The Development of the Active Risk Management System

Abstract

This review paper details the development and implementation process of a risk management tool that includes the assessment of static and dynamic factors, as well as factors that are both risk related and protective. ARMS is a tool used to help criminal justice practitioners as they work to support the safe reintegration of those with sexual convictions back into the community. The tool was developed for use by the Police, Probation and Prison Services across England and Wales and this paper outlines the following: (a) the process adopted by the development team in designing the tool, (b) the theoretical principles considered and adopted by the team, and (c) a summary of the early evaluation and recommendations made. This paper concludes with some further recommendations for both the developers of the tool as well as for the Police Service in England and Wales.

Keywords: Risk Management, Strengths Based, Sex Offenders, Policing
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1. Introduction

The introduction of the Sex Offender Act 1997 began with what could be argued as a significant cultural shift in policing across England and Wales. While the Act introduced a lawful obligation on certain individuals post-conviction and caution, to ‘register’ with the police, its intention was more than to introduce a process of mere administration (Brain, 2010), indeed, these requirements were later strengthened following the introduction of the Sexual Offences Act 2003. The introduction of the Criminal Justice and Court Services Act 2000 imposed further statutory requirements for the Police and Probation Service to collaborate in the assessment and management of sexual and violent offenders. The introduction of Multi Agency Public Protection Arrangements (MAPPA) and Multi Agency Public Protection Panels (MAPPP) followed (Harrison, 2011). These arrangements were consolidated further by the Criminal Justice Act 2003 whereby, the Prison Service joined the Police and Probation Service as the Responsible Authority for MAPPA and a host of other agencies required as agencies with a duty to co-operate (Thomas, 2010). MAPPA requires agencies with responsible authority such as the Police to a) identify people who require MAPPA (these include sexual and violent offenders); b) share relevant information about such people with appropriate agencies; c) assess their risk of serious harm; and d) manage their risk. Arguably, over the last twenty years, the policing of people with sexual offences has shifted from a regime of surveillance to a regime of supervision (Brain, 2010).

In an effort to provide supervision and direct specialist resources to the management of people convicted of sexual offending; the police along with their criminal justice partners have historically used the Risk Matrix 2000 (RM2000) assessment (Hanson and Thornton, 2000). RM2000 is a statistically derived risk assessment tool, used for adult males convicted of a sexual offence. It has become the industry standard across the criminal justice system in the UK, but in particular with the Police, it has offered direction for the coordination of resources. RM2000 scoring is undertaken in two stages and against a number of variables. Stage one includes the rating of three items: age,
number of sexual sentencing appearances, and number of criminal sentencing appearances. Points are awarded to these items and the offender is categorized into one of four risk categories i.e. low, medium, high or very high. Stage two of the process requires the scoring of four aggravating factors including: sexual convictions against a male, a stranger, the offenders’ marital status and convictions for non-contact sexual offenses. Where any two of these aggravating factors are present, the risk categorization is raised one level, if all four are present the risk categorization is elevated by two levels (Thornton, 2007).

In an effort to adhere to the new supervision regime, and set against national Guidance on Protecting the Public (Association of Chief of Police Officers, 2010), RM2000 risk categories became a framework for the police to guide the periodic scheduling of home visits of those living in the community and with sexual offences. This guidance prescribes those assessed with a Low RM2000 classification, to be visited at a minimum every twelve months; Medium RM2000 classification require visits every 6 months, High RM2000 classification require visits every three months and Very High RM2000 classification require monthly visits.

While this framework has been useful in terms of scheduling and allocating resources to specific clients, there is no evidence to support why the timetabling of home visits in this way is necessary or has an impact on reducing the risk a client might pose. Indeed, from a supervision perspective, such static actuarial classifications are clinically limited. This is because static factors are historic in nature, for example a person’s age at the time of their first offence or the numbers of offences they have committed are factors that cannot be changed through intervention. Whereas, dynamic factors such as substance use, anti-social attitudes, social networks etc. can be changed (for an in-depth review of the differences between static and dynamic risk factors and their clinical application, see Craig et al. (2008) or Beech and Ward, (2015).

