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Risk and needs assessment for juvenile delinquents

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Chapter

11

General discussion

General discussion

Risk and needs assessment are essential to be able to refer juvenile offenders for the appropriate interventions (Andrews & Bonta, 2003, 2010; Andrews, Bonta, & Hoge, 1990). In the Netherlands, there are currently no structured and validated instruments available for conducting risk and needs assessment (Vogelvang et al., 2006). Not only in the Netherlands, but also internationally, the development and validation of risk and needs assessment instruments for adolescents are still in the very early stages (Welsh, Schmidt, McKinnon, Chattha, & Meyers, 2008). The limited validation research that is available suggests that improvements are needed, since the predictive value of most instruments available is insufficient (Schwalbe, 2007). For these reasons, the main objectives of this dissertation were as follows: 1) to establish the predictive validity of the Washington State Juvenile Court Pre-Screen Assessment (WSJCPA) in the Netherlands, 2) to examine whether the predictive value of the WSJCPA can be improved by modifying the scoring procedure, 3) to examine the (relative) importance of static and dynamic risk factors for recidivism, 4) to examine gender, ethnic and age differences in the extent to which risk factors occur (prevalence) and the importance of risk factors for recidivism (impact), 5) to examine differences between various types of sex offenders and non-sex offenders in the prevalence and impact of risk factors and whether the risk of general recidivism among sex offenders can be estimated in the same way as among non-sex offenders, 6) to increase the currently limited knowledge about promotive factors, and 7) using this knowledge to provide the building blocks for the national set of instruments to be used by the juvenile justice system (*Landelijk Instrumentarium Jeugdstrafrechtketen*, LIJ), or in other words, optimizing the way in which risk and needs assessment is conducted within the LIJ.

11.1 Summary of most important results

11.1.1 Predictive validity of the WSJCPA

The predictive validity of the WSJCPA in the Netherlands was found to be moderate, with an AUC of .63, which is in line with the AUC values identified in previous American research (Baglivio, 2009; Barnoski, 2004b; Orbis & partners, 2007). Modifications to the scoring procedure by means of CHAID analysis significantly improved the predictive validity to an AUC of .74, making it considerably better than most other risk assessment instruments for adolescents. In the modified scoring procedure only variables that *uniquely* contribute to the prediction of recidivism are included, meaning that significantly fewer risk factors have to be identified in order to obtain a satisfying prediction of recidivism.

11.1.2 Prevalence and impact of risk factors

Static risk factors (especially gender, age at first offense and the number of previous offenses) were generally stronger predictors of recidivism than dynamic risk factors. Risk assessment based on only static risk factors, therefore, resulted in a better prediction of recidivism than risk assessment based on dynamic risk factors only. A combination of static and dynamic risk factors did not result in a significant improvement in the prediction of recidivism compared to static risk factors alone. Only in the case of adolescents aged 12 to 13 years, the addition of dynamic risk factors lead to a significant improvement in the prediction of recidivism, as the predictive power of dynamic risk factors for 12- to 13-year-olds was significantly higher than that for adolescents aged 14 and above.

Dynamic risk factors that proved to be strongly related to recidivism primarily occurred in the domains of relationships (e.g., inability to offer resistance to and/or admiration for antisocial peers), attitude (e.g., a lack of respect for other people's property and/or impulsiveness) and aggression (e.g., the extent to which adolescents can control their aggression and/or the extent to which adolescents consider physical aggression to be an appropriate means of solving conflicts). In order to maximise the potential effect of interventions, it is important to focus on these domains. Moreover, it is important to take account of the differences between various groups of juvenile offenders, since there appear to be significant differences in terms of gender, age and ethnicity both in the prevalence and impact of dynamic risk factors.

11.1.3 Gender differences

Girls reoffended much less than boys, despite the fact that there appeared to be more dynamic risk factors and less dynamic promotive factors for girls. The accumulation of problems in the family domain is much more common for girls than for boys and these problems generally involve more serious issues, such as abuse and out-of-home placements.

