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

Mehdi Alemohammad and Jane L. Wood

School of Psychology, University of Kent

Alan Skelly

Department of Psychology, University of Surrey

James Tapp, Estelle Moore

Centralised Groupwork Service, Broadmoor Hospital

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ABSTRACT

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

Aim *To examine internal MORM factors as predictors of forensic patients' readiness to engage with interventions in a high secure hospital.*

Method *A retrospective design determined whether internal factors of the MORM predicted readiness via levels of engagement for 118 forensic male patients.*

Results *Internal factors of the MORM predicting patients' treatment refusals included: psychopathic cognition, negative self-evaluation/affect and effective goal seeking strategies. Predictors of treatment dropouts included emotional dysregulation, low competencies to engage and low levels of general distress. Predictors of programme completion included: Low motivation, ineffective goal seeking strategies, absence of psychopathic cognition, high levels of general distress and competency to engage.*

Conclusion *The internal factors of the MORM are promising predictors of offender readiness for treatment. Discussion also highlights the clinical importance of assessing patients' readiness before including them in treatment programmes. External factors should be included in future assessments of MORM's predictive power for readiness and a more prospective and rigorous approach to investigating the validity of the MORM is advised.*

Introduction

The risk, need, and responsivity principles for offender rehabilitation have contributed to understanding what should work best in the delivery of interventions aimed at reducing risk (Andrews & Bonta, 2003). For example, the need to match service provision with the level of risk of re-offending and target criminogenic needs associated with offending has been extensively documented (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 relatively less research attention (Howells, Day, & Davey, 2005). Where investigations of responsivity factors have been conducted they have taken an atheoretical perspective and often overlooked the potential interrelatedness of responsivity factors (Day, Casey, Ward, Howells & Vess, 2010). Consequently, responsivity factors, many of which show mediating/moderating effects, are poorly understood by researchers and are not appropriately targeted by forensic practitioners (Ward, Day, Howells, & Birgden, 2004). This potentially restricts the optimum effect of risk reduction interventions given that research has shown these factors such as personal characteristics/desires, staff and setting can be just as important to the process of change (McNeil, Batchelor, Burnett, & Know, 2005).

Researching various responsivity factors has led some researchers to suggest that readiness provides a broader theoretical scope and enables the interrelatedness of responsivity factors (e.g. Serin & Kennedy, 1997; Ward et al., 2004). Readiness refers essentially to the presence or absence of various responsivity factors (among clients' and/or therapeutic contexts) which promote therapy engagement (Ward et al. 2004). The importance of assessing readiness is supported by the associated economical and public safety costs of attrition from and non-engagement with risk reducing interventions, which is well

documented with forensic psychiatric patients (Langevin, 2006; McMurrin & Theodosi, 2007; Sampson, James, Huband, Geelan, & McMurrin, 2013 ; Young, Chick, & Gudjunsson, 2010).

In their review of the effectiveness of anger management programmes, Howells and Day (2003) identified seven factors to impede the effectiveness of treatments. Building on this work, Ward et al. (2004) attempted to address these impediments and what they described as the deficiencies of the responsivity approach. They developed an offender-specific readiness model called the Multifactor Offender Readiness Model or MORM. The MORM proposes that an offender's treatment readiness is a function of internal or person related factors, as well as external or contextual factors (see Figure 1). It suggests that if these factors are present and supported, where for example the individual is motivated and skilful and interventions are delivered in a supportive and resourceful environment, then optimum treatment gains can be made and the risk of attrition reduced. In this study we will be focusing on the internal factors of MORM, which consist of series of cognitive, affective, behavioural, volitional and identity factors (see Figure 2).

INSERT FIGURE 1 HERE

INSERT FIGURE 2 HERE

Research findings suggest that the internal factors of the MORM can inform readiness and engagement In a recent systematic review of reasons for non-completion among offenders in institutional settings, Sturgess, Woodhams and Tonkin (2015) concluded that the

majority of the factors reviewed were consistent with the MORM. Furthermore, using a Delphi survey, Tetley, Jinks, Huband, Howells and McMurrin (2012) attempted to validate MORM by identifying barriers and facilitators of engagement from the perspective of forensic patients diagnosed with a personality disorder and clinicians. They provided evidence for all of the MORM factors, but also reported additional factors such as Trait, Relating, Comorbidity and Physical factors that were not explicitly mentioned within the MORM. Furthermore, in a study using case file reviews of forensic patients in a high secure psychiatric hospital, Sheldon, Howell and Patel (2010) found that the reasons for treatment non-completion were generally consistent with the MORM; however the identity reasons were not common. In terms of the internal factors, the most common reasons for treatment non-completion were emotional arousal/dysregulation, therapy-incongruent goal motivation, and negative attitudes towards self-efficacy, treatment and staff. Similarly, Long et al., (2012) assessed treatment engagement among female patients in secure hospitals. The reasons for non-engagement were mainly cognitive in nature, followed by affective and volitional. The behavioural and identity reasons were rare.