It is of concern therefore, that the regime for policing those with sexual offences relies only on the assessment of a small number of static factors that cannot be influenced through supervision.
Supervision should be driven by the dynamic factors presented by the client, not only to help predict the likelihood of recidivism but to also support practitioners in developing effective risk management strategies (Ward and Fortune, 2016). Indeed, the criminological and forensic psychology literature indicates, that criminal justice practitioners ought to engage in supervision regimes that respond not only to the risk a client presents but also their needs. The Risk Need and Responsivity Model (RNR) developed by Andrews and Bonta (2010) state that the allocation of resources and intensity of treatment should be led not only by risk, but also the deficits clients face, practitioners should manage needs in a way that responds to the unique learning style and motivation levels of the individual. Likewise, the Good Lives Model (GLM) developed by Ward and Stewart (2003) assert that a more strengths based approach to working with clients convicted of sexual offences is far more effective and indeed complementary to the RNR approach. That is, by helping people develop a capacity to achieve personal goals and access meaningful opportunities in their life; their risk of reoffending is inevitably reduced as they begin to strive to live good lives.

Recognising this disparity between police practice and academic knowledge and the lack of a nationally agreed dynamic assessment framework across the criminal justice agencies; a team of NOMS practitioners, academics and police practitioners formed in 2009. They aimed to develop a framework tool that would help practitioners assess dynamic factors while incorporating actuarial evidence; assess the risk and strengths of clients; and support the process of risk management planning of clients with sexual convictions. The team aimed to develop a tool that would serve the needs of the Police, Probation Service and Prison Services in England and Wales. The team developed the Active Risk Assessment System (ARMS), which has been subsequently implemented across all police areas in England and Wales. This paper is therefore written in retrospect of tools’ implementation, and outlines the following: (a) the process adopted by the development team, (b) the theoretical principles considered and adopted, and (c) a summary of the early evaluation and recommendations made. This paper also concludes with some further recommendations for both the developers of the tool as well as for the Police Service in England and Wales.
2. Method used to develop the tool

2.1 Development team

The development team comprised of academics and practitioners with extensive expertise in the assessment, treatment and management of people with sexual convictions. Included in the team were three senior representatives from the National Offender Management Service (NOMS) and an experienced police professional (the first author of this paper MB). In the early development phase the team sought advice from Professor David Thornton, in relation to the Risk Matrix 2000. The team met on regular occasions over a period of four years. Although not part of the development team, researchers from the NatCen Social Research Crime and Justice Team (Nicholls and Webster, 2014), an independent social research organisation, carried out preliminary research of the tool.

2.2 Identification of risk factors

To consider relevant risk factors for the ARMS tool, the development team looked to the seminal piece of work carried out by Mann et al. (2010). In their review of risk factors related to sexual offending, Mann et al. proposed that in order for risk assessment, treatment and management of people with sexual convictions to be effective, risk factors ought to be empirically associated with sexual recidivism. In an effort to classify which risk factors might be deemed as psychologically meaningful for people with a sexual offending history, Mann et al., set criteria to determine factors associated with recidivism were that each factor had to: (a) have a plausible rationale that the factor causes sexual offending and have (b) strong evidence that it predicts sexual recidivism. In their review they found: 12 factors to be ‘empirically supported risk factors’; six factors to be ‘promising risk factors’; four factors to be ‘unsupported but with interesting exceptions’; and a number of ‘worth exploring’ and ‘not related to recidivism’ factors. For the purpose of the development of the ARMS tool, the development team determined that only those identified in the Mann et al. study identified as being ‘empirically supported risk factors’ would be included in the ARMS tool. Thus twelve factors were selected. While each factor is not discussed in detail here, a summary is
provided in Table 1. For a more comprehensive review of each risk factor please see the original Mann et al. (2010) paper.

[Insert table 1 about here]

The development team extended their search beyond those psychologically meaningful factors to include criminological theory too. Thus, when considering situational factors related to crime (Clarke, 1997) and in particular to sexual offending (Smallbone et al., 2013), developers recognised the importance of ‘situation’ when assessing a client. In particular ‘situation’ may provide both (a) the opportunity to access or groom a victim(s) and thus re-offend, and (b) it might also serve as a triggering influence, heightening the desire to offend, through for example emotional cues, social pressures and other stimuli (Wortley and Smallbone, 2014). The factor ‘Opportunity or Victim Access’ was therefore also added as a viable risk factor for the ARMS tool.

One of the limitations of this process is that the development team found a total of 13 risk factors. While not an issue in itself, the team felt when applied to practice, this volume of items might be too onerous. Therefore, without compromising the integrity of all factors identified, the development team re-organised these 13 risk factors through a process of collapsing or consuming certain factors into one. This made a final list of seven risk factors which were felt to be more manageable for practitioners during the assessment process. Table 2 details the mapping process between identified risk factors and ARMS factors related to risk.

