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Support for the predictive validity of the Multifactor Offender Readiness Model (MORM):
forensic patients' readiness and engagement with groupwork

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Multifactor Offender Readiness Model

ABSTRACT

Background Treatment non-engagement in forensic settings has ethical and economic implications. The Multifactor Offender Readiness Model (MORM) proposes a framework for assessing treatment readiness across person, programme and contexts.

Research question: Are the internal factors of the MORM associated with whether forensic patients engage, complete, refuse or drop out of groupwork interventions?

Method: In a retrospective design, associations between internal factors of the MORM, measured as part of assessment for group participation, and the outcomes of treatment refusal, treatment dropout and treatment completion were investigated.

Results: 118 male high security hospital patients consecutively referred for group treatment agreed to participate. Internal factors of the MORM associated with treatment refusals included: psychopathic cognition, negative self-evaluation/affect and ineffective goal seeking strategies. Those associated with dropouts included emotional dysregulation, low competencies to engage and low levels of general distress. MORM factors associated with completion included: low motivation, ineffective goal seeking strategies, absence of psychopathic cognition, high levels of general distress and competency to engage.

Conclusions: Internal factors of the MORM could be useful contributors to decisions about treatment readiness for hospitalised male offender-patients. Up to one in three programmes offered were refused, so clinical use of the MORM to aid referral decisions could optimise the most constructive use of resources for every individual.

Introduction

The risk, need, and responsivity principles for offender rehabilitation (Andrews & Bonta, 2003) has been well documented as contributing to more effective decision making on readiness for treatment (Ogloff & Davis, 2004; Polaschek, 2012). The responsivity principle, which recommends tailoring interventions to the learning style, motivation, abilities and strengths of the individual, has, however, received less research attention (Howells et al., 2005). Where such investigations have been conducted they have taken an atheoretical perspective and often overlooked the potential interrelatedness of responsivity factors (Day et al., 2010). Consequently, responsivity factors, many of which moderate treatment effects, are poorly understood by researchers and not always appropriately considered by practitioners (Ward et al., 2004). This could restrict the effectiveness of risk reduction interventions (McNeil et al., 2005).

Research into responsivity factors has led some researchers to prefer a concept of 'readiness' as providing a broader theoretical scope and enabling fuller allowance for the interrelatedness of responsivity factors (e.g. Serin & Kennedy, 1997; Ward et al., 2004). Readiness may be defined in terms of the presence or absence of various responsivity factors in the person and/or the therapeutic contexts which promote therapeutic engagement (Ward et al. 2004). Accurate assessment of readiness would have the added advantage of reducing the costs associated with treatment non-engagement (Langevin, 2006; McMurrin & Theodosi, 2007; Sampson et al., 2013).

In a review of the effectiveness of anger management programmes, Howells and Day (2003) identified seven factors which impede the effectiveness of treatments. Building on this work, Ward et al. (2004) developed an offender-specific readiness model called the Multifactor Offender Readiness Model (MORM). This model proposes that an offender's

treatment readiness is a function of individuals' personal characteristics as well as external or contextual variables (see Figure 1). It suggests that if positive characteristics are present and supported - for example the individual is motivated and has relevant skills and interventions are delivered in a supportive and resourceful environment, then optimum treatment gains can be made and the risk of attrition reduced. For the current study, the focus of interest was on the internal factors of MORM, including cognitive, affective, behavioural, volitional and identity factors (see Figure 2).

