

# The Structural Properties of the Extremism Risk Guidelines (ERG22+): a structured formulation tool for extremist offenders

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## 1. Summary

This study explores the structural properties of the ERG22+ formulation tool (Her Majesty's Prison and Probation Service, 2011) which is used in the management of extremist offenders by the criminal justice system of England and Wales. The ERG22+ was developed from case studies and the limited theoretical evidence that was available at the time in this area. As data has now been gathered on convicted extremists through the ERG22+, the structure of the tool can be examined as part of a validation process.

The formulation tool is made up of 22 factors organised into three domains; Engagement, Intent and Capability. Each factor and domain is assessed and recorded as being 'strongly present', 'partly present' and 'not present'. This allows the construct validity and the internal consistency reliability of the ERG22+ to be examined statistically.

One hundred and seventy one ERG22+s were included in the analysis. All had been completed with convicted Islamist extremists. Multidimensional scaling analysis was carried out to identify any potential underlying structures which may inform the development of the tool. The internal consistency reliability of the ERG22+ was examined using Cronbach's alpha.

The study found the ERG22+ shows promise as a risk and need formulation tool for extremist offenders, which could be developed further in light of the findings. Five domains were suggested from the analysis (Identity and External Influence, Motivation and Ideology, Capability, Criminality, Status and Personal Influence), which make theoretical sense. However, two factors did not spatially cluster into domains and had some ambiguity (Mental Health and Excitement, comradeship and adventure). These two factors would benefit from further refinement and improvement. The internal consistency reliability analysis found good overall consistency for the tool but low consistency on some domains, especially those with few items. The internal consistency reliability of the ERG22+ is likely to improve if these domains are expanded to include more factors.

The study had a number of limitations. Only Islamist extremists were included in the analysis so it may not be possible to generalise the findings to those who support another group, cause or ideology. The women in the study also represented a small group and may have differing motivations to men. Further research is needed to examine the properties of the ERG22+ with those supporting differing groups, causes or ideologies and with a sample of female offenders. The inter-rater reliability between assessors should also be examined to

determine the levels of agreement. Further refinement, development and validation of the measure should also be carried out as our understanding of extremist offenders expands and evolves. The analysis carried out in this study should be seen as the first step in this validation process.

### 2. Introduction

There are an increasing number of individuals being convicted of extremist offences who are entering the criminal justice system. Government statistics indicate that the number of prisoners detained for terrorism-related offences has continually increased since data recording began in 2009 (Home Office, 2018). It is important to ensure these individuals are carefully managed by the criminal justice system, with effective assessment and intervention approaches to understand their needs, prevent reoffending, and successfully reintegrate them into society (Pickering, 2012). However, there is still limited evidence of what assessments and interventions are most effective for extremist offenders (Dean, 2014). What is known is that the motivations and the circumstances in which extremist offenders commit offences are varied and complex (Dean, 2014). Knowing more about the personal and contextual circumstances, as well as individual motivations for offending is likely to assist in determining the appropriate interventions and management actions needed to reduce their risk of committing further extremist offences (Borum, 2015). This is where understanding and assessing their risk becomes of great importance. The field of risk assessment has developed in other criminal domains, in order to allow better prediction of future reoffending and to help inform sentencing decisions, risk management and supervision after conviction (Darjee & Russell, 2012). However, risk assessment in the context of extremism is far less developed.

Risk assessments within the general offender population have historically followed two approaches; clinical or actuarial. Clinical risk assessments tend to be unstructured and rely upon the professional judgement of the individual assessor (Monahan, 2012), but have been criticised for their subjectivity and lack of inconsistency (Quinsey, Harris, Rice & Cormier, 1998). Actuarial approaches involve the statistical calculation of risk using known risk factors to predict offending. While often considered to be more statistically reliable and valid, they only allow consideration of a set of recorded predetermined risk factors to be assessed at a group level. They do not allow individual and situational factors to be considered. An actuarial approach for risk assessment with extremists is not possible as the evidence around extremist offending is not sufficiently well developed and the base rate for such activities too low, so statistical calculations cannot be made (Sarma, 2017; Scarcella et al, 2016). The current preferred approach for assessment with extremist offenders is Structured Professional Judgement (SPJ) where a minimum set of factors are considered systematically but are not combined to produce an overall risk score. It allows the collation of information to be used for both assessment and management of the individual (Sarma, 2017) and has the flexibility to consider the individual context (Monahan, 2012; Skeem & Monahan, 2011).

