ORIGINAL ARTICLE

The predictive value of the dynamic risk outcome scales (DROS) for recidivism in (forensic) clients with mild intellectual disabilities or borderline intellectual functioning

M. J. Delforterie [1,2] | B. L. Hesper [1] | H. L. I. Nijman [2,3] | H. P. L. M. Korzilius [4] | A. Turhan [1,2] | R. Didden [1,2]

[1]Trajectum, Specialized and Forensic Care, Zwolle, the Netherlands

[2]Behavioural Science Institute, Radboud University, Nijmegen, the Netherlands

[3]Fivoor, Specialized and Forensic Care, Utrecht, the Netherlands

[4]Institute for Management Research, Radboud University, Nijmegen, the Netherlands

Correspondence
M. J. Delforterie, Trajectum, Specialized and Forensic Care, Zwolle, the Netherlands; Behavioural Science Institute, Radboud University, Nijmegen, the Netherlands.
Email: mdelforterie@trajectum.info

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Abstract

Background: The dynamic risk outcome scales (DROS) was developed to assess treatment progress of clients with mild intellectual disability or borderline intellectual functioning using dynamic risk factors. We studied the predictive value of the DROS on various classifications and severity levels of recidivism.

Method: Data of 250 forensic clients with intellectual disabilities were linked to recidivism data from the Judicial Information Service in the Netherlands. Receiver operating characteristics (ROC) analyses were used to determine the predictive values.

Results: The DROS total score could not significantly predict recidivism. A DROS recidivism subscale predicted general, violent and other recidivism. These predictive values were comparable to those of a Dutch tool validated for risk assessment in the general forensic population.

Conclusions: The DROS recidivism subscale predicted various classifications of recidivism better than chance. At present, the DROS appears to have no added value beyond the HKT-30 for the purpose of risk assessment.

KEYWORDS
borderline intellectual functioning, DROS, HKT-30, mild intellectual disability, recidivism, risk assessment

1 | INTRODUCTION

In the forensic field, estimating the risk of future offending behaviour (recidivism) is important to substantiate decisions on treatment and discharge. The use of risk assessment tools is widespread in the general forensic setting to estimate this risk (Singh et al., 2011). Risk assessment tools mostly consist of static risk factors and/or dynamic risk factors. Static risk factors are

unchangeable and contain aspects from the past related to a higher chance of recidivism. An example is the age of first police contact. Static risk factors are useful to determine the intensity of the treatment needed to reduce the risk of recidivism. Dynamic risk factors are changeable, and are therefore also useful to determine the content of treatment and to indicate whether the patient is improving. Examples are maladaptive coping strategies, hostile attitude and impulsivity.

For people with a mild intellectual disability or borderline intellectual functioning (hereafter referred to as people with intellectual disabilities; IQ 50–85), it is important to have reliable risk assessment instruments available. A systematic review on the predictive value of risk assessment tools on aggression in a population of people with intellectual disabilities shows that most studies report a better than chance level of success (Hounsome et al., 2018). Studies with samples of clients with intellectual disabilities on risk assessment tools developed for the general forensic population show that instruments with static risk factors predict recidivism on average slightly better than instruments with dynamic risk factors (mean Area Under the Curve [AUC] of .80 for static instruments and .71 for dynamic instruments; see Lofthouse et al., 2017). Nevertheless, the predictive value of instruments with dynamic risk factors is large (Rice & Harris, 2005). Several studies also showed that instruments developed for a population of people with intellectual disabilities targeting dynamic risk factors (e.g., the Short Dynamic Risk Scale; Quinsey, 2004) predict recidivism with a large effect (AUCs between .72 and .76; see Pouls & Jeandarme, 2015 for an overview).

The Dynamic Risk Outcome Scales (DROS; Drieschner & Hesper, 2008) is an instrument originally developed to measure treatment progress in clients with intellectual disabilities and severe behavioural and/or mental health problems and consists of dynamic risk factors for externalising problem behaviour, such as physical and verbal aggression, destruction of property, and theft. The DROS has proven to be reliable and valid (see Delforterie et al., 2020; Drieschner, 2014) and has a good predictive value for aggressive behaviour within treatment facilities (Drieschner et al., 2013) (for more information on the development and reliability and validity of the DROS, see the method section). Although originally not developed as a risk assessment tool, in Dutch clinical practice, for lack of a risk assessment tool specifically focused on clients with intellectual disabilities, the DROS is seen and used as a risk assessment tool for this subgroup (e.g., Lofthouse et al., 2017).