Figure 1: The Multifactor Offender Readiness Model

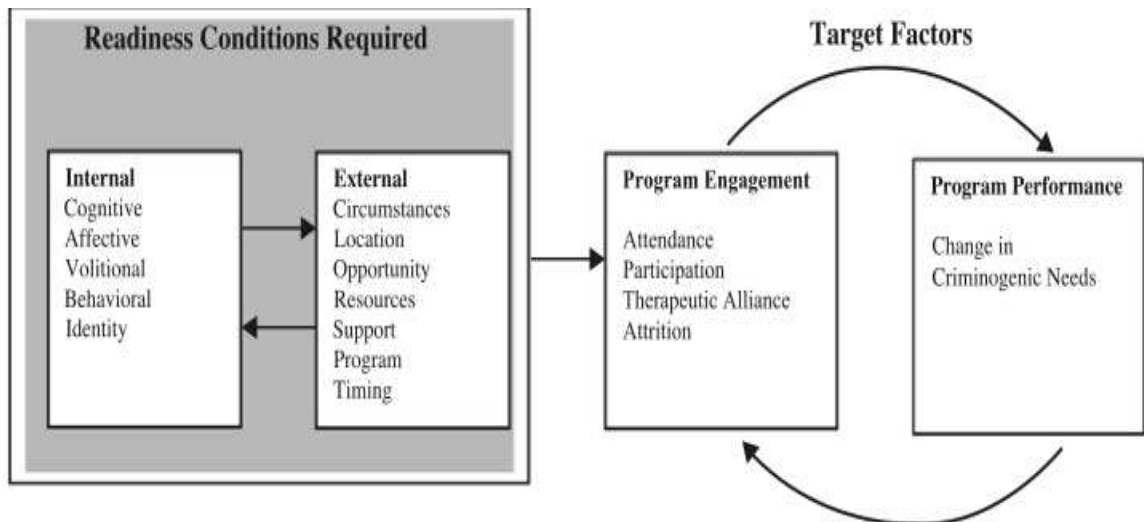
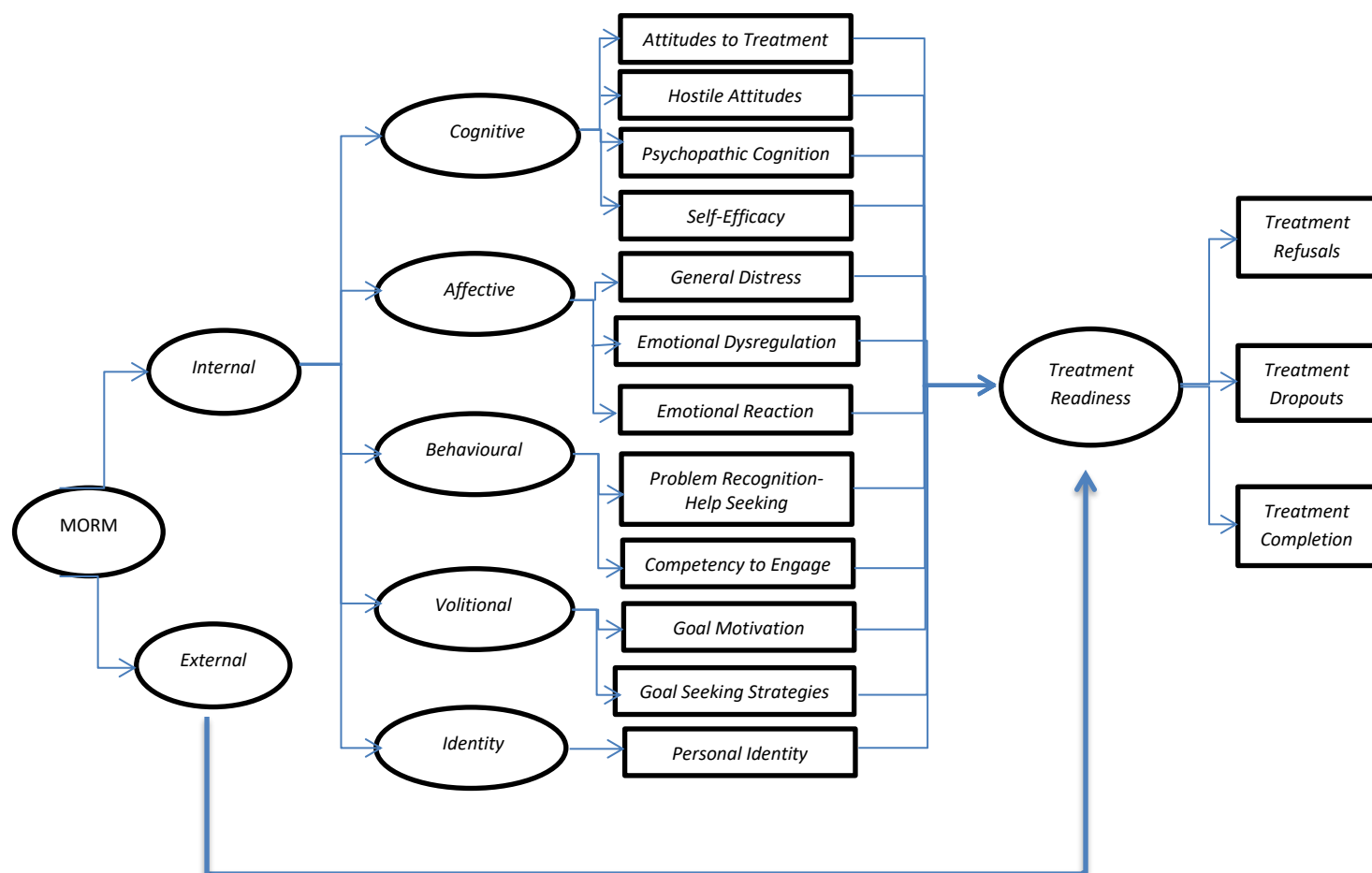