In addition, gender differences were also identified with regard to the *impact* of risk factors on recidivism. For girls, risk factors in the family domain – such as abuse, running away from home, parents with judicial contacts, and parents with alcohol/drug problems – had by far the greatest impact on recidivism, whereas for boys these factors were of little or no significance in terms of recidivism. In the case of boys, risk factors in the domains friends, use of free time and school had the greatest impact on recidivism. Although these factors also predict recidivism in girls, they do so to a much lesser extent than the risk factors in the family domain.

The risk classification developed for girls showed that girls with a high risk of recidivism can be divided into three different groups, each facing different risk factors: 1. girls with delinquent parents, 2. girls who have been victims of abuse, and 3. girls who

repeatedly commit property offenses. For the girls in the first group, there are relatively often other risk factors within the family alongside delinquency, such as the use of alcohol/drugs by parents, neglect and out-of-home placements. The girls in the second group not only face relatively large numbers of risk factors in the family domain, but also in the other domains (friends, school and use of free time). For the girls in the final group, there are relatively few dynamic risk factors and the high risk primarily results from the presence of static risk factors, such as previously committed offenses.

11.1.4 Ethnic differences

The ethnic groups studied (Dutch, Moroccan, Surinamese, Turkish and Antillean adolescents) differed significantly from each other in terms of offense patterns, the prevalence of risk factors and the impact of these risk factors on recidivism. The Dutch relatively frequently committed public order offenses, the Moroccans property offenses without the use of violence, the Surinamese property offenses with the use of violence, the Turkish property offenses both with and without the use of violence and the Antilleans sexual offenses, property offenses without the use of violence and public order offenses.

Surinamese and Antillean adolescents faced by far the most risk factors, especially in the home situation, whereas Moroccan and Turkish adolescents faced the least risk factors. However, the latter may not be fully representative, since there may be a tendency among Moroccan and Turkish adolescents and their parents to withhold information about problems, for example as a result of issues relating to shame and/or honour, as previous studies have shown (Eapen & Ghubash, 2004; Stevens et al., 2003). This dissertation also revealed that Moroccan and Turkish offenders denied significantly more frequently to have committed the offense than Dutch adolescents: of the Moroccan adolescents, 48% denied having committed an offense, of the Turkish adolescents 31% and of the Dutch 15%. The literature also shows that Moroccan and Turkish parents are more often unaware of their children's problems (Junger, Terlouw, & Van der Heijden, 1995).

There were also significant differences in terms of the impact of the risk factors on recidivism. Among adolescents from a Dutch background, by far the most risk factors were related to recidivism (family, use of free time, school, friends and mental health), whereas only one or very few risk factors were related to recidivism among adolescents with a non-Dutch background. Among Moroccan adolescents, risk factors in the domains of friends, use of free time and school were related to recidivism; among the Surinamese and Antillean adolescents only the risk factors in the domain use of free time were related to recidivism and in the case of Turkish adolescents, only the family risk factors were related to recidivism, in particular family members with a history of contact with legal authorities.

11.1.5 Age differences

The level of recidivism proved to be dependent on the age of the juvenile offender, with recidivism at its lowest in early adolescence, peaking in middle adolescence and again diminishing in late adolescence. It should be noticed that the relationship between age and recidivism (the 'age-recidivism curve') is broadly comparable with the 'age-crime curve' (Farrington, 1986; Laub & Sampson, 2003).

During adolescence, differences were found in the prevalence of risk factors. There was an increase in the prevalence of risk factors with age in most domains (employment, use of free time, substance use, relationships and school). In the relationships and school domain, an initial increase was followed by a decrease from the age of 15 onwards. In the developmental model of onset, accumulation and continuity of risk factors (Loeber, Slot, & Stouthamer-Loeber, 2008), adolescence is considered to be a single stage, but it is possible to extrapolate from this model that exposure to risk factors from the family, friends and school domain reduces during adolescence. According to this model, the number of risk factors from the individual domain increases. The findings of this dissertation also show that the prevalence of a number of individual risk factors increases, such as substance use and unemployment. However, the prevalence of most individual risk factors (skills, attitude and aggression) appeared to diminish as age increases. This could be explained by the fact that adolescence is a period of social, emotional and moral growth (e.g., Cole, Cole, & Lightfoot, 2005). Although this development probably progresses less rapidly among juvenile delinquents, this could explain the decrease in the prevalence of risk factors in the individual domain (attitude, skills and aggression).