In a meta-analysis by Olver, Stockdale and Wormith (2011), it was 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., (2011) reported that a number of demographic and historical factors also predicted attrition, Holdsworth, Bowen, Brown and Howat (2014) in their review found that demographic and historical factors showed equivocal relationship with groupwork engagement. They also reported inconsistent findings in relation to general distress, intelligence, confidence and anger. However, they reported hostility, impulsivity, risk-taking, psychopathy antisocial

behaviour, denial, criminal thinking and negative outlook (personal identity) to be strong determinants of group non-engagement. .

It should be noted that 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, Bryan, Davey & Casey, 2006). A variety of readiness assessments such as Readiness to Change Questionnaire (RCQ) (Rollnick, Heather, Gold, & Hall, 1992) and Violence Risk Scale (VRS) (Wong & Gordon, 2003) have been developed based on TTM. However, the model has attracted a series of criticisms in recent years (for a review, see Mossiere & Serin, 2014; Burrows & Needs, 2009; Sutton, 2001; Casey, Day, & Howells, 2005). Other models such as 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) developed the Corrections Victoria Treatment Readiness Questionnaire (CVTRQ) which was derived from MORM, and Day et al. (2009) modified it to the Violence Treatment Readiness Questionnaire (VTRQ) for use with violent offenders. However, despite having good psychometric attributes and empirical support for the overall model, these assessments do not provide evidence for specific factors (Mossiere & Serin, 2014), rely solely on self-report measures and focus primarily on one treatment type which means that there is no single assessment that covers all MORM's factors (Howells & Day, 2007)

The current study assessed treatment readiness in a high secure psychiatric setting. Our aim was to see if internal factors of the MORM predicted forensic patients' readiness to engage with groupwork interventions - using engagement rates as the outcome measure. To address some of the limitations in previous research such as the small sample sizes, exclusion

of treatment refusals, single treatments and solely the cognitive aspects of MORM, this study included a larger sample including treatment refusals, differential treatments, self-report *and* observational assessments.

Method

Sample

The sample consisted of 118 adult (>18 years) male forensic patients detained at a UK High Secure Hospital. Patients are admitted from judicial, custodial and care settings (Jamieson, Butwell, Taylor, & Leese, 2000). Individuals can be admitted directly from the courts if found guilty of a serious offence and considered to be suffering from a mental disorder. From custodial settings, prisoners, whose mental health status deteriorates, increasing the risk to self or others in the prison setting, are also referred. Similarly, admissions from a lower secure or non-secure inpatient hospital occur if individual risk increases, which means the person can no longer be safely managed in conditions other than high security. Index offences for the sample included: violence (65%), sexual offences (20%), and others, (e.g. arson, robbery, kidnapping - 15%). Diagnoses included: schizophrenic disorders (58%), personality disorders (27%), other disorders (6%), or unknown (9%). Patients' ethnicity comprised of 65.3% White, 28% Black / African / Caribbean / Black British, 0.8% Asian / Asian British, 1.7% Other ethnic group and 4.2% not reported. 17.8% of the sample were current patients while the rest (82.2%) were previous admissions. At the time of first referral to the service the average age of the sample was 33.3 years (SD, 8.5, median 33.1, mode, 18.2), and the average length of hospital stay was 45.5 months (SD 53.9, median 19.8, mode 3,45).

Groupwork therapy

All participants were referred to a Centralised Groupwork Service (CGS) at the study site. Referrals were made by participants' clinical teams, informed by a psychological formulation of needs conducted at admission to the hospital. All referred participants will complete a suitability assessment at the CGS upon receipt of a referral. This will typically occur within the first 6 months of admission, mental state or risk to self and others permitting. The suitability assessment process, along with recommendations for the individual's clinical team, will inform risk reduction and mental health restoration needs, and a recommended groupwork pathway, which can include a range of group interventions (see Table 1). Interventions broadly draw upon psychoeducation, cognitive behavioural and third wave therapies and psychodynamic models of therapy. The assessments (described below) aimed to provide information on clinical diagnosis, treatment planning, and interpersonal functioning with respect to participating in group therapy. Each pathway aims to be responsive to the individual, and will typically begin with groupwork to promote therapeutic engagement in the early period of admission, and then focus on restoring mental health, and finally reducing risk of future offending. For a more detailed description of the service and group interventions please refer to Perkins, Moore & Moore, (2007).