Figure 2: The relationship between the internal MORM and treatment engagement

There is evidence that the internal factors of the MORM can inform readiness and engagement. In a systematic review of reasons for non-completion among offenders in institutional settings, Sturgess et al (2015) concluded that most of those identified were consistent with the MORM. Tetley et al (2012) attempted to validate the MORM by identifying an expert consensus on the barriers and facilitators of engagement from the perspective of offender patients with personality disorder, as well as the clinicians that were working with them. They found evidence for all of the MORM factors, but also additional ones such as 'trait', 'relating', 'comorbidity' and 'physical' factors. In a study of patients in a

high security psychiatric hospital, Sheldon et al (2010) also found supporting evidence that reasons for treatment non-completion were consistent with the MORM, specifically, emotional arousal/dysregulation, therapy-incongruent goal motivation, and negative attitudes towards self-efficacy, treatment and staff. Long et al., (2012) assessed treatment engagement among female patients in secure hospitals and also found cognitive, affective and volitional characteristics were associated with non-engagement, but behavioural and identity reasons were less so.

In a meta-analysis, Olver et al (2011) found that psychopathy, hostility, intelligence, disruptive behaviour, negative attitude towards treatment, lack of problem recognition (denial), low motivation and anger problems all predicted treatment attrition, while general distress (anxiety/depression) did not. Although Olver et al., reported that a number of demographic and historical factors also predicted attrition, Holdsworth et al (2014), in their review, found that these variables had an equivocal relationship with engagement in groups. They also reported inconsistent findings in relation to general distress, intelligence, confidence and anger and their impact on engagement. However, hostility, impulsivity, risk-taking, psychopathy, antisocial behaviour, denial, criminal thinking and negative outlook (personal identity) were all found to be strong determinants of group non-engagement. .

The MORM is only one of the various offender readiness models available. The Transtheoretical model (TTM) of behaviour change or Stages of Change model (Prochaska & DiClemente, 1982) is perhaps the most widely used and researched model in offender rehabilitation (Day et al., 2006). A variety of readiness assessments have been developed from the TTM, such as the Readiness to Change Questionnaire (RCQ) (Rollnick et al., 1992) and the Violence Risk Scale (VRS) (Wong & Gordon, 2006). This model has, however, attracted criticisms in recent years (for a review, see Mossiere & Serin, 2014; Burrows & Needs, 2009; Sutton, 2001; Casey et al., 2005). Other models such as the Readiness to

Change Framework (Burrows & Needs, 2009) and Conceptual Model of Treatment Responsivity (Serin & Kennedy, 1998) show similarities to MORM, but also, like MORM, they require further validation. Since MORM's inception, Casey et al. (2007) have developed the Corrections Victoria Treatment Readiness Questionnaire (CVTRQ), which was derived from MORM, while Day et al. (2009) modified it into the Violence Treatment Readiness Questionnaire (VTRQ) for use with violent offenders. Both have been investigated in terms of their reliability and validity, and provide the first attempts at assessing readiness factors acceding to the MORM. These assessments, however, do not include all of the internal factors of MORM (e.g. identity factor) and are self-report assessments. Therefore, further investigation has been advocated into the validity of the MORM itself with offender populations with different needs in different mental health settings (Howells & Day, 2007). The current study investigated whether the internal factors of the MORM were associated with the completion, refusal and drop out rates of forensic patients referred for groupwork interventions.

Method

Ethical approval for the study was granted by NHS Local Research Ethics Committee and the West London Mental Health Trust Research and Development Consortium.

Sample

The sample consisted of was drawn from all those male adult (>18 years) patients who were detained in a high security hospital in England and had been referred by their clinical teams for assessment for a range of 'formal' therapy groups between 2001 and 2014. The patients are admitted to the hospital from judicial, custodial and other health settings if they are considered to be suffering from a mental disorder (or likely to be) and to pose an

imminent risk of harm to others (Jamieson et al., 2000). Referrals for groupwork follow detailed psychological assessment of the individual's needs and some capacity to learn from engaging in activity alongside others. Those who are not referred are likely to be considered too unwell to be safe in the company of others; the majority of those admitted to a bed in the pathway for men with personality disorder are referred for groupwork; at least one third of patients admitted to the mental illness pathway are referred over the duration of their care.