In addition, this dissertation showed that there are important age differences in terms of the *impact* of risk factors on recidivism. The impact of almost all dynamic risk factors, both in the social environment (school, family and relationships) and in the individual domain (attitude, skills and aggressiveness) decreased with age. Because this decrease was more prevalent in certain domains than in others, the relative importance of these risk factors changed: the risk factors in the family domain were most strongly related to recidivism at the onset of adolescence, whereas at the end of adolescence, risk factors in the domains of attitude, relationships and school were the most important. This represents a significant addition to the model developed by Loeber, Slot and Stouthamer-Loeber (2008), since this model provides information only about the exposure to risk factors at different ages and not about the importance of this (its impact) in terms of delinquency or recidivism.

11.1.6 *Differences between sex offenders and non-sex offenders*

There is very little research available that compares the risk profiles of various types of juvenile sex offenders with non-sex offenders. Existing literature in which comparisons are made is varied and often contains contradictory findings, due to methodological shortcomings like small sample sizes, lack of any adequately defined non-sex offender groups and ignoring the heterogeneity of juvenile sex offenders (Van Wijk et.al., 2005). Therefore, in this dissertation we examined the extent to which differences exist in the prevalence and impact of static and dynamic risk factors between non-sex offenders, misdemeanor sex offenders, felony sex offenders and child abusers. The prevalence of dynamic risk factors was significantly lower in sex offenders than in non-sex offenders. In addition, more serious sexual offenses were associated with a lower prevalence of dynamic risk factors. This applied to every risk factor in the use of free time, alcohol/drugs and attitude domains, and to almost every risk factor in the school, relationships, family, aggression and skills domains. In contrast, the impact of dynamic risk factors on general recidivism proved to be considerably larger among sex offenders compared to non-sex offenders. In other words, risk factors are less commonly found among sex offenders than non-sex offenders, but if they do occur, their impact on recidivism is much stronger.

11.1.7 *Assessing risk of general recidivism in juvenile sex offenders*

Risk assessment instruments developed for juvenile sex offenders are often unable to predict sexual recidivism or general recidivism (Viljoen et al., 2009; Viljoen et al, 2007). As juvenile sex offenders are much more likely to reoffend with a non-sexual offense rather than a sexual offense, we examined the extent to which the WSJCPA can be used to assess the general risk of recidivism among juvenile sex offenders. The predictive validity of the WSJCPA was studied separately among misdemeanour sex offenders, felony sex offenders, child abusers and female adolescent sex offenders. In general, the relationship between risk factors and recidivism was stronger within the different groups of sex offenders than among the non-sex offenders. As a result, the predictive value of the WSJCPA was significantly higher for the misdemeanour and felony sex offenders. The predictive validity for child abusers and female adolescent sex offenders was not significantly different from that of non-sex offenders. This means that the WSJCPA is a suitable instrument for estimating the general risk of recidivism among various groups of juvenile sex offenders.

11.1.8 *Prevalence and impact of promotive factors*

Previous research into promotive factors has mainly focused on the *onset* of delinquent behavior (Stouthamer-Loeber et al., 1993, 2002; Van der Laan et al., 2010). In this dissertation we examined the impact of a large number of promotive factors on

recidivism and compared this with the impact of risk factors. This comparison revealed that for most factors the impact of promotive factors was approximately as large as the impact of risk factors. This means that the effect on recidivism of reinforcing or increasing promotive factors is comparable to the effect of reducing risk factors. Dynamic *promotive factors* that are strongly related to recidivism occur in the domains of relationships (e.g., pro-social friends), attitude (e.g., respect for authority figures), school (e.g., attaching value to education and/or probably continuing or graduating from school) and skills (e.g., dealing with difficult situations). For the promotive factors as well, the impact at a young age (12) is significantly higher than that at a later age (14 to 16). In terms of risk assessment, the predictive power of instruments for predicting recidivism is largest when the instrument takes into account both risk and promotive factors.