A number of assessment tools have been developed specifically for use with extremist offenders (Scarcella, 2017). However, few of these tools have been statistically tested for reliability and validity. It is fundamental that an assessment has good validity and reliability (Kline 1999) in order for it to help inform decisions that will have great impact on those assessed. Validity is the extent to which an instrument measures what it is intended to measure, typically described in terms of construct validity. Reliability is also central to any assessment. Internal consistency reliability is a measure of how well several items on an assessment measure the same construct or idea and therefore produce similar scores (Kline 1999; Nunnally 1978). Both reliability and validity need to be established if an assessment is to be considered useful and meaningful and are considered to be the first steps in a thorough validation process (Salo, Laaksonen & Santtila, 2016; Tavakol & Dennick, 2011).

This study examines the construct validity of one of the risk and needs formulation tools for extremist offenders, the ERG22+ (National Offender Management Service, 2011). To date, there has been no study of the psychometric properties of the ERG22+, which has resulted in criticism of the measure given its widespread use (Ross, 2016; Scarcella et al, 2016).

Two sets of analysis were carried out as part of a study of the structural properties of the ERG22+. One examined the construct validity using multi-dimensional scaling analysis (MDS) and one using principal components analysis (PCA). However only the MDS analysis is reported upon in this report. This is because the two approaches produced broadly similar findings and the MDS approach offered a more flexible, non-parametric method of determining a structure within the ERG22+, which was considered more appropriate for the data. This approach meant no assumptions needed to be made about the possible number of dimensions, the items within the tool or their relationship with each other. However a fuller description of the two approaches and their results can be found in the following publication; Powis, B., Randhawa, K. & Bishopp, D. (2019) An examination of the structural properties of the Extremism Risk Guidelines (ERG22+): a structural formulation tool for extremist offenders. *Terrorism and Political Violence*. DOI:10.1080/09546553.2019.1598392.

#### 2.1 ERG22+

ERG22+ has been in use by HMPPS (formerly NOMS) in England and Wales since 2011; with all extremist offenders convicted under Terrorism legislation having been subject to the ERG22+ since September 2011. The ERG22+ is a revised version of an earlier risk formulation measure, the Structured Risk Guide (SRG) (Webster, Kerr and Tompkins, 2018; Lloyd & Dean, 2015). A pilot study of the SRG concluded that this approach offered a promising method of assessing convicted extremists and made recommendations for further

improvement of the measure which informed changes and refinement to what is now known as the ERG22+ (Webster, Kerr and Tompkins, 2018; Lloyd & Dean, 2015).

The ERG22+ is intended for use with people who have been convicted of any extremist or extremist-related offence and is completed by qualified forensic professionals, who have received training in its administration (see Lloyd & Dean 2015 for a fuller description).

The ERG22+ adopts an SPJ approach and analyses the personal and contextual factors and circumstances that contributed to an individual's engagement in an extremist group, cause and/or ideology, and offending. The assessor considers the presence and significance of 22 factors, their impact on risk and need issues and how these may be addressed as part of their management. Consideration is also given to whether any of the factors act protectively. The 22 factors are organised into three domains, Engagement, Intent and Capability. The Engagement domain refers to factors that may account for an individual's involvement and growing identification with an extremist group, cause and/or ideology. The Intent domain refers to those factors evidencing an individual's readiness to support and/or use illegal means, and/or violence to further the goals of an extremist group, cause or ideology. The Capability domain refers to those factors that enable an individual to cause harm, offend or perpetrate violence on behalf of a group, cause and/or ideology. The + suffix accounts for any other factor/s that may have had a significant influence. See Appendix A for a full list of the ERG22+ factors.

## 3. Method

### 3.1 **Participants**

All those who had been convicted of an Islamist extremism or Islamist extremism-related offence in England and Wales and had a completed an ERG22+ at the start of the study (in 2017) were included. The sample achieved was 171.

The majority of the sample (161, 94%) were male and 10 (6%) were female. Their mean age was 31 years (range 17 - 67). Around two thirds were of Asian ethnicity (110, 64%), with the remainder being Black (30, 18%), White (17, 10%), mixed race (11, 6%) and "other" ethnicities (3, 2%).

#### 3.2 Procedure

The ERG22+s were completed by Forensic Psychologists or experienced Probation Officers, who had received training in the ERG22+, following a series of face to face interviews with the offender, and in conjunction with other records held.

The summary record sheet for each ERG22+ was entered into SPSS version 21.0 (IBM CORP., 2012) and the Hudap version 8 programme for multidimensional scaling (Reuven & Toledano, 1994) The record sheet includes the 22 ERG22+ items that have been assessed as 'strongly present', 'partly present' and 'not present'.

### 3.3 Analysis

Descriptive statistics were performed on the ERG22+ items to explore the presence of factors across the sample.