Procedure

All patients in the sample had been referred to the hospital's Centralised Group Service (CGS) by the patients' clinical teams, informed by a psychological formulation of needs conducted at admission. The aim is that each individual's treatment pathway will be uniquely responsive to their clinical, criminogenic and safety needs (for more detail, see Perkins et al., 2007). Interventions (see Table 1) are based on a staged model of recovery, with early foundations based on psycho-educational material (e.g. understanding mental illness), multi-modal interventions to meet complex mental health needs (e.g. Dialectical Behaviour Therapy; Cognitive Behavioural Therapy, Mentalization Based Treatment) and risk reduction programmes to promote interpersonal safety (e.g. the role of substance misuse and offence-related work).

Insert Table 1 about here

All referred patients were assessed for suitability for treatment typically within the first 6 months of admission, and prior to attending groups, with a view to developing a shared understanding of their needs and how these might be met via treatment (Moore & Drennan, 2013). The suitability assessment consisted of the following:

The Personality Assessment Inventory (PAI, Morey, 1991) consists of 344 self-reported items reflecting personality and psychopathology. There are four sub-scales (validity, clinical, treatment and interpersonal). The PAI has moderate test-retest reliability among non-clinical populations (0.7; Boyle & Lennon, 1994), good internal consistency ($\alpha > 0.81$; Morey, 1991), and its use with offenders has been supported (Douglas et al., 2001).

Clinical Outcomes in Routine Evaluation (CORE, Evans et al., 2000) is also a self-rating scale, with 34 items assessing wellbeing, problems/symptoms, life functioning, and risk to self and others. CORE-OM has good internal consistency (0.75-0.95) and good test-retest reliability with clinical samples ($ICC > 0.87$; Evans et al., 2002).

The Chart of Interpersonal Reaction in Closed Living Environments (CIRCLE, Blackburn & Renwick, 1996) is a 51 items observational assessment, assessing interpersonal styles (e.g. dominance, nurturance and coercion). Nurse staff observations and scores are summed and standardised to produce a final score on eight interpersonal styles. CIRCLE has adequate inter-rater reliability (0.55–0.68) and good test-retest reliability within forensic settings (0.83–0.92; Blackburn & Renwick, 1996).

To establish the internal factors of the MORM for the study sample, items from these assessments that conceptually corresponded to the internal factors of MORM were endorsed and grouped by one of the researchers. A random selection of items was categorised by another researcher to investigate inter-rater agreement. As initial agreement was 78%, a third rater provided judgement on disagreed items. Final agreement was 95% and items with remaining disagreements were deleted, leaving 149 items describing the internal factors of MORM. The “attitude towards treatment” category was unclassifiable and was removed, leaving 11 potential constructs that closely matched the internal factors of MORM. Cronbach’s alphas for all constructs except goal seeking strategies ($\alpha = 0.61$), ranged from α

= 0.7 to $\alpha = 0.9$ (see Table 2), showing “acceptable” to “excellent” internal consistency (George & Mallery, 2003).

As the PAI and CIRCLE items are rated on a 4-point likert scale and the CORE-OM includes a 5-point likert scale, patients’ data on PAI, CORE-OM and CRICLE were recoded, item scores were standardised and Z-scores calculated.

The number and types of treatments that patients were offered were collated alongside completion, dropout or refusal rates. A treatment refusal was defined as any group missed because of refusal to take part; a dropout was defined as any patient-initiated non-completion of a group programme, and did not include patient removals because of organisational issues such as ward transfer or other such changes in circumstances. Completion was marked by patients attending a group programme until its completion, but may have included up to three missed sessions due to illness or competing appointments, such as a legal visit. Thus, it was possible that levels of engagement could vary, so we recorded this across the different group therapies.

Planned analysis

The primary outcome variables were proportions of groups programme completions, dropouts or group refusals. This enabled us to allow for the number and range of groups attended. Analyses were conducted using the Statistical Package for Social Sciences (SPSS, version 21). A general linear model (GLM) was used to generate three sets of binomial regression analyses. Treatment refusals, dropouts, or completions were in turn inserted as the dependent variables for each analysis and the 11 internal factors of the multifactor offender readiness model were the independent variables. First, all independent variables were entered into the model together, then stepwise elimination was carried out, setting α at 0.15 as the

criterion. This was done in order to improve the model due to potential multicollinearity, the large number of independent variables and detecting smaller effect sizes (Chong & Jun, 2005).