11.3 Limitations

Some limitations of this dissertation need to be mentioned. Firstly, a number of the findings is based on a sample consisting of American adolescents. Future research should demonstrate to what extent these findings also apply to Dutch adolescents. However, some of the data were available for both Dutch and American adolescents, and the findings based on this data broadly correspond with each other. For example, the relative importance of different risk factors is the same for Dutch and American adolescents, as are the age differences. The expectation is, therefore, that most of the findings will also apply for Dutch adolescents. Another limitation of the American dataset is that the data were collected using the Washington State Juvenile Court Assessment (WSJCPA; full screen). This instrument is designed to be used by professionals working in the juvenile justice system to identify risks and criminogenic needs in juvenile offenders in order to be able to refer for the appropriate interventions, but not to provide an in-depth examination of promotive and risk factors. In addition, no data are available on the interrater reliability of the full screen. However, since the users of the full screen have been intensively trained, an extensive manual is available and quality assurance is an important part of the screening process, there is no reason to assume that the interrater reliability would be low. A second sample used in this dissertation consisted of juvenile offenders referred to the Council of Child Care and Protection. The collection of data for this sample was partly retrospective and made use of information previously collected with the help of the BARO (*Basis Raads Onderzoek* – Protection Board Preliminary Investigation). These data were therefore collected for a different purpose than academic research, which may have repercussions for its quality and completeness. A final limitation is that the risk and promotive

factors are measured only once, so it was not possible to examine whether the factors generally considered to be dynamic actually are dynamic.

11.4 Implications for clinical practice

The results of this dissertation have various implications for clinical practice. Firstly, the WSJCPA has been validated for use in the Netherlands and has been improved by means of a modification to the scoring procedure. This improvement not only involves an increase in its predictive power, but also saves time in the assessment process, since the number of questions that must be answered is significantly lower and questions that are relatively difficult to get answers to, such as those relating to sexual abuse and mental health problems, can be omitted without any loss of predictive power. This new and validated version of the WSJCPA has been in use by the youth probation service since October 2009 and by the Council of Child Care and Protection since March 2011. Secondly, this dissertation shows that the choice of an intervention should take gender, cultural background and age of a juvenile offender into account in order to maximise the potential effect of behavioral interventions. The first step in the referral for interventions is to perform needs assessment to identify the domains in which problems occur. Because of the high correlations of problems in the different domains, there will often be problems in several domains in the high risk groups. Age differences that must be taken into account when indicating interventions involve differences in the relative importance of dynamic risk and promotive factors. Based on these results, it is expected that the potential effect of an intervention at the age of 12 is greatest if there is a focus on risk factors in the family domain, at the age of 13 if there is a focus on risk factors in the relationships domain, and from age 14 if there is a focus on risk factors in the attitude domain. There are also gender differences in the relative importance of risk factors. For girls, risk factors in the family are particularly important. The likelihood of recidivism is low for most girls, despite the presence of many risk factors. The girls who are at high risk can be divided into various groups with specific problems, such as a history of abuse or delinquent parents, which therefore each require a different approach. In terms of ethnic differences, it is important to take account of the fact that for most adolescents from a non-Dutch background only one or a few risk factors relate to recidivism, which raises the question of the extent to which existing behavioral interventions are effective for these adolescents. For example, for Surinamese and Antillean adolescents, risk factors in the family domain are not related to recidivism, despite the fact that such problems frequently occur among these adolescents. This raises the question to which extent family-related interventions can achieve the desired effect on recidivism among these adolescents. Interventions generally considered

to be promising or effective are not necessarily effective for all groups of adolescents from a non-Dutch background. Among Moroccan adolescents, risk factors relating to friends have by far the greatest impact on recidivism, which means that interventions that directly involve the peer group are most likely to be effective. For Surinamese and Antillean adolescents, only problems in the use of free time are related to recidivism, which means it is important that interventions focus on these problems.