[Insert Table 2 about here]

2.3 Identification of protective factors

Very little literature exists by way of empirical examination in terms of which protective factors reduce the risk of recidivism in people with sexual convictions (Farmer et al., 2015). It is worth noting however that since the development of the ARMS tool, de Vries Robbé et al. (2015) published a paper exploring the protective factors of those with sexual convictions. Yet, even with this
additional work, the volume of empirical evidence examining protective factors and their relationship to sexual recidivism is still in its infancy and at the time of the ARMS development the same rigorous approach adopted by Mann et al. (2010) to risk factors, could not be used to review the literature of protective factors. Instead, the developers turned to the desistance literature, in an effort to determine what protective factors might be clinically helpful for practitioners to work with. Desistance is a complex process and can best be described as the maintenance of the abstinence from crime (Maruna, 2001). Desistance like any process requires continual change (Farrington, 2007) and does not operate in isolation but interacts with internal and external factors, and is influenced by structural, social and cultural contexts (Healy, 2010). Thus, the development of a comprehensive, meaningful and empirically sound tool of protective factors is contextualised within the boundaries of available knowledge.

Defining protective factors is not without its difficulties, indeed the literature sees a variety of definitions to explain what a protective factor is (Farrington et al., 2016). Protective factors have been described as a mirror image or polar opposite of a risk factor, or those that buffer against the effects of a risk factor thus mitigating the strength of the risk (Tharp et al., 2013). However, de Vries Robbé et al. (2014) describe that protective factors must be able to “exist as definable propensities or manifestation thereof in their own right, rather than being no more than the absence of a risk factor” (p. 19). As in the previous risk factor section, each protective factor will not be discussed in detail here, but instead a summary of each factor considered by the development team is documented in Table 3.

The development team thus, repeated the same collapsing or consuming process for each of the seven protective factors listed in Table 3 developing five ARMS protective factors. Table 4 details the mapping process between identified protective factors and ARMS protective factors.
3. **Assessment Pathway**

The ARMS tool is not just a risk assessment tool but aims to be a comprehensive risk management system. It therefore incorporates a number of key stages required by the assessors. Having identified which risk and protective factors were to be included in the tool, the development team created a risk management pathway to help support assessors apply the tool in practice. Figure 1 charts the five key stages of the process to completing an ARMS assessment. Following which each of the five stages are briefly discussed.

3.1 **Stage One: Rating ARMS Risk and Protective Factors**

The development team opted to require assessors to make a subjective professional evaluation of each factor by determining the urgency to which each factor needs attention or intervention by rating factors in terms of their priority. It was felt this terminology be a more clinically meaningful rating system, unlike other risk management frameworks whereby assessors are required to provide a numerical ‘score’ of the presence of strength of factor. This features in other tools where each item is scored between 0-2 such as: the Offender Assessment System (OASys) (Howard and Dixon, 2012); RM2000 (Thornton, 2007); and Stable and Acute 2000 (Hanson and Harris, 2000). Instead the ARMS rating scheme requires the assessors to determine the level of priority in terms of action needed by classifying each factor as being a high, medium, or low priority. To support their rating assessors are required to detail their rationale for reaching the priority decision. The use of narratives is a major component of the ARMS framework as it allows the assessor to set out, in real time, why certain conclusions were drawn and why certain actions were necessary. This not only helps provide rich description for understanding of the case but also provides a useful and defensible time-line through which assessors can measure progress and document decisions.
3.1.1 Defining Priority

Developers identified a need to clearly define each rating level so that when considering each factor individually, assessors would correctly determine the appropriate level of priority and action needed for each factor. Each classification is defined as follows:

- **High Priority** is an indicator of there being a significant presence of the factor. In terms of risk of opportunity for example this might mean an imminent likelihood of offending. This priority rating requires urgent activity to be carried out in the short term, it might even be necessary to ‘act now’ to prevent further offending. With regard to protective factors this rating indicates that there is a significant deficit in the person’s life and requires urgent engagement, examples might include a sudden collapse in relationships, loss of employment, relapse of substance use etc. Actions to be considered would include arrest, recall, information sharing or intervention etc.

- **Medium Priority** indicates a likelihood of offending if the factor is left unchecked or unresolved as risk may increase over time. Therefore this priority rating indicates a more medium term action is needed perhaps over the next three months. With medium priority protective factors this might suggest work is required to support the client in attaining a particular goal, perhaps they have the competency but not the opportunity in their lives to bolster this particular factor.

- **Low Priority** indicates that there is no concern at the moment, it suggests that an on-going monitoring activity is required whether this be a risk or protective factor.