Results

There were 118 adult male offender patients included in the study sample. The majority of patients were White (n = 77, 65%), followed by Black British/African/Caribbean (n = 33, 28%), Asian/Asian British (n = 1, <1%), other ethnic groups (n = 2, 2%), and ethnicity was not formally reported for five patients (4%). The mean age of the sample was 37.1 years (SD:8.5; range 18.8-60.8) at the time of referral for groups, and the average length of stay was 3.7 years (SD: 4.4, range 0.24-29.4).. Index offences for the study sample included: violence (n = 76, 64%), sexual offences (n = 23, 20%), and others (n = 19, 16%, e.g. arson, robbery, kidnapping). Primary diagnoses included: chronic psychoses (n = 68, 58%), personality disorders (n = 32, 27%), other disorders (n = 7, 6%), or were not reported/yet determined (n = 11, 9%). After conducting further analysis, we found that the sample's characteristics (in terms of diagnosis, ethnicity and offence type) was similar to a larger number of patients resident in the the hospital and those who had not been referred for groupwork, However, there had inevitably been risk-related selection of patients who were deemed suitable for group treatment according to their need and anticipated willingness/capacity to engage by their clinical teams. .

A total of 392 referrals for groups had been made for the 118 patients. Patient refused nearly one third of these referrals (115, 29.5%) and 63 (16%) dropouts; 206 (52.5%) referrals resulted in completion (8, 2% referrals were closed by the clinical team due to concerns of

risk or well-being for the patient) (see Table 1). 63 (53%) patients accounted for the refusals, 43 (36%) for the dropouts while 100 (85%) completed. As we were interested in relevant characteristics of patients at the time of referral all analyses were conducted using numbers of refusals, dropouts and completions rather than numbers of patients.

Several internal factors of the MORM showed strong relationships with one another (Table 3). On testing for multicollinearity the variation inflation factor (VIF) did not exceed 5 for any of the internal factors and their threshold value did not fall below 0.2.

INSERT TABLE 2 HERE

Treatment refusals

After entering all the factors into the model, psychopathic cognition and negative affect towards self proved to be positively and independently associated with refusal rates. After stepwise elimination, the category of effective goal seeking strategies also proved to be associated. Therefore, the higher the level of psychopathic cognition, negative affect towards self and effective strategies for attaining goals, the higher the rate of refusals.

Treatment dropouts

After entering all MORM internal factors into the model, emotional dysregulation and low competency to engage were significantly associated with dropout rates. Following stepwise elimination, low levels of general distress was also associated with drop out. Therefore, patients with emotional regulation difficulties, low competency to participate in treatment and low levels of general distress were more likely to have dropped out of groups.

Treatment completions

After entering all the MORM internal factors into the model, low psychopathic cognition, high competency to engage and low goal motivation were significantly associated with treatment completion, while ineffective goal seeking strategies and high levels of general distress had a relationship which approached significance. Stepwise elimination did not improve the model.

More detail of all these models is shown in table 2.

INSERT TABLE 3 ABOUT HERE

Discussion

The study found that half of the group programmes offered to patients were completed, but about one sixth of those offered were lost because of drop out. Patients refused just under a third of the group programmes offered. These findings are broadly comparable to those in other published studies (Long et al., 2012; McMurren & Theodosi, 2007; Sheldon et al., 2010). Considering that refusals out-numbered dropouts, it appears that optimising the initial assessment is a vital clinical task (Quinsey et al., 1993, Long et al., 2012). Our results provided some support for the predictive validity of the internal factors of the Multifactor Offender Readiness Model (MORM), which is discussed below. Internal MORM factors not found to have any relationships with group take up behaviours could be partially explained by the small sample size relative to the number of potential predictors, as well as the strong correlation that existed between the potential predictors, which reduced the power of

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detecting smaller effect sizes. Two factors showed counter-intuitive relationship with the engagement outcome and these will also be discussed in more detail.

Treatment Refusals

The finding that psychopathic cognition predicted refusal is consistent with previous research (e.g. Beutler et al., 2000). Antisocial and self-focused attitudes may reinforce views that there is no need to change, while externalising control may lead to blaming others and a failure to take responsibility for one's actions or need to change (Chambers et al., 2008). A desire to exert power over others may lead an offender to consider treatment as a threat to self-image (Hemphill & Hart, 2002). In short, psychopathic cognition may mean that patients see treatment as inappropriate, or not applicable for them, and patients who see treatments as inappropriate are likely to refuse them (Brown & Tully, 2013). Negative self-affect, including shame, was also associated with refusal, perhaps indicating patients' belief that their identity is unchangeable and "bad" so therapy is undeserved or pointless (Tangney & Dearing, 2002). Refusal of groups may also be viewed as a means of avoiding the judgments of others (Mann et al., 2013). Negative affect may also have its impact through links to other features such as anger (Tangney, 1995) or hostility (Hoglund & Nicholas, 1995) or, in effect, its combination with psychopathic cognition in the form of low compassion (Tangney, 1991) or low victim empathy (Bumby, 2000).