Insert Table 1 Here

Assessments

Since previous assessments derived from MORM (e.g. CVTRQ and VTRQ) do not include all MORM's internal factors (e.g. identity factor), we generated 11 predictors of the internal factors of the MORM from assessments routinely conducted with patients referred for groupwork. We chose CIRCLE as it provides observational assessment, which

complements the self-report measures, while used PAI due its comprehensiveness and multifaceted nature, which helped with creating the 11 internal factors. CORE-OM provided detail that was useful for creating affective predictors. This was also convenient given the retrospective design of the study.

Personality Assessment Inventory (PAI, Morey, 1991): 344 self-report items assessing a respondent's personality and psychopathology that is measured across four 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 ($\alpha > .81$ - Morey, 1991), and its use with forensic populations is supported (Douglas, Hart, & Kropp, 2001).

Clinical Outcomes in Routine Evaluation (CORE, Evans et al., 2000): 34 items assessing wellbeing, problems/symptoms, life functioning, and risk to self and others. CORE-OM has good internal consistency (.75 - .95) and good test-retest reliability with clinical samples (ICC $> .87$ - Evans et al., 2002).

The Chart of Interpersonal Reaction in Closed Living Environments (CIRCLE, Blackburn & Renwick, 1996): 51 items assessing compassion, nurturance and coercion. Assessments are based on raters' observations and scores are summed and standardised to produce a final score. 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).

Procedure

Ethical approval was granted by NHS Local Research Ethics Committee and the West London Mental Health Trust Research and Development Consortium. Assessment information and number and types of treatments that patients were offered were calculated alongside levels of engagement (i.e. completion, dropout, refusals). Treatment refusals

consisted of any treatment that the patient refused to take part in. Dropouts were any patient-initiated non-completion of treatments and therefore we excluded patient removals that were carried out by the facilitators or the service due to external factors such as transfers, deterioration of mental health etc. Finally, treatment completion was marked by a full completion of a groupwork by the patient. Since the PAI and CIRCLE items are rated on a 4-point likert scale and the CORE-OM includes a 5-point likert scale, to create the MORM predictors, patients' data on PAI, CORE-OM and CRICLE were recoded, item scores were standardised and Z-scores calculated. The PAI, CIRCLE, and CORE-OM items were then categorised and endorsed according to MORM's internal factor descriptions by one researcher whilst a random selection of items was categorised by another to test for reliability. As initial agreement was 78%, a third rater provided judgement on disagreed items. Final agreement was 95% and remaining disagreed items were deleted - leaving 149 items describing the internal factors of MORM. The "attitude towards treatment" category was unclassifiable and was removed, leaving 11 predictors. Cronbach's alphas for all constructs except goal seeking strategies ($\alpha = .61$), ranged from $\alpha = 0.7$ to $\alpha = 0.9$ (see Table 3), showing "acceptable" to "excellent" internal consistency (George & Mallery, 2003).

Planned analysis

We took into consideration that patients might refuse some of the treatments that they were offered, while they might also drop out or complete others. Therefore, instead of arbitrarily categorising patients into three separate categories, we treated refusals, dropouts and completions as *rates/proportion*. For example, unlike a simple binary outcome in which the outcome would be whether a patient refused or didn't refuse a treatment, refusal is treated as a series of events out of a series of trials which in our case varies for each patient (i.e. number of treatments offered to that patient). Therefore, using SPSS, a General Linear Model

(GLM) was used to generate three sets of binomial regression analysis. Here treatment refusals, dropouts, and completions formed the DV for each analysis and the predictors formed the IVs. Subsequent to entering all the predictors into the model (i.e. forced model), we then carried out a stepwise elimination, setting the α to .15 as the criteria in order to improve the model and identify the strongest combinations of factors that would predict refusals, dropouts or completion rates..