To investigate whether the DROS indeed can be used as a risk assessment tool, the current research focuses on the predictive value of the DROS for recidivism. Additionally, for comparison purposes, the predictive value of the Historical, Clinical, Future-30 (in Dutch: Historisch, Klinisch, Toekomst-30 [HKT-30]), a Dutch risk assessment tool validated for the general forensic population (Task Force Risk Assessment Forensic Psychiatry, 2002), was examined in the same sample. In the Netherlands, risk assessment in forensic psychiatry has been mandatory since 2005, using prescribed instruments like the HKT-30 (De Vogel et al., 2012). The DROS is mandatory to measure treatment progress in forensic clients with intellectual disabilities. Due to the good predictive value of the DROS for aggressive behaviour within facilities (Drieschner et al., 2013), we expect that the DROS is able to predict violent recidivism following discharge from the facility better than chance. There are no expectations regarding the strength of the prediction and the prediction of other recidivism classifications. Due to the static risk factors included in the HKT-30, we hypothesize (see also Lofthouse et al., 2017) that the HKT-30 is better at predicting recidivism than the DROS.

2 | METHOD

2.1 | Setting

Trajectum is a facility for the treatment and care of clients with intellectual disabilities and severe behavioural disorders. Trajectum has living groups that are low secure, medium secure and high secure. During treatment, the client works towards more freedom and responsibility. Interventions are embedded in a sociotherapeutic living environment adapted to the level of functioning of clients (see Neimeijer et al., 2019).

2.2 | Procedure

The clinical treatment within Trajectum is evaluated on the basis of data collected in the Routine Outcome Monitoring (ROM). Within ROM, instruments are filled in regularly (e.g., every 6 months) until discharge. The DROS is one of the instruments within ROM. For the current study, the latest (if complete) DROS data were selected from clients who gave written consent to use the data for research purposes and who were discharged between 2007 and the end of 2014. To obtain consent, researchers provided written and oral information to clients and (if necessary) their legal guardians concerning data collection. They were informed that the research was confidential and anonymous. Names were replaced by codes to ensure privacy. Subsequently, clients with a legal measure (i.e. clients who are detained under mental health legislation) were selected from this group (n = 250). Data on convictions after discharge of these 250 clients were requested from the Judicial Information Service (in Dutch: *Justitiële Informatie Dienst*: JustID). Convictions were classified by JustID into three recidivism classifications: violent, sexual and other (including arson and property crimes without violence). A distinction was also made between relatively minor offences with a sentence of less than 4 years, and relatively moderate to serious offences with a sentence of 4 years or more. If a client had multiple convictions for the same classification of recidivism including the same severity (minor or serious), only the first conviction after the discharge date was reported.

2.3 | Participants

The sample (n = 250) consisted mainly of men (n = 236; 94.4%). Age at date of discharge was on average 36.4 years (SD = 11.4; range 18.6–70.6). A violent index offence was the most common type of index offence (37%). For more characteristics of the study participants, see Table 1.

2.4 | Instruments

2.4.1 | DROS

The DROS consists of 42 items divided across 15 subscales (Drieschner & Hesper, 2008). These subscales and items were

TABLE 1 Characteristics of the study participants

			N	%
Gender		Men	236	94.4
		Women	14	5.6
Index offence		Violence (exclusively)	92	36.8
		Sexual (exclusively)	44	17.6
		Other (exclusively)	30	12.0
		Violence and sexual	14	5.6
		Sexual and other	2	0.8
		Violence and other	54	21.6
		Violence, sexual and other	5	2.0
		Index offence unknown	9	3.6
DSM-IV-TR classification		Intellectual disabilities	250	100
		Substance use disorder	150	60
		Personality disorder	133	53
		Psychotic disorder	58	23
			Mean (SD)	
IQ			70.2 (9.4)	
Age at date of discharge			36.4 (11.4)	
Mean treatment duration			44.1 months (36.9)	

