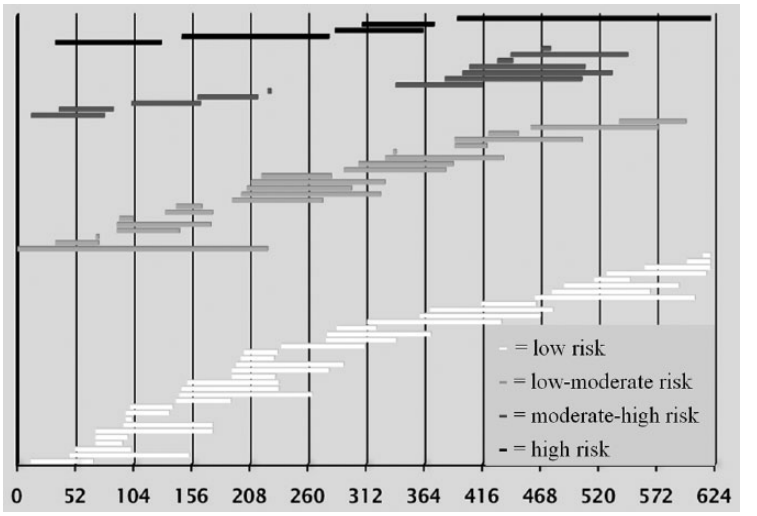

Figure 1. Overview of the participation of offenders of different risk levels in group treatment over the course of 620 weeks.
Note. Each bar represents an offender with the color indicating risk levels and the length of the bar indicating the period spend in treatment. Week 1 is January 1, 1999, and week 620 is March 2011.

Table 2. Distribution of Risk Levels Based on STATIC-99R Scores for the Three Samples.

	Outpatient Treatment Group (n = 80)	Dutch National Sample (n = 145)	Canadian Sample (n = 2,011)
Low risk %	43.8 (35)	42.1 (61)	39.6 (796)
Low to moderate risk %	30.0 (24)	28.3 (41)	34.7 (698)
Moderate to high risk %	15.0 (12)	21.4 (31)	18.1 (364)
High risk %	11.3 (9)	8.3 (12)	7.6 (153)
STATIC score *M* (*SD*)	2.2 (2.6)	2.3 (2.3)	2.3 (2.5)

Note: No significant differences were found.

risk levels, $F(3, 60) = 1.05$, $p = .38$, $\eta_p^2 = 0.05$ (.01-.06 is small; .06-.14 is medium; ≥.14 is large). Tukey's post-hoc comparisons revealed no significant differences between any of the individual risk categories, nor was there

Table 3. Average Treatment Duration for Treatment Completers and Drop Out Percentage for All Patients Per Risk Level.

	Completed	Treatment Duration in Weeks	Drop Out
Risk Level	(*n* = 61)	*M* (*SD*)	% (*n*)
Low risk	(*n* = 29)	73.9 (34.3)	9.4 (3)
Low to moderate risk	(*n* = 17)	79.1 (32.2)	26.1 (6)
Moderate to high risk	(*n* = 8)	90.1 (30.8)	33.3 (4)
High risk	(*n* = 7)	97.3 (52.5)	22.2 (2)

Note. No significant differences were found.

a significant difference between the treatment duration of high-risk offenders ($M = 97.3$, $SD = 33.0$) and all other offenders combined ($M = 77.9$, $SD = 52.5$), $t(59) = 1.36$, $p = .18$, Cohen's $d = .44$. When the small subgroups of moderate- to high-risk offenders ($n = 8$) and high-risk offenders ($n = 7$) were combined to one level ($n = 15$, $M = 93.5$, $SD = 40.9$), no significant difference in treatment duration was observed across risk levels, $F(2, 58) = 1.52$, $p = .23$, $\eta_p^2 = 0.05$. The Mann–Whitney *U*-test revealed a trend for the non-completers to have higher risk levels (mean rank = 46.9), than the completers (mean rank = 36.4); $z = -1.74$, $p = .08$, two-tailed.

