

Psychometric attributes associated with attrition within a prison-based democratic therapeutic community

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Abstract

Purpose – *The purpose of this paper is to examine the psychometric characteristics of male offenders who joined a democratic therapeutic community and their relationship to attrition.*

Design/methodology/approach – *Residents who left therapy prematurely during the assessment phase (N = 46) and residents who left therapy prematurely during core therapy (N = 202) were compared to residents who completed therapy (N = 52) on two psychometric measures: Raven's Standard Progressive Matrices and The Blame Attribution Inventory.*

Findings – *A multinomial logistic regression analysis showed higher levels of external blame can predict attrition during therapy; those with higher levels of external attribution are significantly more likely to leave therapy prematurely, including both during the assessment phase and during core therapy. Raven's Standard Progressive Matrices score did not significantly predict whether an individual left therapy prematurely.*

Originality/value – *Support was found for existing research within the academic evidence base. The findings have both empirical and clinical utility, suggesting during the assessment phase of therapy, practitioners can identify residents that may require additional support to maintain engagement, minimising the potential for premature departure. The implications of the findings are discussed, with suggestions made for future research.*

Keywords *Therapeutic community, Prison, Attrition, Drop-out, Non-completion, Male offenders, External blame, Intellectual ability*

Paper type *Research paper*

Introduction

Treatment interventions for the offender population have been widely researched, with attrition identified as somewhat inevitable (Wormith and Olver, 2002). Further, research has suggested non-completion of treatment may be a predictor of recidivism (Hanson and Bussiere, 1998; McMurrin and Theodosi, 2007). Attrition can have adverse consequences for the individual, other participants in treatment and for staff, including reduced staff morale (McMurrin et al., 2010).

Research has explored reasons for non-completion of treatment within offender populations, including treatment readiness (Howells and Day, 2007). A meta-analysis conducted by Olver et al. (2011) identified several variables associated with treatment non-completion, including age, criminal history, personality, intelligence, motivation and level of risk. Non-completers was associated with higher risk offenders. However, this meta-analysis included different definitions of "drop out". Without homogeneity among studies, the ability to draw reliable conclusions is limited. Wormith and Olver (2002) also compared treatment completers and non-completers, in an offender sample, finding those who do not complete are often younger, less well educated and have limited employment history. They also generally have a higher number of previous convictions (Zanis et al., 2003).

Received 30 October 2022
Revised 31 October 2022
Accepted 31 October 2022

The authors gratefully thank the reviewers who took the time to review this article for publication.

Declaration of conflicting interests: The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding: The author(s) received no financial support for the research, authorship and/or publication of this article.

Research has supported these findings within a sample of participants with personality disorder (McMurrin *et al.*, 2010; Olver *et al.*, 2011). McMurrin *et al.* (2010) conducted a systematic review of 25 empirical studies on psychosocial treatments for personality disorder to identify factors associated with treatment non-completion. The findings identified a range of patient characteristics, need factors and environment factors associated with non-completion. These included age, level of education, emotional neglect during childhood, juvenile convictions, a diagnosis of personality disorder and higher levels of avoidance.

According to McMurrin and Theodosi (2007), non-completion of treatment approaches, such as therapeutic communities (TCs), requires separate study. As noted in the Ministry of Justice (2013b, p. 4), democratic therapeutic communities (DTCs) “provide treatment for offenders whose primary criminogenic risk factors need to be targeted, while simultaneously addressing psychological and emotional disturbance”. DTCs aim to reduce re-offending through challenging offence-related risk factors across a variety of learning contexts. This “embraces therapies based on psychodynamic, cognitive behavioural and social learning theories, through which residents living in a democratic therapeutic community can change all aspects of their behaviour” (Ministry of Justice, 2013b, p. 4).

DTC models use a multi-modal approach and have a strong treatment effect (McGuire, 2002). The learning process is enabled through participation in small therapy groups and large community meetings, which foster the core principles of community living. That is, a tight-knit environment where everything is open for examination and feedback so that residents are given the freedom to display problematic behaviour and the opportunity to learn from it (Warren, 2004; Ministry of Justice, 2013b).

Research has found a high proportion of residents leave DTCs prematurely. Rutherford (2008) reported a non-completion rate of 61% over a two-year period. In the UK, a small cluster of studies have investigated non-completion in prison DTCs. A study by Cullen (1992) found a reconviction rate of 33% for TC graduates compared to an average of 44% for adult male prisoners. Further, those released after 18 months in therapy had a lower reconviction rate than those released before this time. The research reveals a strong relationship between the length of stay and treatment effect, with residents who stay between one and two years or more having the best outcome.