selected on the basis of research among the general population on dynamic risk factors for recidivism (e.g., Andrews & Bonta, 2003; Douglas & Skeem, 2005; Mann et al., 2010), which are also related to recidivism in samples of people with intellectual disabilities (e.g., Gray et al., 2007; Lindsay et al., 2008; Van der Put et al., 2014; see also Drieschner, 2014). Examples of subscales are *Problem recognition*, *Coping skills*, *Impulsivity*, and *Problematic sexual cognitions and behaviour*. The items of the DROS were scored by a therapist on a 5-point rating scale; the scores 1, 3 and 5 were labelled, with lower scores being considered to be associated with more externalising problem behaviour. To create the subscales of the DROS, means were calculated. The DROS total score was used to predict recidivism in order to indicate the general level of risk. The DROS total score was created using the mean of all subscales. In addition, subscales have been selected to create a DROS recidivism subscale (see Statistical analyses) and the subscale *Problematic sexual cognitions and behaviour* is used to predict sexual recidivism. The DROS total score and the subscales are valid and reliable. For example, Cronbach's α ≥.80 for 11 of the 15 scales and the total score; test–retest reliability was significant and large for all scales and total score with *r*s between 0.67 and 0.95; and compared to the Adult Behaviour Checklist (ABCL; Achenbach & Rescorla, 2003), the DROS showed convergent and divergent validity (for more information on reliability and validity of the DROS total score and subscales, see Delforterie et al., 2020).

2.4.2 | HKT-30

The HKT-30 (Task Force Risk Assessment Forensic Psychiatry, 2002) was administered at Trajectum until 2014. The HKT-30 is a structured risk assessment tool for estimating the risk of violent recidivism in general forensic psychiatric clients. The HKT-30 consists of

11 historical, 13 clinical and 6 future items. The historical scale consists of static and historical risk factors while the clinical and future scales map dynamic risk factors. Items are rated on a 5-point scale ranging from 0 to 4, with 0 indicating low risk for that item. In a general forensic clients sample, recidivism could be predicted with a medium effect (with AUCs ranging from .67 to .69) for the separate scales and a large effect for the total score (AUC of .72; De Ruiter & Hildebrand, 2007). We created three scales by means of sum scores: (1) a sum score of all items on the HKT-30 (*HKT-30*); (2) a sum score of all items on the clinical and future scales (*Clinical and future scale*) and; (3) a sum score of all items on the clinical scale (*Clinical scale*). Only complete cases regarding the subscales were included in the analyses, resulting in $n = 142$ complete *HKT-30* and $n = 241$ of both *Clinical and future scale* and *Clinical scale*.

2.4.3 | Outcome measures for recidivism

JustID recidivism data included the date of the offence and the various classifications of recidivism: violent, sexual and other recidivism. Within these classifications, a distinction was made in the severity of the offence (minor or serious). We also included recidivism irrespective of classification and severity (general recidivism).

2.5 | Statistical analyses

All analyses were done with IBM SPSS Statistics (Version 25). The recidivism rates of the first re-offence were calculated using the Kaplan–Meier survival analysis, which takes the difference in follow-up periods per patient into account. The recidivism percentages were calculated based on clients who had not (yet) re-offended.

General recidivism
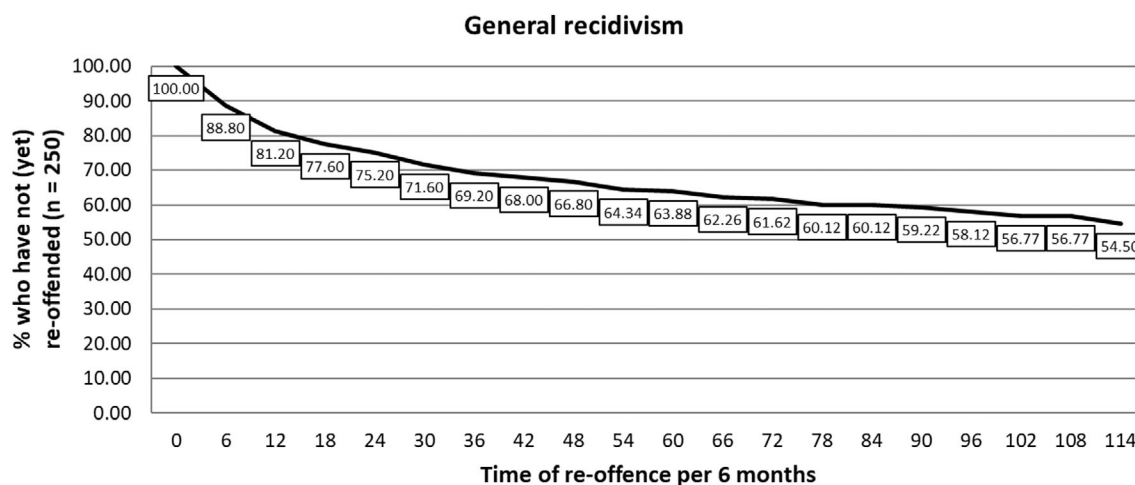
FIGURE 1 Kaplan–Meier-survival curve of percentage of clients ($n = 250$) who have not (yet) re-offended per 6 months