Results

A total of 392 referrals for groupwork were made for 118 patients. 115 (29.5%) of these referrals were refused, 63 (16%) dropped out of and 206 (52.5%) were completed by the patients. Eight (2%) of these referrals were due to external termination by the staff. We also assessed the relationship between the predictors (Table 2). Several predictors showed strong relationship with one another, however, subsequent to administrating a multicollinearity diagnosis, the Variation Inflation Factor (VIF) for none of the predictors exceeded the value of 5 and the Threshold value did not fall below .2 for any of the predictors

INSERT TABLE 2 HERE

Treatment refusals

After entering all the predictors into the model, Psychopathic Cognition and Negative Affect were positive predictors of refusal rates. Following stepwise elimination, Effective Goal Seeking Strategies was also a significant predictor. Therefore patients with higher

reported levels of psychopathic cognition, negative affect towards self and perceived effective strategies to attain goals, are more likely to refuse groupwork interventions.

Treatment dropouts

After entering all the predictors into the model, Emotional Dysregulation and Low Competency to Engage were significant predictors of dropout rates. Following stepwise elimination, low levels of General Distress also became a significant predictor. Therefore patients with difficulties with emotion regulation, and a low perceived competency to participate in treatment, were more likely to have dropped out of groups, as were patients with low level of reported general distress.

Treatment completions

After entering all the predictors into the model, Low Psychopathic Cognition, High Competency to Engage and Low Goal Motivation positively predicted treatment completions while. Ineffective Goal Seeking Strategies and High Levels of General Distress were marginally significant Stepwise elimination did not improve the model. This shows that when factors that predict refusals and dropouts are absent, patients are likely to complete treatment.

INSERT TABLE 3 HERE

Discussion

This study aimed to investigate whether the internal factors of the MORM could predict forensic patients' engagement with groupwork interventions in a secure setting. Findings show that half of the treatments that were offered to patients were completed, while around sixth of them were not completed. We also discovered that patients refused just under a third

of these referrals. The refusals were higher than previous reports in other high secure hospitals (Young et al., 2010), while lower than low/medium secure hospitals (Long et al., 2012). The dropouts were similar to rates reported for institutional settings (McMurrin & Thedossi, 2007) and high secure hospitals (Sheldon et al., 2010). Furthermore, the results provided some support for the number of MORM constructs while other factors did not significantly predict engagement. These non-significant findings could be partially explained by the small sample size relative to the number of predictors, as well as the strong correlation that existed between the predictors, which reduced the power of detecting smaller effect sizes. Two predictors showed counter-intuitive relationship with the engagement outcome and these will be discussed in more detail.

Treatment Refusals

That psychopathic cognition predicted refusals is consistent with previous findings (e.g. Beutler, Clarkin, & Bongar, 2000). Antisocial and self-centred attitudes may influence an individual view that there is no need to change and externalising control may lead to blaming others and a failure to take responsibility for one's actions or need to change (Chambers, Eccleston, Day, Ward, & Howells, 2008). Also, a desire to exert power over others may lead an offender to consider treatment as a threat to his/her powerful self-image (Hemphill & Hart, 2002). In short, psychopathic cognition may lead patients to see treatment as inappropriate - and patients who see treatments as inappropriate are likely to refuse treatments (Brown & Tully, 2013). Negative self-affect also predicted refusals. Patients with negative emotions such as shame may believe that their identity is unchangeable and "bad" so there is no point in therapy, or that therapy may be harmful if discussing traumatic and offending experiences (Tangney & Dearing, 2002). They may also refuse group interventions to avoid others' judgments (Mann, Webster, Wakeling, & Keylock, 2013). Negative affect such as shame also links to anger (Tangney, 1995), hostility (Hoglund & Nicholas, 1995),

low compassion (Tangney, 1991), and low victim empathy (Bumby, 2000) – which may feed difficulties in recognising the need for personal change. Indeed, we found that negative self-affect, together with psychopathic cognition, were the most important predictors of treatment refusals. Patients with effective goal seeking strategies were also more likely to refuse treatments. Whilst this seems counter-intuitive, it is possible that these offenders believe that they have no need to change their *offending* behaviour, while those with ineffective goal seeking strategies (e.g. substance misuse, self-regulative issues and organisational problems) become motivated to engage and start their treatments (i.e. therapy *incongruent* goal motivation, Howells & Day, 2007; Ward & Stewart, 2003). However, It should also be noted that the ineffective goal seeking strategies construct received the lowest value in terms of its internal consistency ($\alpha = .60$), and therefore it is possible that the construct was not measuring what it was intended to measure, which might also explain the counter intuitive findings.