Previous studies on the efficacy of DTCs have explored reconviction rates (Taylor, 2000) and psychometric change (Genders and Player, 1995; Newton, 1998; Shine, 2001). Genders and Player (1995) and Shine (2001) found those who left treatment early tended to be less intelligent as measured by the Raven’s standard progressive matrices (Raven *et al.*, 2003) and score higher on extrapunitive hostility and tough mindedness as measured by Eysenck’s Revised Personality Questionnaire (EPQ-R; Eysenck and Eysenck, 1991). The findings also suggested a relationship between sentence length and length of stay, with premature leavers serving shorter sentences.

The *DTC Assessment Manual* (Ministry of Justice, 2013a) suggested a profile of high psychoticism, external attribution of guilt, extra punitive hostility and high extraversion are predictive of those who are likely to have difficulties engaging in the DTC model. The Ministry of Justice (2013a, p. 31) outlines several factors that could contribute to individuals leaving therapy prematurely; “Paranoid ideation or overt behaviours such as self-harm can limit engagement and, for example, lead to early termination from treatment, a factor which may, for DTCs, be associated with increased risk of recidivism”. Jones (1997) identified several factors relevant to treatment engagement, including anxiety and depression, overt suspicion and offence specific risk factors.

Previous research has indicated that time in treatment within prison-based DTCs is associated with personality traits, particularly traits of psychopathy. Shine and Hobson (2000) studied a sample of 104 residents of a prison-based TC in the UK. This found high

scores on the Hare Psychopathy Checklist Revised were significantly associated with failure to progress from the assessment unit onto a therapy wing and the number of adjudications and security information reports. The results indicated a trend of psychopathy to be associated with shorter periods in therapy, but this was not significant.

Miller *et al.* (2004) identified differences in demographic, criminal and psychometric characteristics between residents who prematurely left TCs and those who completed. Further, psychometric composition and personality type differed between sub-groups of premature leavers, specifically residents who were “asked to leave” and “requested to leave”. Previous research has supported distinction between different categories of “leavers” when investigating treatment non-completion for offenders with personality disorders (McMurrin *et al.*, 2010; Olver *et al.*, 2011). This research highlights the need to distinguish between different categories of therapy leavers when investigating reasons for non-completion.

Contrary to past research, the findings of Miller *et al.* (2004) did not corroborate previously identified risk factors associated with non-completion, including age, pre-convictions, substance abuse, extrapunitive hostility and tough mindedness. However, the authors identified this was possibly due to the small sample size used in the study and recommend the completion of longitudinal research to enhance understanding of this topic. Supporting the findings of Miller *et al.* (2004), Rutherford (2008) found age and type of index offence were not significant predictors of length of stay in TC treatment. Rutherford (2008) did, however, identify that participants belonging to a black and minority ethnic group were significantly less likely to stay in treatment compared to white participants. By contrast, research by Newton (2000) found ethnicity did not distinguish between therapy leavers, highlighting the contradictory findings within the current evidence base.

Research has explored the relationship between length of stay and psychometric measures on a female prison-based DTC (Hastings, n.d.). Residents who left treatment prematurely ($N = 48$) were compared to those who completed ($N = 49$) on psychometric measures: The Standard Progressive Matrices (SPM); The EPO-R; The Blame Attribution Inventory (BAI) and The Hostility and Direction of Hostility Questionnaire. Findings suggest residents who did not complete had significantly lower levels of intelligence and higher levels of tough mindedness and extrapunitive hostility compared to residents who completed (Hastings, n.d.). This research recommended future research compare any differences between sub-groups of non-completers, including residents who leave before starting therapy. Therefore, this research aims to fill the current gap in the existing evidence base by distinguishing between those who completed therapy, those who left prematurely during the assessment phase and those who left prematurely during core therapy.

Aims of the current study

The current study aimed to explore attrition in a male prison-based DTC. The psychometric characteristics included in this research were guided by the existing evidence base; intellectual ability has been linked with non-completion of TC treatment, as has *locus* of control, which overlaps with external attribution (Shine, 2001). All hypotheses were one-tailed and predicted as follows:

- The men who did not complete therapy would have significantly lower levels of intellectual ability as measured by the Raven’s SPM.
- The men who did not complete therapy would have significantly higher levels of external attribution as measured by the BAI.

Method

Design

The research was a retrospective independent design comparing “completers” to two types of “non-completers” on two measures, external blame and intellectual ability. Residents who left therapy prematurely were categorised as leaving during the assessment phase or during core therapy. There was no distinction made between reasons for leaving, e.g. whether participants withdrew or were deselected from therapy, due to availability of data. Please note the term “completer” refers only to duration of stay and does not consider therapeutic success.