The receiver operating characteristics (ROC) analysis was used to determine the predictive value of the DROS total score and the subscale *Problematic sexual cognitions and behaviour*. The relationship between *sensitivity* (true positive prediction) and 1—*specificity* (false positive prediction) is plotted in a curve. The area below is called the Area Under the Curve (AUC). An AUC of .50 indicates that the predictive value of the instrument is not better than what would be expected based on chance. An AUC above .56 means a small effect, above .64 a medium effect and above .71 a large effect (Rice & Harris, 2005). Because of the number of analyses we conducted, alpha was adjusted by $.05/20 = .003$.

In addition, it was explored whether a DROS recidivism subscale could be created. Using a logistic regression with backward stepwise selection, we added all subscales of the DROS as independent variables, with general recidivism as the outcome measure. With the backward selection, at first all subscales are included in the model, after which it is determined whether removing a subscale improves the model. Of the subscales that remained and that correlated negatively with general recidivism, a DROS recidivism subscale was created using a mean score, with which the predictive value was determined in ROC analyses.

Finally, the predictive values of the total HKT-30 scale, the clinical and future scale and the clinical scale were determined by means of ROC analyses. These were compared with the AUC values of the DROS total score and DROS recidivism subscale using the program MedCalc for Windows (Version 18.11.6) using the method of Delong et al. (1988). Because of the number of comparisons we employed, alpha was adjusted by $.05/30 = .002$.

3 | RESULTS

3.1 | Descriptive data

The average time between discharge and the reference date (30 November 2018) was 6.75 years (81 months; $SD = 23.4$; range:

47–133 months). A total of 100 clients (40%) re-offended, with 61 clients re-offending violently (24.4%; minor 10.4%; serious 20.8%), 7 clients re-offending sexually (2.8%; minor 1.2%; serious 2%) and 79 clients showing other re-offences (31.6%; minor 23.2%; serious 24.8%[1]). There is no difference in the presence or absence of these classifications of recidivism and severity between clients with mild intellectual disabilities (IQ between 50 and 70) and borderline intellectual functioning (IQ between 70 and 85) (χ^2 between .001 and .44, ps > .51; Fisher exact test for sexual recidivism due to low n, ps > .43).

Figure 1 shows the recidivism percentages based on the Kaplan–Meier survival analysis. The curve starts at 100%, which means that no one has re-offended at the time of discharge. After that, the curve descends, and so does the percentage of clients who have not (yet) re-offended. Within 1 year, 81% have not yet re-offended and within 2 years this is 75%. At the end of the maximum study period (11 years), 53% (adjusted for follow-up period and therefore deviating from the total sample) had not (yet) re-offended. Figure 1 also shows that the curve is steepest in the first 12 months, and that recidivism therefore occurs relatively often in the first year.

3.2 | Predictive value of the DROS

The DROS total score was found to have no significant predictive value for any of the recidivism classifications or severity levels. See Table 2 for the AUCs of the recidivism classifications and for severity levels.[2]

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[1]Some clients showed both mild and severe re-offences within the same category ($n = 17$ for violence, $n = 1$ for sexual, and $n = 41$ for other re-offences).

[2]In addition, we tested the performance of the DROS total score in low-risk individuals. We reran the analyses of the DROS total score with clients who scored a 4 or 5 on this scale. There were $n = 67$, of which 21 re-offended (31%), with 12 re-offending violently (18%), no clients re-offending sexually, and 17 clients showing other re-offences (25%). All AUCs were non-significant (AUCs between .55 and .58, ps > .40).