Treatment Dropouts

Dropouts were predicted by low competency for therapy engagement, high emotional dysregulation and low general distress. Low cognitive (e.g. verbal skills) and intellectual abilities, as well as low educational achievements have previously been linked with treatment dropouts (Olver et al., 2011) and so it is not surprising that patients with little cognitive competence do not adequately engage with treatment. That we examined general distress is relatively unusual in forensic settings. Although research varies as to whether general distress enhances or reduces treatment readiness (Holdsworth et al., 2014), there is evidence that treatments are effective when individuals experience moderate to high general distress (Beutler et al., 2000) because distress can be motivational (Day et al., 2010) and tolerating it can enhance readiness (Tetley et al., 2012). Indeed, general distress may generate offenders' need for change and their engagement in treatment is because they seek release from distress.

In turn this can be used to address offending behaviour (Casey & Rottman, 1998) since offenders access their offence supportive schemas when distressed, which can give therapy more chance of success (Serran, Fernandez, & Marshall, 2003). A caveat is that distress should not be too high since very high levels can impede readiness (Howell & Day, 2006). Higher emotional dysregulation also predicted dropouts. Geer, Becker, Gray and Krauss (2001) suggest that offenders with low self-control have difficulty in completing treatments and impulsive offenders can be disruptive, break programme rules and thus, cannot benefit from programme goals (Ward et al., 2004).

Treatment Completions

Treatment completion was predicted by low psychopathic cognition, high general distress, high competency to engage, low goal motivation and ineffective goal seeking strategies. Research has previously linked completion with lower levels of psychopathy, especially antisocial cognition (McCarthy & Duggan, 2010). Ward and Stewart (2003) argue that factors besides criminogenic needs, such as ineffective goal seeking strategies may motivate offenders to engage and complete treatments. With regards to distress, Staton-Tindall et al. (2007) found a stronger negative relationship between anxiety/depression and treatment participation in females compared to male offenders, suggesting possible gender differences. That high motivation decreased treatment completion is counter-intuitive. The difficulty of measuring dynamic constructs such as motivation using self-report measures has been highlighted in previous research (Casey et al., 2007). Furthermore, the motivation construct in the current study assessed a determination to change a problematic behaviour (e.g. "I need to make some important changes to my life") but was not specific to offending (e.g. "I need to change my offending behaviour"). Ward et al. (2004) conceptualise motivation as intent to attain goals and argue that readiness results from desire to change offending behaviour. Indeed, Howells and Day (2007) suggest that psychopaths may be

motivated to achieve destructive goals and so perform poorly in treatments. Therefore the selected assessments in the current study may not correspond to therapy-congruent motivations but instead related to all motivations including atypical or destructive ones.

Research also suggests that unrealistic goals/expectations can cause treatment attrition (Day et al., 2010; Tetley et al., 2012) and so perhaps our *low motivation* assessments stem from offenders having more realistic expectations of what they could achieve via therapy.

Research also links social desirability with treatment readiness (Serin & Kennedy, 1997) and, since low motivation negatively correlated with almost all other predictors it could be that high motivation scores represent for some, a “fake” response – which can impede readiness.

Limitations of this study include that attitude towards treatments and external factors of MORM were not assessed but this is something that future work can assess. Also, PAI and CORE-OM items were not offender specific and many factors such as goal motivation and problem recognition/help-seeking were related to *any* problems important to offenders which may explain why these were not good predictors of treatment engagement. However, research shows that replacing, for example, “my drinking” with “my offending” in readiness assessments do not lead to differences in treatment readiness (McMurrin et al., 1998) and so this may not explain sufficiently our non-significant findings.

Future research could address the above limitations and explore how MORM’s internal and external factors work in tangent to predict readiness. However, since MORM does not cover all variables related to attrition, other factors/readiness models also warrant research attention (McMurrin, 2012; Sheldon et al., 2010; Tetley et al., 2012). Furthermore, although refusals and dropouts are clear evidence of non-engagement, some patients who stay in treatments may engage minimally and so future research could use holistic, multimodal and dynamic measures to assess levels of treatment engagement. Also, it may be more accurate to assess readiness at different stages of treatment, since readiness increases over the

course of treatment (Day et al., 2009). Since refusals outnumbered dropouts, our study highlights the importance that future work should assess refusals since ignoring them leaves us with inaccurate estimations of non-engagement (Quinsey, Harris, Rice, & Lalumiere, 1993, Long et al., 2012). Finally, it is safe to assume that the relationships between MORM factors and readiness may differ according to different populations and settings. Given that the current study was carried out in high-secure psychiatric setting, the generalizability of our findings is limited only to this population/setting. It is therefore important that the current findings are replicated with different types of offenders, settings, and treatments.