- **Unable to Rate** indicates that the assessor has insufficient information available to arrive at a rating as described above. In such cases the assessor sets out how this is to be resolved including timescales for completion and a priority rating indicating the level of urgency required for this factor.
The assessor should strive to reach a sense of balance and proportionality between actions and priority, as it is possible to have a number of actions identified for one particular factor each requiring a differing sense of urgency. Where this occurs the highest action priority rating will inform the overall priority rating for each given factor. Each factor rating is drawn together in a checklist beginning the process of identifying the overall ‘ARMS Priority Assessment’.

3.2  

**Stage Two: ARMS Overall Priority Assessment**

This stage requires assessors to give an overall assessment of the priority of risk and need. Following the completion of individual priority rating, assessors continue to use their professional judgment and with the aid of the checklist of all factors, determine an overall priority rating for their client. It is possible that certain factors may well out-weigh others; this is acceptable as long as assessors are able to justify and evidence their rationale for such decision.

3.2.1  

**Defining ‘Overall’ Priority**

To assist assessors in the completion of this stage of the tool, the development team defined priority ratings as follows:

- **Very High Priority** would indicate that there were an overwhelming number of individual factors identified as a High Priority. However, there may be cases where the majority of factors have been rated as low or medium priority, but there is clear evidence that in one factor, such as ‘Opportunity’ the client is actively seeking out opportunities to offend. In such cases the assessor is encouraged to consider ‘weighting’ the individual factor accordingly and to consider rating the ARMS assessment as Very High. This rating indicates there is evidence of an imminent likelihood of further sexual offending and requires an immediate action and response to reduce the imminent nature of the risk. This will likely involve an intensive ‘wrap around’ style of engagement with the offender until further assessment indicates the level of risk is reduced.
• **High Priority** indicates that although some ratings may vary there is a predominance of factors rated as High Priority. Protective factors are either minimal or require considerable maintenance and support. Action is likely to involve regular engagement with the client until further assessment indicates the level of risk has reduced.

• **Medium Priority** indicates that although some ratings may vary a predominance of factors rated Medium Priority suggest a stable and balanced assessment between risk and protective factors. There are no grounds for an active investigation or immediate action but some targeted activity and periodic engagement with the client will be necessary to reduce the risk further and enable ongoing review of the assessment.

• **Low Priority** indicates that although some ratings may vary a predominance of factors are rated as Low priority. This suggests there is minimal evidence of a risk of further sexual offending with a dominance of stable protective factors evident. While active investigation is considered unnecessary the case would benefit from further engagement with the offender in line with national minimum standards so that the ongoing review of the assessment can be maintained.

Having reached an Overall Priority Rating, assessors reach stage three of the process and are required to complete a ‘General Level of Risk Management’.

### 3.3 Stage Three: General Level of Risk Management

The fundamental principle of the ARMS Framework is that it includes an assessment of the dynamic factors related to risk and protective factors. However, it would be wrong to ignore or set aside actuarial principles of risk assessment given that actuarial tools tend to be more reliable than clinical judgement when predicting recidivism (Craig et al., 2009). While actuarial tools help determine recidivism classifications, they only focus on historical risk factors and are therefore meaningless for individual clinical treatment. Therefore risk management tools ought to utilise both clinical and actuarial methods, incorporating risk and protective factors. Indeed, Craig et al. (2008) suggests it
might be more clinically helpful to start with a dynamic risk assessment and then adjust the overall rating by considering static and historic factors through the use of an actuarial risk tool such as the RM2000. It is this approach that was adopted by the developers of the ARMS tool.

This stage first begins with assessors adjusting the ARMS Overall Priority rating by considering the clients RM2000 classification. The combining or aggregation of both actuarial and dynamic assessments is a challenge for even the most experienced of practitioners (Beech et al., 2009), developers chose not to postulate a prescriptive formula but rather allow the assessor to consider their findings identified in the ARMS Priority assessment and to adjust or override the actuarial classification. For example an assessor might assess their client has having a Very High Overall ARMS Priority rating, this might be due to the client having no protective factors and a number of risk factors present; yet they might have a Low RM2000 Classification. This third stage in the process allows the assessor to either decrease the Very High ARMS Overall Priority rating, thus reducing the level of actions and resources needed or override the Low RM2000. Table 5 provides a suggested guide for assessors when combining both the ARMS Priority Rating and the RM2000 classification.

[Insert Table 5 approx. here]

After reaching the General Level of Risk Management, officers are now able to develop a case formulation where the risk management strategy would clearly set out how this level of risk ought to be reduced further or maintained.

3.4 Stage Four: Risk Management Strategy

This fourth stage requires assessors to draw on final priority ratings and develop a comprehensive and systematic risk management strategy. The process for compiling the strategy involves assessors adopting a case formulation approach. Case formulation has been described as the way of bridging the gap between risk assessment and risk management (Ward and Beech, 2006). Essentially, the ARMS case formulation is structured around five steps.
• Step One: The assessor summarises the case identifying its salient features.