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TABLE 2 Predictive values of the DROS total score and DROS recidivism subscale on different outcome measures of recidivism

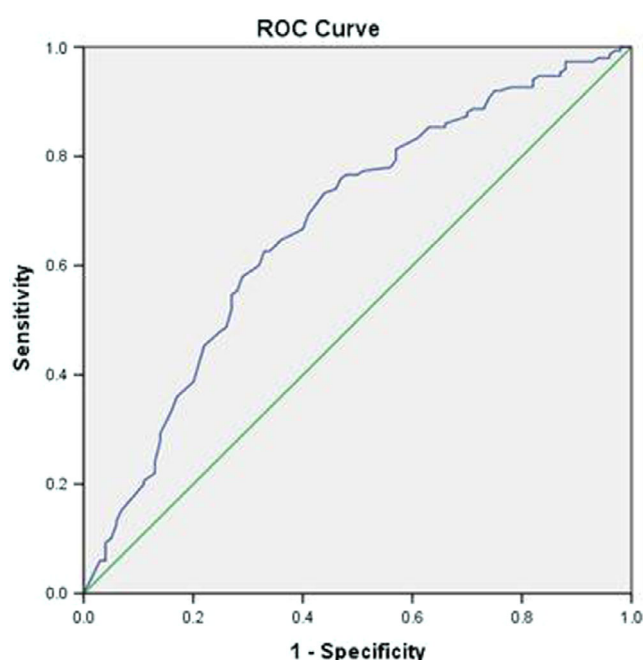|	DROS total score				DROS recidivism subscale			
	AUC	95% BI	SE	p	AUC	95% BI	SE	p
Recidivism (general)[a]	.58	.51–.65	.04	.04	.67	.61–.74	.04	.000*
Violence	.61	.52–.69	.04	.01	.71	.62–.79	.04	.000*
Violence minor[b]	.61	.49–.74	.06	.07	.69	.56–.82	.07	.002*
Violence serious[c]	.63	.54–.72	.05	.005	.74	.66–.82	.04	.000*
Sexual	.73	.58–.89	.08	.04	.70	.53–.87	.09	.07
Sexual minor[b]	.86	.78–.94	.04	.03	.86	.69–1.00	.09	.03
Sexual serious[c]	.67	.49–.86	.09	.19	.60	.44–.75	.08	.47
Other	.57	.49–.65	.04	.07	.68	.60–.75	.04	.000*
Other minor[b]	.58	.50–.67	.05	.06	.69	.61–.78	.04	.000*
Other serious[c]	.59	.50–.67	.04	.05	.69	.60–.77	.04	.000*

[a]Recidivism regardless of classification or severity.
[b]Sentence <4 year.
[c]Sentence ≥4 year.
*p < .003.

FIGURE 2 Receiver operating characteristics (ROC) curve of the DROS recidivism subscale on general recidivism

Using a backward stepwise logistic regression we created a subtotal score of DROS subscales to predict recidivism. The remaining subscales that were negatively related to recidivism were selected so that a higher score on that subscale was related to a lower probability of recidivism (a higher score on the DROS indicates less externalising problem behaviour). This resulted in a model with three subscales of the DROS that were significantly predictive of general recidivism: *Hostility*, *Impulsivity* and *Tendency to substance abuse*. A mean score of these subscales was calculated to create a DROS recidivism subscale.

Table 2 shows that the DROS recidivism subscale provides significant AUCs for general recidivism, violent recidivism (including minor and serious re-offences) and other recidivism (including minor and serious). This effect is large for violent recidivism and serious violent recidivism; for the other significant recidivism classifications, the effect is medium. See Figure 2 for an illustration of the ROC curve for generalised recidivism.

Furthermore, the predictive value of the existing subscale *Problematic sexual cognitions and behaviour* of the DROS on sexual recidivism was examined. This effect was significant and large for sexual recidivism with a minor offence (AUC = .88, 95% CI = .76–1.00, SE = .06, p = .03), a serious offence (AUC = .80, 95% CI = .55–1.00, SE = .13, p = .02) and sexual recidivism regardless of severity (AUC = .81, 95% CI = .63–.99, SE = .09, and p < .01). However, due to the low number of recidivists in terms of sexual recidivism (n = 3 for minor offence, n = 5 for serious offence and n = 7 in total) and the wide confidence intervals, these results should be interpreted with caution.

Finally, the predictive values of the HKT-30 were examined (see Table 3) in order to compare the predictive validity of this instrument with the DROS.