Patients with effective goal seeking strategies were more likely to refuse treatments. This seems counter-intuitive, but it is possible that these patients believed that they had no need to change their offending behaviour, while those with ineffective goal seeking strategies (e.g. substance misuse, self-regulative issues and organisational problems) became motivated to change these, and so engaged (i.e. therapy incongruent goal motivation, Howells & Day, 2007; Ward & Stewart, 2003). It should also be noted, however, that ineffective goal seeking had a rather low internal consistency ($\alpha = 0.60$), so it is also possible that the construct was not measuring what it was intended to measure.

Treatment Dropouts

Low competency for therapy engagement, high emotional dysregulation and low general distress were associated with treatment dropout. The relationship of low competency to engage with dropouts aligns with previous findings that showed intellectual abilities and low educational achievements have been linked with treatment dropouts (Olver et al., 2011). In terms of general distress, previous research findings vary as to whether this enhances or reduces treatment readiness (e.g. Beutler et al, 2000; Holdsworth et al., 2014). As a potential readiness motivator, it has been suggested that the need to reduce distress may outweigh its negative influence on engagement (Day et al., 2010; Tetley et al., 2012). A caveat is that if distress is too high, it can impede readiness (Howell & Day, 2006). Higher emotional dysregulation was also associated with dropout. Geer et al., (2001) suggested that impulsive offenders can be disruptive, break programme rules and, thus, benefit less from the programme's content (Ward et al., 2004).

Treatment Completion

Treatment completion was associated with low psychopathic cognition, high general distress, high competency to engage, low goal motivation and ineffective goal seeking strategies. Researchers have previously linked treatment completion with lower levels of psychopathy, especially antisocial cognition (McCarthy & Duggan, 2010), while Ward and Stewart (2003) have argued ineffective goal seeking strategies may motivate offenders to engage and complete treatments. Staton-Tindall et al. (2007) found that anxiety/depression was more strongly associated with low treatment participation in female than male offenders, suggesting possible gender differences. Our finding that high motivation decreased treatment completion seems counter-intuitive. In previous research Casey et al., (2007) showed that it is difficult to measure motivation through self-report. Furthermore, the MORM motivation

construct reflects determination to change a problematic behaviour (e.g. “I need to make some important changes to my life”) but is not specific to offending. This is important, because Howells and Day (2007) suggest that people with high psychopathy scores may be motivated, but to achieve goals other than positive change (e.g. engage in order to demonstrate readiness for transfer/release). It is possible, therefore, that the MORM motivation factor does not correspond to therapeutically congruent motivation. Research also suggests that unrealistic goals/expectations can cause treatment attrition (Day et al., 2010; Tetley et al., 2012) and so perhaps the low motivation assessed in the current study is indicative of offenders having more realistic expectations of what they might achieve through therapy. Research also links social desirability with treatment readiness (Serin & Kennedy, 1997) and, since low motivation negatively correlated with almost all other MORM factors, it could be that high motivation scores represented ‘faking readiness’.

The current study was limited in that attitudes towards treatments and external MORM factors were not assessed. The MORM does not cover all variables potentially related to attrition, and other factors/readiness models warrant research attention (McMurrin, 2012; Sheldon et al., 2010; Tetley et al., 2012). Potentially confounding factors, such as length or type of treatment, length of stay, diagnosis and number of referrals were not included in the regression models. Our findings must be interpreted with this in mind, although other studies suggest that the impact of these variables may be less important than those we investigated (Holdsworth et al., 2014). Also, personality assessment inventory and clinical (CORE-OM) items were not offender specific and nor were some MORM factors such as goal motivation and problem recognition/help-seeking. In other studies, however, treatment readiness has not required specification of the target for change (McMurrin et al., 1998).

Refusals and dropouts are often used as evidence of non-engagement, but they are at the extreme end of a spectrum. Group participants may continue to attend but engage minimally in the intervention. Future research could use more subtle and perhaps dynamic measures to assess levels of treatment engagement more thoroughly. Further, if readiness is a dynamic process, it may be most informative to assess it at different stages of treatment (Day et al., 2009). Finally, it may be that relationships between MORM factors and readiness for treatment differ according to different populations and settings, so our findings may not be generalisable beyond a high security hospital population.

Conclusion

In this sample of patients in a high security hospital, factors referred to as 'internal' within the Multifactor Offender Readiness Model were associated with some indicators of treatment readiness, including treatment refusal, treatment drop out and treatment completion. Profiles derived from the MORM could be usefully applied during the process of the assessment of patients prior to referral for group and other therapies. This information might assist clinicians in preparing patients for the interventions and thereby minimise the problems associated with a drop out (when words like 'failure' can be damaging to esteem and alliance). Pre-referral strategies could, for example, address motivation and/or provide skills for managing expectations. An additional benefit of optimising referrals in this way would be that limited resources could be allocated more efficiently with a positive impact on engagement.