Discussion

The aim of the present study was to assess the distribution of risk levels in a clinically composed treatment group. The distribution of risk levels within the treatment group did not deviate from the total population of sex offenders referred to outpatient treatment in the Netherlands (between 1996 and 2002), nor from the combined Canadian samples that were used to compile the percentile ranks for the STATIC-99R (Hanson et al., 2012). In other words, these findings are consistent with a distribution that would be obtained if no selection regarding risk level occurred between conviction and treatment of these offenders. Consequently, offenders of all risk levels were present in the treatment group. Contrary to expectation, treatment duration and treatment completion of the offenders in the treatment group were not significantly related to their risk levels. Taken together, the findings suggest that whatever selection occurred in the clinical trajectory leading up to the compilation of this high-intensity outpatient treatment group, it must have been guided by other factors than risk level. The demographic differences in terms of education, relationship status, and employment between the treatment group and the

total sample of offenders referred to outpatient treatment may point to a clinical selection of a subset of offenders that is more capable and motivated for treatment.

Given the high intensity (24 hr per week) and the long duration (the average treatment length was 80 weeks), a distribution of risk levels skewed toward the higher end would *a priori* seem appropriate in view of the suggested recommendations in the international literature. Instead, the largest segment (44%) of the enrolled offenders was of the lowest risk level. Accordingly, a major problem emerging from our findings is the likely over-treatment of low-risk offenders. This notion is strengthened by the minimal association between risk level and treatment duration within the group. The average treatment duration for the low-risk offenders (74 weeks) was 92% of the general average treatment length (80 weeks), and about three quarters of the average treatment length of the high-risk offenders. The small effect size in treatment duration does not nearly approach the three or four times factor recommended in the literature (Hanson, 2009; Marshall et al., 1991). The over-treatment of low-risk offenders results in a considerable waste of resources, especially given their relatively large numbers. Furthermore, there is a possibility that over-treatment increases low-risk offenders' recidivism rates (Bonta et al., 2000; Lowenkamp & Latessa, 2002). The finding that clinical group composition did not result in any selection regarding risk level also suggests that high-risk offenders may be placed in low-intensity treatment groups, leading to under-treatment of high-risk offenders. Future research should assess whether moderate to high and high-risk offenders are indeed included in clinically composed low-intensity outpatient treatment groups.

The question why low-risk offenders are allocated to high-intensity treatment and why they remain in treatment for such a long period is difficult to answer. Clinical treatment selection in general is an understudied topic, and often remains a black box (but see Van Manen et al., 2012, for an interesting effort to visualize the clinical decision process in the context of personality disorders). Enquiry among treatment providers indicated that low-risk offenders often present with numerous problems and complaints that they are very motivated to work on and willing to accept help for. These problems for the larger part are not linked to their recidivism risk and might also be treated in regular mental health care settings, but instead are given attention during the forensic treatment. This problematic state of affairs seems to spring from misinformation in two directions. Forensic treatment providers are insufficiently informed about dynamic risk factors related to reoffending and therefore providing treatment that is insufficiently guided by the Need principle (the focus of treatment on risk related factors). Conversely, regular mental

health practitioners are often inexperienced and reluctant to treat sex offenders at all, and generally lack knowledge about which psychological factors are and which are not related to sexual offending. As a result, low-risk offenders remain in their forensic treatment groups to work on these general issues.

The current study has a number of limitations that limit the generalization of the results. The study sample consisted of one treatment group only and examination of other treatment groups may have yielded different results. However, the current treatment group was followed over a long period of time (almost 12 years), and the treatment facility providing the treatment is a well-respected facility in the Netherlands, utilizing procedures that are to a high degree representative for other treatment facilities in the Netherlands. Indeed, in general, the formation of treatment groups is not guided by the use of internationally validated actuarial risk assessment instruments.