Participants

Participants included male offenders from a Category B prison in the UK, who had engaged in the TC. The study involved use of routinely collected data for all residents during the TC intervention. After the data set was reviewed to ensure each participant had a full set of data, including psychometric information and treatment outcome, the total sample was 300 participants ($N = 300$). The sample was comprised of participants who completed therapy ($N = 52$), participants who left during assessment ($N = 46$) and participants who left during core therapy ($N = 202$).

Distinction of the assessment and core therapy stage was underpinned by guidance within the *DTC Assessment Manual* (Ministry of Justice, 2013a). This outlined the “assessment phase” as a 12-week period in which each resident is assessed on their eligibility and suitability, against set criteria. The aim of this is to “identify those who are suitable for therapeutic community treatment, assist in the prioritisation of offenders selected for treatment, highlight those who may present difficulties within DTCs and assist communities as they aim to consist of an appropriate balance in terms of treatment needs, offence types and personality profiles” (Ministry of Justice, 2013a, p. 4). Once assessed as suitable, the resident enters the “core therapy” stage, in which the resident engages in therapeutic meetings and community living.

Analysis of demographics identified the mean age of participants to be 38.2 years old ($SD = 9.3$). This was relatively stable across the three participant groups, with the mean age of the completed therapy group being 38.6 years old ($N = 52$), left during assessment being 37.3 years old ($N = 46$) and left during core therapy being 38.2 years old ($N = 202$). Refer to [Tables 1](#) and [2](#) for a breakdown of participant demographics in relation to ethnicity and offence type.

Measures

The measures used were those routinely administered to residents during the initial phase of the TC: The Raven’s SPM (Raven *et al.*, 2003) and The BAI (Gudjonsson, 1984). The Raven’s SPM was designed to measure intellectual ability and to assess the educative component of general intelligence. This relates to an individual’s ability to develop and generate non-verbal constructs and their capacity for reflection, insight and construction of meaning and identification of relationships (Newberry and Shuker, 2011). The Raven’s SPM test consists of 60 black and white puzzles with multiple-choice response options. An individual’s total score ranges from 0–60, with lower scores indicating a lower level of intellectual ability. Research has indicated the Raven’s SPM has good internal consistency and retest reliability (Raven *et al.*, 2003).

Gudjonsson (1984) initially developed the BAI, later revised by Gudjonsson and Singh (1989). This is a self-report measure concerned with how offenders attribute responsibility for their behaviour in relation to three domains: external attribution, mental attribution and guilt. The inventory consists of 42 true or false items, which measure how offenders form

Table 1 Demographic information relating to participant ethnicity for the total sample (N = 300), participants who completed therapy (N = 52), left during assessment (N = 46) and left during core therapy (N = 202)

<i>Ethnicity of participant</i>	<i>Total sample (N = 300)% (N)</i>	<i>Completed (N = 52)% (N)</i>	<i>Assessment (N = 46)% (N)</i>	<i>Core therapy (N = 202)% (N)</i>
White British	74.0 (222)	73.1 (38)	65.2 (30)	76.2 (154)
Black Caribbean	7.7 (23)	11.5 (6)	8.7 (4)	6.4 (13)
Mixed White and Black Caribbean	3.0 (9)	3.8 (2)	13.0 (6)	0.5 (1)
Mixed (any other)	2.7 (8)	0.0 (0)	0.0 (0)	4.0 (8)
White (any other)	2.3 (7)	1.9 (1)	4.3 (2)	2.0 (4)
Asian Indian	1.7 (5)	3.8 (2)	2.2 (1)	1.0 (2)
Any other group	1.7 (5)	1.9 (1)	0.0 (0)	2.0 (4)
Asian Pakistan	1.3 (4)	1.9 (1)	0.0 (0)	1.5 (3)
Asian (any other)	1.3 (4)	1.9 (1)	2.2 (1)	1.0 (2)
Asian Bangladeshi	1.0 (3)	0.0 (0)	2.2 (1)	1.0 (2)
Black (any other)	1.0 (3)	0.0 (0)	2.2 (1)	1.0 (2)
White Irish	1.0 (3)	0.0 (0)	0.0 (0)	1.5 (3)
Black African	0.7 (2)	0.0 (0)	0.0 (0)	1.0 (2)
Mixed black and white African	0.3 (1)	0.0 (0)	0.0 (0)	0.5 (1)
Mixed white and Asian	0.3 (1)	0.0 (0)	0.0 (0)	0.5 (1)

Table 2 Demographic information relating to participant index offence type for the total sample (N = 300), participants who completed therapy (N = 52), left during assessment (N = 46) and left during core therapy (N = 202)