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Table 3. The inter-correlations of the internal factors of the Multifactor Offender Readiness Model MORM among men in a high security hospital

	PC	HA	SE	GD	ED	SA	PR/HS	CE	GM	GSS	PI
PC	-										
HA	0.59**	-									
SE	0.31**	0.61**	-								
GD	0.24**	0.58**	0.76**	-							
ED	0.34**	0.56**	0.52**	0.65**	-						
ER	0.25**	0.52**	0.63**	0.77**	0.66**	-					
PR/HS	-0.11	-0.31**	-0.45**	-0.47**	-0.51**	-0.64**	-				
CE	0.17	0.50**	0.74**	0.73**	0.40**	0.55**	-0.31**	-			
GM	-0.09	-0.27**	-0.30**	-0.33**	-0.39**	-0.44**	0.68**	-0.08	-		
GSS	0.37**	0.49**	0.54**	0.56**	0.61**	0.53**	-0.37**	0.40**	0.38**	-	
PI	-0.06	0.25**	0.19*	0.21*	0.11	0.08	-0.03	0.37**	0.24**	-0.00	-

Note: * $p < 0.05$, ** $p < 0.01$, **PC** = Psychopathic Cognition, **HA** = Hostile Attitudes, **SE** = Low Self-Efficacy, **GD** = General Distress, **ED** = Emotional Dysregulation, **SA** = Negative Self Affect, **PR/HS** = Lack of Problem Recognition/ Help Seeking, **CE** = Low Competency to Engage, **GM** = Low Goal Motivation, **GSS** = Ineffective Goal Seeking Strategies, **PI** = Negative Personal Identity

Table 1. Description of refusals, dropouts and completions of group programmes

Treatments' Names	Length of the Group*	Number of Referrals	Number of removals due to external factors	Number of Refusals	Number of Drop Outs	Number of Completions
Anger Treatment Programme	Short	55	0 (0%)	12 (22%)	8 (14%)	35 (64%)
Cognitive Behavioural Therapy	Medium	24	0 (0%)	5 (21%)	2 (8%)	17 (71%)
Dialectical Behavioural Therapy	Medium	16	0 (0%)	3 (19%)	6 (37%)	7 (44%)
Enhanced Thinking Skills	Short	50	0 (0%)	11 (22%)	9 (18%)	30 (60%)
Family Awareness & Relationship Skills	Medium	17	0 (0%)	10 (59%)	2 (12%)	5 (29%)
Fire Intervention Programme	Medium	12	1 (8%)	3 (25%)	0 (0%)	8 (67%)
Art & Drama groups	N/A	3	3 (100%)	0 (0%)	0 (0%)	0 (0%)
Homicide Victims Known/Stranger	Long	10	0 (0%)	4 (40%)	3 (30%)	3 (30%)
Leavers	N/A	38	0 (0%)	13 (34%)	7 (18.5%)	18 (47.5%)
Metalisation Based Therapy	Medium	4	2 (50%)	2 (50%)	0 (0%)	0 (0%)
Reasoning & Rehabilitation	Short	18	1 (5.5%)	8 (44.5%)	0 (0%)	9 (50%)
Substance Misuse	Medium	36	0 (0%)	13 (36%)	5 (14%)	18 (50%)
Challenging Stigma & Promoting Recovery	Long	7	0 (0%)	0 (0%)	3 (43%)	4 (57%)
Sex Offender Groups	Medium	23	0 (0%)	8 (35%)	3 (13%)	12 (52%)
Understanding Mental Illness	Short	44	0 (0%)	13 (29.5%)	8 (18%)	23 (52.5%)

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Understanding Personality Disorder	Short	11	0 (0%)	2 (18%)	1 (9%)	8 (73%)
Understanding Relationship & Intimacy	Medium	3	1 (33%)	2 (67%)	0 (0%)	0 (0%)
Violent Offender Groups	Medium	21	0 (0%)	6 (28.5%)	6 (28.5%)	9 (43%)
Total		392	8 (2%)	115 (29.5%)	63 (16%)	206 (52.5%)

Note: N = 118. Some patients were removed due to deterioration of mental health, transfers and other external factors. *Short = less than 9 months, Medium = 9-18 months, Long = More than 18 months / open groups

Table 2. Binomial Regression Coefficients (B) of Internal Multifactor Offender Readiness Model (MORM) factors associated with group refusals, dropouts and completions