3.3 | Comparing AUC values

Using MedCalc we examined the differences in predictive values between the DROS and the HKT-30 (see Table 4). The results showed that the predictive value of the DROS total score is comparable to that of the HKT-30 sum score, clinical and future scale and clinical scale. For sexual recidivism with a minor offence, the DROS total score predicted better than the clinical and future scale of the HKT-30 (p < .003). There were no other differences between the DROS total score and the HKT-30, clinical and future scale and clinical scale.

The DROS recidivism subscale predicted general recidivism and other recidivism better than the HKT-30 clinical and future scale and the clinical scale. Additionally, the DROS recidivism subscale predicted other minor recidivism better than the clinical scale of the HKT-30.

TABLE 3 Predictive values of the HKT-30 (n = 142), clinical and future scale (n = 241) and the clinical scale (n = 241) on different outcome measures of recidivism

	HKT-30				Clinical and future scale				Clinical scale			
	AUC	95% BI	SE	p	AUC	95% BI	SE	p	AUC	95% BI	SE	p
Recidivism (general)[a]	.64	.55–.73	.05	.004	.56	.49–.64	.04	.10	.57	.50–.64	.04	.07
Violence	.66	.55–.77	.06	.005	.59	.50–.69	.05	.04	.60	.51–.69	.05	.03
Violence minor[b]	.65	.48–.82	.09	.07	.59	.45–.73	.07	.17	.63	.50–.76	.07	.04
Violence serious[c]	.72	.61–.83	.05	.000*	.65	.56–.74	.05	.002*	.65	.56–.75	.05	.002*
Sexual	.64	.36–.91	.14	.27	.70	.50–.90	.10	.07	.76	.58–.93	.09	.02
Sexual minor[b]	.83	.69–.97	.07	.11	.78	.69–.87	.05	.10	.84	.70–.97	.07	.05
Sexual serious[c]	.58	.28–.88	.15	.56	.66	.40–.93	.14	.21	.73	.50–.95	.11	.09
Other	.64	.54–.74	.05	.007	.57	.49–.65	.04	.09	.56	.48–.64	.04	.13
Other minor[b]	.63	.51–.74	.06	.04	.57	.48–.66	.05	.13	.56	.47–.66	.05	.16
Other serious[c]	.68	.57–.79	.06	.002*	.59	.50–.68	.05	.05	.58	.49–.66	.05	.10

[a]Recidivism regardless of classification or severity.
[b]Sentence <4 year.
[c]Sentence ≥4 year.
*p < .003.

	versus HKT-30 p	versus Clinical and future scale p	versus clinical scale p
DROS total score			
Recidivism (general)[a]	.85	.54	.70
Violence	.42	.48	.64
Violence minor[b]	.09	.31	.77
Violence serious[c]	.60	.64	.60
Sexual	.46	.68	.76
Sexual minor[b]	.06	.0005*[d]	.63
Sexual serious[c]	.51	.99	.52
Other	.87	.99	.62
Other minor[b]	.50	.69	.50
Other serious[c]	.86	.92	.54
DROS recidivism subscale			
Recidivism (general)[a]	.03	.0001*[e]	.0003*[e]
Violence	.06	.004	.008
Violence minor[b]	.09	.06	.24
Violence serious[c]	.56	.05	.07
Sexual	.53	.65	.32
Sexual minor[b]	.59	.61	.98
Sexual serious[c]	.90	.51	.28
Other	.05	.0016*[e]	.0004*[e]
Other minor[b]	.01	.002	.001*[e]
Other serious[c]	.42	.04	.008

TABLE 4 Comparison of predictive values between the DROS total score and DROS recidivism subscale (see Table 1) with the HKT-30, Clinical and future scale and Clinical scale (see Table 2) on different outcome measures of recidivism

[a]Recidivism regardless of classification or severity.
[b]Sentence <4 year.
[c]Sentence ≥4 year.
[d]Highest AUC: DROS total score.
[e]Highest AUC: DROS recidivism subscale.
*p < .002.

4 | DISCUSSION

This is the first study to investigate whether the DROS can predict recidivism in (forensic) clients with intellectual disabilities. We hypothesized that the DROS could predict violent recidivism, but that the HKT-30 would be better at predicting recidivism than the DROS because of the inclusion of static factors. The results showed that the DROS total score does not predict general, violent, sexual or other recidivism (including arson and property crimes without violence) better than chance. A DROS recidivism subscale predicted general, violent and other recidivism with medium to large effects. The subscale *Problematic sexual cognitions and behaviour* of the DROS predicted sexual recidivism with a large effect. Last, the predictive values of the HKT-30 and the DROS total score and DROS recidivism subscale are largely comparable.