**Construct Validity.** Construct validity of the ERG22+ was examined using multi dimensional scaling analysis (MDS). MDS is a non-parametric approach that presents the relationships between variables simultaneously in geometric space (Borg & Groenen, 1997; Coxon & Davies, 1982; Shye, Elizar & Hoffman, 1994). Distances between the points represent the degree of statistical association with items. The analysis produces a scalogram that plots variables as points in space with those closest together having the highest degree of association (Wright & Villalba, 2012). This technique has been usefully applied in areas of ability testing (Guttman & Levy, 1991), offender profiling (Canter & Heritage, 1990) and psychopathy (Bishopp & Hare, 2008).

The measure of fit, the coefficient of alienation (CoA), provides an index between 0 and 1 with scores below .2 being considered to have a good fit (Wright & Villalba, 2012). A two dimensional solution was used to unfold the association matrix.

**Internal Consistency Reliability.** The internal consistency reliability of the ERG22+ was analysed using Cronbach's alpha (Cronbach, 1951), which was applied to 1. The tool as a whole, 2: The intent, engagement and capability factors separately, and 3: the components identified via the MDS analysis.

Further technical detail of the analysis can be found at Powis et al. (2019).

# 4. Results

### 4.1 Presence of ERG22+ Risk Factors

Some risk factors had much higher presence across the sample than others. Risk factors that were strongly or partly present for the majority of participants were 'need to redress injustice', 'need for identity, meaning and belonging', 'political and moral motivation', and 'attitudes that justify offending' and 'access to networks, funding and equipment'. The risk factors that had the lowest presence across the groups were 'need to dominate others', 'opportunistic involvement', 'mental health issues' and 'harmful end objectives'.

Appendix B shows the presence of ERG22+ risk factors for the sample.

### 4.2 Construct Validity

A correlation matrix identified that all items were correlated and therefore the data were considered to be suitable for MDS analysis.

MDS was carried out for all 22 risk factors. The analysis indicated a relatively good fit (CoA = .23). Five domains were identified which were defined as 'Identity & External Influence', 'Motivation & Ideology', 'Criminality', 'Capability' and 'Status and Personal Influence'.

Two factors did not cluster well with other items. 'Mental Health' was spatially located apart from other items, which is unsurprising given that mental health could be viewed as a specific domain that should be considered independently from other factors. 'Excitement, comradeship and adventure' was located in the centre rather than spatially clustering with specific items. This factor includes different concepts of 'excitement', 'comradeship' and 'adventure' so could be expected to group with several different domains.

Appendix C shows the MDS Scalogram of 22 ERG22+ items.

#### 4.3 Internal consistency

The internal consistency of the ERG22+ as a whole found an alpha coefficient of 0.80, indicating high internal consistency, although this may be partly due to the high endorsement of factors across the sample, such as 'Identity, meaning and belonging' and 'Need to redress injustice'.

The Engagement and Intent domains were found to have moderate internal consistency. Engagement had an alpha coefficient of 0.65 and Intent an alpha coefficient of 0.79. The internal consistency for Capability was low, with a score of 0.46 (acceptable alpha coefficients range from 0.65 to 0.80).

The domains suggested by the MDS were found to have varying alpha coefficients. The 'Motivation & Ideology' domain had a high alpha score of 0.85. The 'Identity & External Influence' domain had an alpha score of 0.61. The 'Status & Personal Influence' domain had an alpha score of 0.42, with the 'Capability' and 'Criminality' domains having an alpha score of 0.71 and 0.19 respectively.

### 5. Discussion

This study explored the structural properties of the ERG22+ by examining the construct validity using Multidimensional scaling analysis. The findings from the analysis do not entirely support the current organisation of the 22 risk factors into the three domains of Engagement, Capability and Intent but suggest a different model with five underlying subscales. Restructuring the measure into these subscales may assist in discriminating between those individuals being assessed. It would also ensure the tool has construct validity, as each item in the subscale would be measuring the same overall construct. However, the structure suggested by the MDS analysis should be considered preliminary at this stage and further development of the domains and confirmatory research are needed.

The measure could be further developed by examining the items that did not spatially cluster well with other factors to examine whether they could be redefined and improved. Some items, in particular, had ambiguous meanings that could be clarified. The factor 'the need for excitement, comradeship and adventure' was located in the centre rather than clustering with specific items. This is not surprising, as the factor includes two distinct concepts, the need for excitement/adventure and the need for comradeship. Mental health was spatially located apart from other factors and could be considered as a specific domain in its own right. Mental health covers a full range of psychopathology, which could have different influences on the risk of extremist offending. For example, someone with a low IQ and learning difficulties may be more susceptible to group influence and control, whereas someone displaying narcissistic tendencies may have a greater need for status, which may account for their engagement in extremism. The mental health factor in the ERG22+ would benefit from being a single domain and expanded to cover the many aspects of psychopathology that might be differentially associated with extremism.