Thirdly, the results of this dissertation suggest the importance of early intervention, both in the social environment (school, family and relationships) and individual domain (attitude, skills and aggression). The impact of almost all risk and promotive factors is by far the largest in early adolescence and the same is therefore also the case for the potential effects of interventions aimed at these factors. The average decrease in the impact of the factors is 40% throughout adolescence and 25% between the ages of 12 and 13. This means that immediately after the 12th year, there is a strong decrease in the importance of the dynamic risk factors (with the exception of employment and use of free time). These findings imply that at the age of 12 it may still be relatively easy to exert an effect on recidivism, whereas significantly greater efforts will be required to achieve this at the age of 13.

Fourthly, the results of this dissertation show that dynamic risk factors have a relatively major impact on general recidivism among sex offenders. It is expected that the effect of interventions for sex offenders that deal with these factors on recidivism would also be relatively large. If, in addition to specific programs for sex offenders, behavioral interventions are used that are aimed at the dynamic risk factors most closely associated with general recidivism, it is possible that there will be a decrease not just in general recidivism, but also in sexual recidivism. Furthermore, present findings show that the WSJCPA is a suitable instrument for estimating the general risk of recidivism among different groups of juvenile sex offenders. Because risk assessment instruments developed especially for juvenile sex offenders are incapable of making a significantly useful prediction of both sexual recidivism and general recidivism (Viljoen et al., 2009; Viljoen et al., 2007), it is preferable to use the WSJCPA when assessing the general risk of recidivism in sex offenders.

Fifthly, this dissertation contributes to the so far limited knowledge about promotive factors and shows that for most factors the strength of the risk effect is similar to the strength of the protective effect. This knowledge is essential, because it provides empirical support for the 'Good Lives Model' (GLM; Ward, 2002; Ward & Gannon, 2006; Ward & Stewart, 2003). The GLM was developed several years ago as an alternative to the Risk-Needs-Responsivity model (RNR model). The GLM focuses on promoting the welfare of the delinquent and places the strengths and capacities of the individual in a central position. According to the GLM, the RNR model focuses too much on risks and provides insufficient guidance to motivate adolescents in order to continue

or sustain an intervention (Mann et al., 2004). In contrast to the RNR model, there is as yet little empirical evidence showing that the GLM is effective in reducing recidivism. The results of this dissertation suggest that interventions that focus on reinforcing or increasing promotive factors could potentially be just as effective as interventions that focus on reducing risks. Because a focus on reinforcing/increasing promotive factors is considered to be important for motivating adolescents and promoting therapy compliance (Ward, 2002; Ward & Gannon, 2006; Ward & Stewart, 2003), it deserves to be given at least as much attention as a focus on risk factors.

Sixthly, the results of this dissertation are important for the development of risk and needs assessment instruments and therefore form the building blocks for the national set of instruments for use within the juvenile justice system (LIJ). Because this dissertation has shown that risk assessment based solely on static risk factors achieves positive results at all ages, the risk assessment within the LIJ will make exclusive use of static data from police systems, such as previous records and the age at the first offense. The scoring procedure used for this risk assessment has been derived from the modified WSJCPA scoring procedure, which makes the predictive power of the risk assessment within the LIJ significantly higher than that of most other risk assessment instruments internationally used for adolescents (Schwalbe, 2007). The results of this dissertation have been used in the needs assessment of the LIJ to determine the relative weighting of the different risk and promotive factors, which are based on the strengths of correlations with recidivism. Items that are strongly related to recidivism are given a higher weighting than items that are less strongly related to recidivism. The LIJ is based on the RNR model. The risk principle is used to determine who will proceed on to the next phase, the needs principle is used to determine which behavioral intervention matches a young person's criminogenic profile and the responsivity principle is used to match the intervention to a young person's motivation, capabilities and context. Within the LIJ, the choice of an intervention that matches the young person's criminogenic profile is made by means of the 'behavioral interventions system', a method in which the indication criteria for behavioral interventions are matched with the adolescents' dynamic risk profiles (see chapter 8). The guidance to evidence based behavioral interventions is not solely based on the prevalence of problems, but also on the importance of these problems for recidivism. In this, gender and age differences are both taken into account. For example, alcohol problems at the age of 12 are given a significantly higher weighting than alcohol problems at the age of 16, and sexual abuse involving girls is weighted significantly higher than sexual abuse involving boys. An important component of the LIJ involves the development of a care needs assessment in which risk factors are identified that do not necessarily relate to recidivism (such as sexual abuse, low self esteem and internalizing problems), but which are important for the welfare of adolescents and therefore justify intervention.