A predictive value with a small effect may in practice be insufficient to reliably predict recidivism. Various studies into risk assessment instruments show a predictive value with a large effect, even in individuals with intellectual disabilities (for reviews, see Hounsome et al., 2018; Lofthouse et al., 2017; Pouls & Jeandarme, 2015). A medium to large effect is achieved with the DROS recidivism subscale, to predict general, violent and other recidivism. Using the subscale to predict recidivism thus appears to be better than the DROS total score, but research on the DROS recidivism subscale in an independent sample is needed to confirm this finding.

The subscale *Problematic sexual cognitions and behaviour* predicted sexual recidivism with a large effect. However, the number of clients who re-offended sexually was very low and the confidence intervals were very large, so that more research on this specific target group is needed. Commonly used risk assessment tools for sex offenders, such as the Static-99R and Stable-2007, have a comparable score between sex offenders with and without intellectual disabilities, and could therefore be an alternative for estimating sexual recidivism (see Delforterie et al., 2019).

In general, the comparative analyses in our study showed no significant differences in predictive value between the DROS total score and the HKT-30 for the present sample of forensic clients with intellectual disabilities. Although the differences are not significant, in a number of cases the absolute AUC values found for the HKT-30 (but not for the clinical and future or clinical scale) are higher than AUC values of the DROS total score, which implies that the DROS as a risk assessment tool for forensic clients with intellectual disabilities has no added value. This was as expected, because in the review by Lofthouse et al. (2017), instruments with static risk factors (such as the H-items of the HKT-30) predicted recidivism slightly better in a target group of people with intellectual disabilities than instruments with only dynamic risk factors. In the current study, however, the DROS recidivism subscale predicted slightly better than the HKT-30 in some cases. However, since the DROS recidivism subscale was created based on the best predictive value for recidivism in the current dataset, further research is needed to investigate whether this subscale also provides a good predictive value in other samples. In addition, the HKT-30 received an update in 2014 resulting in the HKT-R (Spreen et al., 2014) that showed an AUC of .78 for violent recidivism within 2 years and an AUC of .68 for violent recidivism within 5 years in a general forensic target group (Bogaerts et al., 2018). Further research is needed to determine whether the HKT-R is a better predictor of recidivism than the HKT-30 or the DROS in a target group of people with intellectual disabilities.

This study has strengths and limitations. Because prospective data were used, the results are more comparable with practice than with retrospective data. There was also sufficient power to look at different recidivism classifications (Bujang & Adnan, 2016), though the number of recidivists was on the low side for sexual recidivism. We additionally did a power calculation in R (power.diagnostic.test) with an expected sensitivity of .80, a power of .80, and prevalence of 40% recidivism. This resulted in an n of 39 cases (clients who re-offended) and 58.5 controls (clients who did not offend), which is less than our n of 100 cases and 150 controls. Calculating power using the same technique but with n of cases = 100, power was .997.

With regard to the recidivism data, we used data from JustID in which only convictions by the criminal court are included. It is possible that recidivism would be assessed more reliably if, for example, arrests would have been included. Moreover, in our analyses, we did not take into account that time-to-event is censored to the study period, meaning that recidivism is not fully observed for those who did not re-offend within the study period. As recidivism occurs relatively often in the first year (see Figure 1), we expect that most of those who did not re-offend within the study period of at least 4 years, will not re-offend after our study period. An explanation for the relatively often occurrence of re-offending in the first year may be that former forensic clients are more embedded in society (e.g., by having a permanent residence or not having a relapse into addiction) if they have been able to maintain themselves without recidivism in the first year after discharge. However, we cannot be certain that people will not re-offend after the study period, and therefore, in future studies, this should be considered. Last, there was no information available on clients who did not consent to the study. Therefore, results may be biased by those who agreed to participate having different characteristics to those who did not.

4.1 | Conclusion

The current study showed that the DROS total score could not predict recidivism better than chance, and a DROS recidivism subscale could predict general, violent and other recidivism with a medium to large effect. More research is needed among the target group of people with intellectual disabilities for sexual recidivism. Compared to the HKT-30, the DROS seems to have no added value for the purpose of risk assessment.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

M. J. Delforterie https://orcid.org/0000-0001-7987-4664
A. Turhan https://orcid.org/0000-0001-8923-3350

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.