Conclusion

The current study shows the potential contribution of the MORM model, specifically the proposed internal factors, for assisting in assessments of patient readiness to engage with group psychological therapy. Chiefly it highlights the importance of considering readiness before encouraging patients to attend treatment. If patient readiness is not assessed before assigning individuals to treatment then there is a risk of patients refusing treatment or dropping out due to issues such as those outlined above. By using models such as the MORM then readiness may be assessed objectively and enable clinicians to help patients address problematic issues before treatment. This will enable patients to maximise the benefits of programme provision. Also, assessing readiness psychometrically enables strategies to be developed to offset patients' problems. For example, individuals with low competencies may benefit from one-to-one sessions before entering group therapy, or motivational interviewing may benefit treatment resisters (McMurran, 2009). General literature in psychotherapy suggests that strategies (e.g. role induction and expectations, treatment contracts and negotiation and affect expression) may help enhance engagement among patients (Ogrodniczuk, Joyce & Piper, 2005). This has little research attention, but when the high NHS costs (Sampson, James, Huband, Geelan, & McMurran, 2013) and recidivism rates

(McMurran & Theodosi, 2007) associated with non-engagement are considered, the importance of this is highlighted. Assessing readiness is one way to help identify where limited resources may be targeted – and the MORM is a promising model for this form of measurement.

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Table 2. The inter-correlations of the Internal MORM predictors

| | PC | HA | SE | GD | ED | ER | PR/HS | CE | GM | GSS | PI |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|--------|------|----|
| PC | - | | | | | | | | | | |
| HA | .59** | - | | | | | | | | | |
| SE | .31** | .61** | - | | | | | | | | |
| GD | .24** | .58** | .76** | - | | | | | | | |
| ED | .34** | .56** | .52** | .65** | - | | | | | | |
| ER | .25** | .52** | .63** | .77** | .66** | - | | | | | |
| PR/HS | -.11 | -.31** | -.45** | -.47** | -.51** | -.64** | - | | | | |
| CE | .17 | .50** | .74** | .73** | .40** | .55** | -.31** | - | | | |
| GM | -.09 | -.27** | -.30** | -.33** | -.39** | -.44** | .68** | -.08 | - | | |
| GSS | .37** | .49** | .54** | .56** | .61** | .53** | -.37** | .40** | -.38** | - | |
| PI | -.06 | .25** | .19* | .21* | .11 | .08 | -.03 | .37** | .24** | -.00 | - |

Note: * $p < .05$, ** $p < .01$, **PC** = Psychopathic Cognition, **HA** = Hostile Attitudes, **SE** = Low Self-Efficacy, **GD** = General Distress, **ED** = Emotional Dysregulation, **ER** = Negative Emotional Reaction, **PR/HS** = Lack of Problem Recognition/ Help Seeking, **CE** = Low Competency to Engage, **GM** = Low Goal Motivation, **GSS** = Disruptive Goal Seeking Strategies, **PI** = Offences Supportive Personal Identity

Table 1. The descriptive statistics of refusals, dropouts and completions for individual treatments