• Step Two: The assessor records the variety of sources from which their evidence has been gathered from. This is likely to include: client interviews, case files, treatment reports, information from partnership meetings etc.

• Step Three: Based on the information of the case, the assessor details a realistic risk scenario that might occur prior to the next review. This helps assessors make sense of the clients past and present circumstances in an attempt to predict a plausible future for the case. Inevitably risk assessment involves a degree of uncertainty so it is possible to predict any number of realistic scenarios the case is likely to follow through which the risk management strategy must take account of.

• Step Four: The assessor completes the risk management strategy. Here a strategy is tailored to the scenario or scenario’s identified. It is described as the ‘how’ of risk management planning. It requires assessors to document clearly the risk/need and evidence how the risk/need will be addressed. Assessors will note any potential barriers to achieving the desired outcome.

• Step Five: The assessor sets out specific actions required to implement the strategy. Actions must be SMART: Specific Measurable Achievable Realistic and Time bound. They must be drawn and related to each identified risk and protective factor, the work must logically and meaningfully address the particular risk associated. The strategy must include detail of the review period for example, who will do the next review and when.

3.5 Stage Five: Supervision Sign Off

The final stage in the ARMS process is for the assessment to be reviewed and given management oversight by the dedicated manager who either ‘signs off’ the assessment, deeming it to be complete, or gives feedback to the assessor with action needed. Following amendments the manager reviews the document again and can sign the document as complete.
4. Testing ARMS

4.1 Pilot Test and Inter Rater Reliability

Following the tools’ development, the development team commissioned independent researchers to evaluate both the implementation and application of the tool by probation and police staff, along with an inter rater reliability measure to assess the consistency of ratings between different assessors (Nicholls and Webster, 2014). The study is briefly described here and a summary of the findings also noted.

The pilot study adopted a case study design and was carried out in 2012. Participants involved in the pilot included probation officers from three Probation Trusts and police officers from two Police Forces (n=20), who used the tool as part of their supervision of 37 clients convicted of sexual offending. Researchers visited each site and carried out in-depth interviews with nine officers. To assess the reliability of the tool Nicholls and Webster (2014) asked officers to assess two hypothetical case studies comparing their assessments to the “gold standard” as rated by the development team.

The evaluation of in-depth interviews following the pilot study report participants feeling that: training was useful and engaging; that joint-working arrangements between Probation and the Police were preferred; officers felt the case examples in the training were too compliant and therefore not realistic enough; while the tool was clear it was too lengthy and needed streamlining; and officers felt it was not appropriate for regular assessment. The evaluation of the tools reliability found greater consistency with the lower risk cases but inconsistency between assessors in higher risk cases, in particular officers struggled to rate and promote protective factors. Nicholls and Webster (2014) were able to make some useful recommendations to the development team regarding their findings. These included: Training should continue to be jointly delivered by Probation and Police staff; the ARMS manual needs updating with clear examples for rating factors and guidance on carrying out an ARMS interview; ARMS should be streamlined where possible and
integrated into existing systems; larger scale pilot testing is needed along with a second inter rater reliability exercise.

5. Conclusion

The development and implementation of a risk management tool that includes static and dynamic factors, as well as factors that are both risk related and protective; is an encouraging step towards the safe reintegration of those with sexual convictions back into the community. The aim of the ARMS development team was to produce a tool with some clinical meaning and utility to be used by the Police, Probation and Prison Services across England and Wales. While this has been partly achieved, much more work is needed. First, while the tool is being used by all Police and Probation areas across England and Wales, it is yet, to be fully incorporated into Prison practice. Second, findings from the Nicholls and Webster (2014) pilot study indicate further research is needed to ensure the tool can be held up to the rigours of inter rater reliability. Third, while the tool is based on empirical evidence, it has yet to be tested in relation to its effectiveness at reducing recidivism. In addition, we also suggest an evaluation of the quality of ARMS Risk Management Strategies. This ought to include an evaluation of the quality and presence of strategies used to tackle factors identified by assessors, as well as a relationship with risk reduction; an evaluation of the supervision of ARMS assessments is also needed; as is a greater understanding of the experiences of assessors managing cases outside of a pilot testing environment; currently only the Police and Probation Service have embraced the tool nationwide and analysis of some of the challenges faced by other agencies is needed. Finally, an understanding as to how this process is experienced for clients with sexual convictions, particularly in relation to how they feel regarding the inclusion of protective factors as part of the formal risk management process is also needed.
References