MORM Factor	Internal MORM	Description of internal factors	Internal Consistency	Treatment Refusals B (Odds Ratio, 95% CI)	Treatment Dropouts B (Odds Ratio, 95% CI)	Treatment Completion B (Odds Ratio, 95% CI)
Cognitive	Hostile Attitudes	21 items, describing a person who perceives others as threatening and is negative/cynical towards others. Examples: <i>“people treat me badly on purpose”, “expression is hostile and unfriendly”, “(not) respectful to people in the authority”.</i>	$\alpha = 0.825$	NS	NS	NS
	Psychopathic Cognition	14 items, representing a demanding and grandiose person who is resistant towards treatment/others, possess antisocial attitudes, blames others, lies, and seek to exert power. Examples: <i>“shirks obligations and responsibilities”, “Lies easily”, “I like to see how much I can get away with” and “refuses to comply with requests or instructions”.</i>	$\alpha = 0.855$	0.578 (1.78, 1.17 - 2.7)**	NS	-0.605 (0.546, 0.37 - 0.8)**
	Low Self-Efficacy	10 items, constitute a person who is not confident in his abilities or believes does not possess the required skills to deal with a situation. Examples: <i>“expresses lack of confidence in his abilities”, “I have (not) been able to do most things I needed to”, “everything seems like a big effort”.</i>	$\alpha = 0.777$	NS	NS	NS
Affective	General Distress	21 items, representing an offender who shows high levels of negative feelings mostly associated with anxiety and depression. Examples: <i>“I have felt tense, anxious or nervous”, “I have felt like crying”, “I usually worry about things more than I should”, “I have exaggerated fears”.</i>	$\alpha = 0.904$	NS	-0.963 (0.382, 0.17 - 0.9)*	0.531 (1.7, 0.93 - 3.1)*
	Emotional Dysregulation	18 items, illustrate an individual that has regular emotional/mood shifts and cannot control these emotions (typically anger), leading to disinhibited behaviour. Examples: <i>“my mood can shift quite suddenly”, “sometimes my temper explodes and I completely lose control”, “I have little control over my anger”, “sometimes I smash things when I get upset”</i>	$\alpha = 0.906$	NS	0.647 (1.91, 1.05 - 3.5)*	NS

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	Negative Affect	8 items, describe a patient that tends to negatively evaluate self, is experiencing shame, and believes he/she has an inferior identity. <i>Examples: "sometimes I think I'm worthless", "I feel that I have let everyone down", "I have felt humiliated or shamed by other people".</i>	$\alpha = 0.799$	0.388 (1.47, 1 - 2.2)*	NS	NS
Behavioural	Lack of Problem Recognition / Help Seeking	6 items, constitute a person that does not believe has any problem (denial), externalises the problems and hence believes he/she is good as he is and therefore does not seek help to address these problems. <i>Example: "I am (not) curious why I behave the way I do", "many of my problems are (not) my own doing", "I can solve my problems by myself", "I do (not) need some help to deal with some important problems".</i>	$\alpha = 0.700$	NS	NS	NS
	Low Competency	14 items, represents an individual that lacks the required social and cognitive skills to engage in a therapy. <i>Examples: "shy in group situations", "talking to people has felt too much for me", "I can't seem to concentrate very well".</i>	$\alpha = 0.728$	NS	1.1 (3.01, 1.3 - 7.2)**	-1.17 (0.311, 0.15 - 0.65)**
Volitional	Low Goal Motivation	8 items, describing an offender that does not show any indication or motivation to change the problematic behaviour. <i>Example: "does not join in group activities", "does not talk enthusiastically about interests or plans", "I do not need to make some important changes in my life".</i>	$\alpha = 0.706$	NS	NS	0.579 (1.78, 1.15 - 2.76)**
	Ineffective Goal Seeking Strategies	9 items, representing an individual that possess poor self-regulative strategies which can interfere with the successful achievement of therapy goals. <i>Example: "sometimes I use drugs to feel better", "I've taken so many commitments that I can't keep up", "drinking help me get along in social situations".</i>	$\alpha = 0.601$	-0.518 (0.596, 0.36 - 1)*	NS	0.514 (1.67, 0.98 - 2.84)*
Identity	Negative Personal Identity	20 items, portraying a person who does not value warmth, socialising and caring and is not optimistic about having a positive future. <i>Examples: "close relationships are not important to me", "I do not have something worthwhile to contribute", "being helpful to others does not pay off in the end"</i>	$\alpha = 0.838$	NS	NS	NS

Note: NS = Not Significant, CI = Confidence Intervals, * $p < 0.05$, ** $p < 0.01$, N= 118, Referrals (Treatments Offered) = 392