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| Treatments' Names | Treatment Modality & Duration | Number of Treatments Offered | Number of removals due to external factors | Number of Treatments Refused | Number of Treatments Dropped Out | Number of Treatments Completed |
|-------------------|-------------------------------|------------------------------|--|------------------------------|----------------------------------|--------------------------------|
| ATP | | 55 | 0 (0%) | 12 (22%) | 8 (14%) | 35 (64%) |
| CBT | | 24 | 0 (0%) | 5 (21%) | 2 (8%) | 17 (71%) |
| DBT | | 16 | 0 (0%) | 3 (19%) | 6 (37%) | 7 (44%) |
| ETS | | 50 | 0 (0%) | 11 (22%) | 9 (18%) | 30 (60%) |
| FARS | | 17 | 0 (0%) | 10 (59%) | 2 (12%) | 5 (29%) |
| FIRE | | 12 | 1 (8%) | 3 (25%) | 0 (0%) | 8 (67%) |
| GAD | | 3 | 3 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| HOM | | 10 | 0 (0%) | 4 (40%) | 3 (30%) | 3 (30%) |
| LEAVERS | | 38 | 0 (0%) | 13 (34%) | 7 (18.5%) | 18 (47.5%) |
| MBT | | 4 | 2 (50%) | 2 (50%) | 0 (0%) | 0 (0%) |
| R&R | | 18 | 1 (5.5%) | 8 (44.5%) | 0 (0%) | 9 (50%) |
| SMU | | 36 | 0 (0%) | 13 (36%) | 5 (14%) | 18 (50%) |
| SND | | 7 | 0 (0%) | 0 (0%) | 3 (43%) | 4 (57%) |
| SOG | | 23 | 0 (0%) | 8 (35%) | 3 (13%) | 12 (52%) |
| UMI | | 44 | 0 (0%) | 13 (29.5%) | 8 (18%) | 23 (52.5%) |
| UPD | | 11 | 0 (0%) | 2 (18%) | 1 (9%) | 8 (73%) |
| URI | | 3 | 1 (33%) | 2 (67%) | 0 (0%) | 0 (0%) |
| VOG | | 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. Anger Treatment Programme (ATP), Cognitive Behavioural Therapy (CBT), Dialectical Behavioural Therapy (DBT), Enhanced Thinking Skills (ETS), Family Awareness and Relationship Skills (FARS), Fire Intervention Programme (FIRE), Groupwork for Art and Drama (GAD), Homicide Victims Known/Stranger (HOM), LEAVERS, Mentalisation Based Therapy (MBT), Reasoning & Rehabilitation (R&R), Stigma and Discrimination (SND), Sex Offender Groupwork (SOG), Substance Misuse (SMU), Understanding Mental Illness (UMI), Understanding Personality Disorder (UPD), Understanding Relationships and Intimacy (URI) and Violent Offenders Group (VOG).

Table 3. Binomial Regression Coefficients (B) of Internal MORM Predicting Treatment Engagement.

| MORM Factor | Internal MORM | Predictor Compositional Structure & Description | Internal Consistency | Treatment Refusals B (Odds Ratio) | Treatment Dropouts B (Odds Ratio) | Treatment Completion B (Odds Ratio) |
|------------------|-------------------------|--|----------------------|--------------------------------------|--------------------------------------|--|
| Cognitive | Hostile Attitudes | 21 items, describing a person who perceives others as threatening and is negative/cynical towards others. Examples: “people treat me badly on purpose”, “expression is hostile and unfriendly”, “(not) respectful to people in the authority”. | $\alpha = .825$ | 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: “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”. | $\alpha = .855$ | .578 (1.78)** | NS | -.605 (.546)** |
| | 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: “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”. | $\alpha = .777$ | 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 have felt tense, anxious or nervous”, “I have felt like crying”, “I usually worry about things more than I should”, “I have exaggerated fears”. | $\alpha = .904$ | NS | -.963 (.382)* | .531 (1.7)* |
| | 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: “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” | $\alpha = .906$ | NS | .647 (1.91)* | NS |
| | Negative Affect | 8 items, describe a patient that tends to negatively evaluate self, is experiencing shame, and believes he/she has an inferior identity. | $\alpha = .799$ | .388 (1.47)* | NS | NS |

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Examples: “sometimes I think I’m worthless”, “I feel that I have let everyone down”, “I have felt humiliated or shamed by other people”.

| | | | | | | |
|--------------------|--|---|-----------------|---------------|-------------|----------------|
| 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. 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”. | $\alpha = .700$ | NS | NS | NS |
| | Low Competency | 14 items, represents an individual that lacks the required social and cognitive skills to engage in a therapy. Examples: “shy in group situations”, “talking to people has felt too much for me”, “I can’t seem to concentrate very well”. | $\alpha = .728$ | NS | !1 (3.01)** | -1.17 (.311)** |
| Volitional | Low Goal Motivation | 8 items, describing an offender that does not show any indication or motivation to change the problematic behaviour. 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”. | $\alpha = .706$ | NS | NS | .579 (1.78)** |
| | 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. 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”. | $\alpha = .601$ | -.518 (.596)* | NS | .514 (1.67)* |
| 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. 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” | $\alpha = .838$ | NS | NS | NS |

Note:; NS = Not Significant, *p<.05, **p<.01, N=118, Referrals (Treatments Offered) = 392