Another limitation of the study is that the achievement of treatment goals was insufficiently documented, leaving the possibility open that a (small) number of offenders may have completed their treatment due to the expiring of their probation instead of sufficient improvement. Future research on this topic may be of great interest and in that respect it is recommended to treatment providers to keep careful track of the goals and progress of their clients. With respect to the comparison groups, it should be noted that both the national treatment referral group and the Canadian sample were of older date than the treatment group, introducing possible cohort effects. On the other hand, mitigating these concerns, Hanson et al. (2012) indicate that the distribution of STATIC-99R risk levels has shown to be very consistent over different cohorts in time and in numerous countries.

Finally and most importantly, while the current study tested whether clinical treatment selection leads to selection in terms of risk levels, it should be acknowledged that it cannot test whether this clinical treatment selection yielded worse treatment outcome than would have occurred when based on actuarial risk levels. As noted by Hanson et al. (2009), this kind of evaluation of the application of the risk principle in terms of recidivism would require comparison with treatment in which the intensity was indeed matched to risk. As there currently are no such treatment groups in the Netherlands (yet), no adequate comparison group was available for this purpose. Should such a group be available in the future, this question certainly needs to be addressed first and foremost. However, although it is theoretically possible that the clinical treatment selection in this sample has lead to better treatment results than a risk-oriented selection would have, this is very unlikely given the accumulating evidence underlining the importance of the risk principle both in correctional treatment in general (Bonta et al., 2000; Lowenkamp & Latessa, 2002) and in the treatment of sex offenders specifically (Hanson

et al., 2009; Olver, Nicholaichuk, Gu, & Wong, 2013; Smid, Kamphuis, Wever, & Van Beek, 2014).

Notwithstanding the limitations, the current study carries a number of practical implications and suggestions. The standard use of validated actuarial risk assessment instruments to guide the assembling of treatment groups could improve adherence to the RNR model, and in so doing lead to more efficient and possibly more effective treatment programs. The most feasible way to decrease the mixing and possible affiliation between high- and low-risk offenders would be to adequately select the high-risk offenders and provide them with individual treatment, because their numbers are not large. Alternatively, one may provide separate treatment groups for (moderate to high and) high-risk offenders and low (and low to moderate) risk offenders. Treatment duration should then be adjusted to the risk level, most importantly implying a much shorter treatment for the low-risk offenders. Moreover, extensive education on the subject of dynamic risk factors related to sexual offending behavior is warranted for forensic treatment providers. Remaining psychological problems of low-risk offenders that are not related to their recidivism risk could either be treated in general mental health care, which would require training of general mental health practitioners on this subject, or a follow-up module of the low-risk group treatment could be created, dedicated to general mental health problems.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

Andrews, D. A., & Bonta, J. (2010). *The psychology of criminal conduct* (5th ed.). Cincinnati, OH: Anderson.

Andrews, D. A., Bonta, J., & Hoge, R. D. (1990). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior*, *17*, 19-52.

Blanchette, K., & Brown, S. L. (2006). *The assessment and treatment of women offenders: An integrative perspective*. Chichester, UK: John Wiley.

Boer, D. P., Hart, S. D., Kropp, P. R., & Webster, C. D. (1997). *The Sexual Violence Risk-20 guide (SVR-20)*. Burnaby, British Columbia, Canada: The Mental Health, Law and Policy Institute, Simon Fraser University.

Bonta, J., & Andrews, D. A. (2007). *Risk-need-responsivity model for offender assessment and rehabilitation* (Corrections Research User Report No. 2007-06). Ottawa, Ontario: Public Safety Canada.

Bonta, J., Wallace-Capretta, S., & Rooney, J. (2000). A quasi-experimental evaluation of an intensive rehabilitation supervision program. *Criminal Justice and Behavior*, *27*, 312-329. doi:10.1177/0093854800027003003

Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment*, *6*, 284-290. doi:10.1037/1040-3590.6.4.284

Frenken, J. (2002). Criminal sexuality and sexually deviant behavior: Definitions and prevalence [Strafbare seksualiteit en seksueel deviant gedrag: Definities en prevalenties]. *Tijdschrift voor Seksuologie*, *26*, 4-8.