Finally, this dissertation shows which dynamic risk and promotive factors are most closely related to recidivism for the various groups of juvenile offenders. This knowledge is important both for the development of new interventions and for improvements of existing ones. An assessment of the existing range of (provisionally) certified interventions based on this knowledge reveals a number of gaps in these provisions. For example, risk factors in the relationships domain are shown to be of major importance for recidivism, especially for Moroccan adolescents and juvenile offenders aged 13. However, there are currently no behavioral interventions available that specifically focus on dealing with peers. For Surinamese and Antillean adolescents, problems in the use of free time have been found to be the most important criminogenic factor, but also for this purpose there are currently no specific behavioral interventions available. The multimodal interventions currently available (MST, FFT and MDFT) all are family-oriented. Juvenile offenders, aged 12 to 17, are referred for these interventions, but this dissertation shows that other criminogenic factors are much more important from the age of 13 onwards. This means that a family-oriented approach would seem to be most suited for offenders at the onset of adolescence. A separate approach for girls would also appear to be important, since girls with a high risk of recidivism show specific problems, in which either a history of sexual abuse or delinquent parents plays a key role. Finally, the current interventions for juvenile offenders primarily focus on risk factors and much less on promotive factors. In view of the importance of these factors for motivation and therapy compliance (Ward, 2002; Ward & Gannon, 2006; Ward & Stewart, 2003), it is important to focus more strongly on promotive factors, both within existing interventions and in the development of new ones.

11.5 Recommendations for further research

One of the aims of this dissertation was to investigate whether the predictive validity of risk assessment instruments can be increased by modifying the scoring procedure, since the predictive validity of most instruments for adolescents is moderate. It was shown that the predictive validity of the WSJCPA significantly improved by modifying the scoring procedure and it also was shown that the number of questions can be reduced. In view of the considerable benefits this offers for clinical practice, it is important to investigate the extent to which these improvements can also be applied to other risk assessment instruments.

In addition, it is essential that future research be focused on identifying the important risk and promotive factors for various specific groups of juvenile offenders, including those in late adolescence and specific groups of adolescents from a non-Dutch background. The impact of risk factors has been shown to be very small for these

adolescents. In order to develop interventions that are also effective for these groups, more knowledge is required about dynamic factors that do play a role in behavioral change among these adolescents. For example, there may be specific risk factors that play a role within ethnic groups, that is, risk factors that are only important for specific ethnic groups, such as a low level of connectedness with society and the feeling of being discriminated.

The first experiences with the LIJ gained in the pilot regions shows that the RNR model may be insufficient for some juvenile offenders. These are adolescents with a high to very high risk of recidivism, but for whom very few or no dynamic risk factors are present. Among these adolescents, the high risk is associated with the presence of static risk factors, such as previously committed offenses. It may be the case that current behavioral interventions do not suit these adolescents, because there appear to be no dynamic risk factors on which such interventions can focus. This can possibly be explained by the fact that these juvenile offenders demonstrate 'adolescence-limited' behavior or delinquent behavior that is caused not so much by exposure to risk factors, but may actually be considered as more or less normative for adolescence as a phase of life, in view of its high prevalence (Moffit, 1993). Among these adolescents, recidivism is less a result of dynamic risk factors and more a consequence of situational factors (Moffit, 1993). An alternative explanation could be that the problems actually faced by these adolescents have not been effectively identified, as a result of the withholding of problems mentioned earlier or parents' unawareness of their children's problems. It is important that further research examines which mechanisms underlie this group's behavior and investigates which criminal law interventions or measures can best be applied to this group in order to reduce recidivism and fulfil care needs.

Finally, the LIJ of course requires validation research in order to establish both the reliability and validity of the instruments. The development of the LIJ is partly based on findings from American research, and Dutch validation research should reveal the extent to which these findings apply to the Dutch situation as well. The predictive validity can be examined over several years when the Dutch recidivism rates are available.