The ERG22+ was found to have good overall internal consistency. Short measures generally have low internal consistency (Brown, 1998), so it is unsurprising that the domains with fewer items had the lowest internal consistency. This was especially so for the Criminality domain which had an alpha score of 0.19 but only comprised of two items. While this indicates reliability in some of the domains others would benefit from development. If domains with few items were expanded to include more factors, the internal consistency reliability is likely to improve.

The study had a number of limitations. Only those who have committed offences in support of Islamist extremism were included in the analysis. It may not be possible to generalise the

findings from this study to those who have offended on behalf of another group, cause or ideology. While women Islamic offenders were included in the study, they represented a small group and may have differing motivations to men. Further research is needed to examine the validity of the ERG22+ with those supporting differing groups, causes or ideologies and with a sample of female offenders.

The findings suggest the ERG22+ offers promise as a framework for assessment using a structured professional judgement approach but would benefit from further development and refinement. While the 22 risk factors were generally consistent in their measurement of the overall risk amongst extremist offenders, some need improvement, in particular the ambiguous items. Further testing of the psychometric properties of the ERG22+ is needed. The extent to which assessors agree upon the presence of risk factors for case examples should be determined through an inter-rater reliability study. Further validation of the measure should also be carried out. However, this will need to be carefully designed as the difficulties in validating assessments for extremist offenders is acknowledged (Monahan, 2012), especially in terms of any predictive validity. Extremist offending is a relatively new offence with low numbers of convicted extremist offenders who are likely to be serving long sentences with little opportunity to reoffend and being subject to close supervision while in custody, which all present problems in making predictions.

The development of the tool was based on the available literature at the time. Extremism is dynamic topic and our understanding of such offenders is continuously evolving and expanding. There needs to be a continuous process of refinement and development of the ERG22+ in line with emerging knowledge to examine the continued relevance of the 22 risk factors and identify any further factors that may be missing. In particular, extremist offenders need to be considered within the wider socio-political contexts both in terms of motivation and potential threat.

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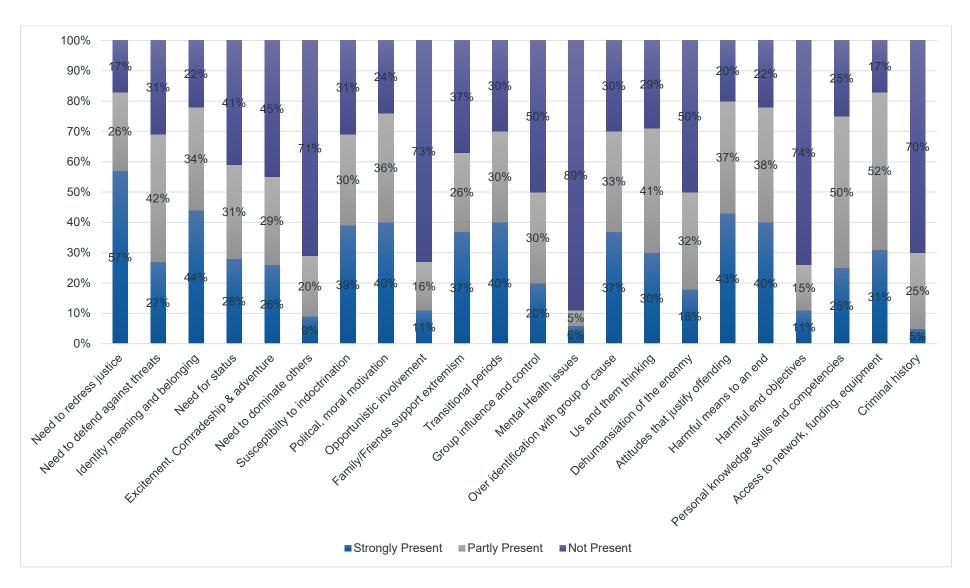
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# Appendix A ERG22+ Factors and Domains

Engagement			Intent		Capability	
11. 12.	Need to redress injustice Need to defend against threats Identity, meaning & belonging Need for status Excitement, comradeship & adventure Need to Dominate others Susceptibility to indoctrination Political, moral motivation Opportunistic involvement Family and/or friends support extremism Transitional periods Group Influence and Control Mental Health Issues	15. 16. 17. 18.	enemy	21.	Personal knowledge, skills, competencies Access to networks, funding, equipment Criminal history	

# Appendix B Presence of ERG 22+ factors



# Appendix C MDS Scalogram of 22 ERG22+ Factors