Grubin, D. (1998). *Sex offending against children: Understanding the risk* (Police Research Series Paper 99). London, England: Home Office.

Hanson, R. K. (1997). *The development of a brief actuarial risk scale for sexual offense recidivism* (User Report 97-04). Ottawa, Ontario: Department of the Solicitor General of Canada.

Hanson, R. K. (2009, April). *Recent developments in risk assessment and treatment efficacy*. Presented at the TBS Advisory Board Seminar in Utrecht, *The Netherlands*.

Hanson, R. K., Bourgon, G., Helmus, L., & Hodgson, S. (2009). The principles of effective correctional treatment also apply to sexual offenders: A meta-analysis. *Criminal Justice and Behavior*, *36*, 865-891. doi:10.1177/0093854809338545

Hanson, R. K., Lloyd, C. D., Helmus, L., & Thornton, D. (2012). Developing non-arbitrary metrics for risk communication: Percentile ranks for the Static-99/R and Static-2002/R sexual offender risk tools. *International Journal of Forensic Mental Health*, *11*, 9-23. doi:10.1080/14999013.2012.667511

Hanson, R. K., & Morton-Bourgon, K. E. (2005). The characteristics of persistent sexual offenders: A meta-analysis of recidivism studies. *Journal of Consulting and Clinical Psychology*, *73*, 1154-1163. doi:10.1037/0022-006X.73.6.1154

Hanson, R. K., & Morton-Bourgon, K. E. (2009). The accuracy of recidivism risk assessments for sexual offenders: A meta-analysis of 118 prediction studies. *Psychological Assessment*, *21*, 1-21. doi:10.1037/a0014421

Hanson, R. K., & Thornton, D. (2000). Improving risk assessments for sex offenders: A comparison of three actuarial scales. *Law and Human Behavior*, *24*, 119-136. doi:10.1023/A:1005482921333

Helmus, L., Thornton, D., Hanson, R. K., & Babchishin, K. M. (2012). Improving the predictive accuracy of Static-99 and Static-2002 with older sex offenders: Revised age weights. *Sexual Abuse: A Journal of Research and Treatment*, *24*, 64-101. doi:10.1177/1079063211409951

Kalindien, S. N., De Heer-de Lange, N. E., & Van Rosmalen, M. M. (2011). *Criminality and justice 2010: Developments and context* [Criminaliteit en Rechtshandhaving 2010: Onwikkelingen en Samenhangen]. The Hague, The Netherlands: Boom Judicial Publishers.

Kalton, G. (1983). *Introduction to survey sampling*. Beverly Hills, CA: Sage.

Lowenkamp, C. T., & Latessa, E. J. (2002). *Evaluation of Ohio's community based correctional facilities and halfway house programs* (Technical report). Cincinnati, OH: University of Cincinnati.

Lowenkamp, C. T., Latessa, E. J., & Holsinger, A. M. (2006). The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? *Crime & Delinquency*, *52*, 77-93. doi:10.1177/0011128705281747

Marshall, W. L., Jones, R., Ward, T., Johnston, P., & Barbaree, H. E. (1991). Treatment outcome with sex offenders. *Clinical Psychology Review*, *11*, 465-485.

Olver, M. E., Nicholaichuk, T. P., Gu, D., & Wong, S. C. (2013). Sex offender treatment outcome, actuarial risk, and the aging sex offender in Canadian corrections: A long-term follow-up. *Sexual Abuse: A Journal of Research and Treatment*, *25*, 396-422. doi:10.1177/1079063212464399

Smid, W. J., Kamphuis, J. H., Wever, E. C., & Van Beek, D. (2013). Treatment referral for sex offenders based on clinical judgment vs. actuarial risk assessment: Match and analysis of mismatch. *Journal of Interpersonal Violence*, *28*, 2273-2289. doi:10.1177/0886260512475313

Smid, W. J., Kamphuis, J. H., Wever, E. C., & van Beek, D. (2014). A Quasi-Experimental Evaluation of High-Intensity Inpatient Sex Offender Treatment in the Netherlands. *Sexual Abuse: Journal of Research and Treatment*, advance online publication. doi: 10.1177/1079063214535817

Van den Eerenbeemt, M., & Van Hoorn, F. (2002, Januari 18). Rechters geven laatste jaren hardere en langere straffen [Judges impose harsher and longer sentences lately]. *Volkskrant*. Retrieved from http://www.volkskrant.nl/vk/nl/2844/Archief/archief/article/detail/626058/2002/01/18/Rechters-geven-laatste-jaren-hardere-en-langere-straffen.dhtml

Van Manen, J., Kamphuis, J. H., Goossensen, A., Timman, R., Busschbach, J. J. V., & Verheul, R. (2012). In search of patient characteristics that may guide empirically based treatment selection for personality disorder patients? A concept map approach. *Journal of Personality Disorders*, *26*, 481-497. doi:10.1521/pedi.2012.26.4.481

Verschuur, J. (2012). *Guidelines for sex offender treatment programs for De Tender outpatient forensic treatment facility* [Een kwestie van goede zeden: Zorgprogramma Seksueel Grens- overschrijdend Gedrag De Tender]. Deventer, The Netherlands: Internal publication.

Ward, T., Mesler, J., & Yates, P. (2007). Reconstructing the risk-need-responsivity model: A theoretical elaboration and evaluation. *Aggression and Violent Behavior*, *12*, 208-228. doi:10.1016/j.avb.2006.07.001

Author Biographies

Wineke J. Smid (MSc/PhD candidate) graduated with honors at the clinical psychology program of the University of Amsterdam in 2004. She is currently working as a senior researcher at the Van der Hoeven Forensic Institute in Utrecht, the Netherlands, and has written her thesis on sex offender risk assessment in the Netherlands. She

coordinates and carries out a number of research projects in cooperation with the police force, the probation office, and the justice department in the Netherlands and is a certified trainer in structured sex offender risk assessment. She is a member of the Association for the Treatment of Sexual Abusers (ATSA) and ATSA's international public policy committee.

Jan H. Kamphuis (Prof.) is full professor of "psychological assessment and personality" at the clinical program of the University of Amsterdam. He is a graduate of the clinical psychology program of the University of Texas at Austin, where he studied as a Fulbright scholar. After finishing his internship at Duke University Medical Center (DUMC), he worked as a cognitive therapist/senior researcher at the mood disorders program of the Academic Medical Center (AMC) in Amsterdam. In 1998, he joined the faculty of the University of Amsterdam. His current main research interests are in clinical personality assessment and in links between personality and psychopathology. He has published articles and chapters on innovations in clinical assessment, anxiety disorders, and the psychology of stalking. Current research projects include a RCT on the effectiveness of Therapeutic Assessment at the Viersprong clinic for patients with personality pathology awaiting therapy, the development of the Dutch multidimensional Personality Questionnaire (with Tellegen & Waller, 2008), and optimizing risk assessment among sexual offenders on the basis of archival data (Van der Hoeven Kliniek). He is a fellow of the Society of Personality Assessment and is certified in Therapeutic Assessment.

Edwin C. Wever (MSc) graduated at the clinical neuropsychology program at the VU University Amsterdam. He joined the research department at the Van der Hoeven Forensic Institute in Utrecht, The Netherlands, in 2005. He is currently working on his doctoral thesis on the assessment and training of (sub)conscious cognitive processes (e.g., attentional bias, approach tendencies, working memory) that may underlie mental disorders associated with (sexual) offending behaviors. He is a member of the Dutch Association for Psychologists, section neuropsychology.

Maud C. F. M. Verbruggen (MSc) graduated at the Clinical Forensic Psychology program at the University of Amsterdam in 2012. During her internship, she worked as a psychological evaluator and assistant therapist at a forensic outpatient treatment center. She wrote her master thesis on risk levels within treatment groups.