<i>Offence type of participant</i>	<i>Total sample (N = 300)% (N)</i>	<i>Completed (N = 52)% (N)</i>	<i>Assessment (N = 46)% (N)</i>	<i>Core therapy (N = 202)% (N)</i>
Violence against the person	64.7 (194)	69.2 (36)	63.0 (29)	63.9 (129)
Robbery	20.3 (61)	19.2 (10)	19.6 (9)	20.8 (42)
Drug offences	4.3 (13)	1.9 (1)	4.3 (2)	5.0 (10)
Sexual offences	3.3 (10)	1.9 (1)	6.5 (3)	3.0 (6)
Burglary	3.0 (9)	3.8 (2)	4.3 (2)	2.5 (5)
Arson	2.3 (7)	1.9 (1)	2.2 (1)	2.5 (5)
Other indictable offences	2.0 (6)	1.9 (1)	0.0 (0)	2.5 (5)

blame attributions for their crimes and the extent to which they feel remorse. The current research included only one of the three independent attribution scores, external attribution, which relates to blaming the crime on social circumstances, victims or society. Research using the BAI has indicated the tool possesses acceptable test-retest stability and the sub-scales have acceptable internal consistency (Cima *et al.*, 2007; Fox *et al.*, 2003).

Procedure

Written consent to undertake psychometric assessments and for this data to be used for research purposes was collected from all participants during the assessment phase of therapy. Data obtained from psychometric questionnaires was stored securely in both paper and electronic forms. Data for analysis was gathered from information routinely collected for TC residents. Following this, psychometric scores were used to investigate any significant differences between residents who completed therapy, left therapy prematurely during assessment or left therapy prematurely during core therapy.

Results

Assumption testing

The assumptions of the data for parametric analysis were investigated. Independence of errors was fulfilled, with the outcome variables being mutually exclusive. Linearity was

investigated, which confirmed there was a linear relationship between the variables (> 0.05). The collinearity diagnostic test indicated there was no multicollinearity, and the data meets the assumption (VIF, 1.002). Following the assumption testing, a multinomial logistic regression was selected as an appropriate method of statistical analysis.

Statistical analysis

A multinomial logistic regression was conducted. A goodness-of-fit test was used to measure how well sample data represented expected data. The “Pearson” (0.906) and “Deviance” (0.942) values were not significant (> 0.05), which indicated the predicted values were not significantly different from the observed values. Therefore, the model was considered a good fit (Field, 2009). Table 3 outlines the results of the multinomial logistic regression.

The likelihood ratio test indicated a significant main effect of external blame, $X^2(2) = 8.68$, $p < 0.05$. External blame significantly predicted whether a person left during the assessment phase, $b = 0.19$, Wald $X^2(1) = 4.33$, $p < 0.05$. The odds ratio indicated that as external blame increased by a unit, the change in the odds of leaving prematurely during assessment (compared to completing therapy) was 1.21: participants were more likely to leave during assessment than complete therapy if they had a high level of external blame. External blame also significantly predicted whether a person left prematurely during core therapy, $b = 0.21$, Wald $X^2(1) = 6.84$, $p < 0.01$. The odds ratio indicated that as external blame increased by a unit, the change in the odds of leaving prematurely during core therapy (compared to completing therapy) is 1.23: participants were more likely to leave in core therapy than complete therapy if they had a high level of external blame.

Raven’s SPM score did not significantly predict whether an individual left therapy prematurely during assessment, compared to completing therapy, $b = -0.03$, Wald $X^2(1) = 1.13$, $p > 0.05$. Raven’s SPM score did not significantly predict whether an individual left therapy prematurely during core therapy, compared to completing therapy, $b = -0.04$, Wald $X^2(1) = 2.17$, $p > 0.05$.

Discussion

The results of this study suggest male offenders who leave the TC prematurely differ in levels of blame attribution, compared to those that complete therapy. Analysis suggests an individual with a high level of external blame is more likely to leave during the assessment phase or leave during core therapy than complete therapy. However, intellectual ability did not significantly predict whether an individual left therapy prematurely, either during the assessment phase or during core therapy. This research used a large sample size ($N = 300$) and contributes to the existing evidence base by making a distinction between different types of premature leavers, residents who left during the assessment phase and those who left during core therapy.

Table 3 Multinomial logistic regression, with premature leavers in assessment and core therapy compared to completers

	<i>B (SE)</i>	<i>95% CI for odds ratio</i>		
		<i>Lower</i>	<i>Odds ratio</i>	<i>Upper</i>
<i>Assessment vs completed</i>				
External attribution (BAI)	0.19 (0.09)	1.01	1.21	1.46
Intellectual ability (Raven’s)	-0.03 (0.03)	0.91	0.97	1.03
<i>Core therapy vs completed</i>				
External attribution (BAI)	0.21 (0.08)	1.05	1.23	1.44
Intellectual ability (Raven’s)	-0.04 (0.02)	0.92	0.97	1.01

The results supported the hypothesis that men who did not complete therapy have significantly higher levels of external attribution as measured by the BAI. The TC model advocates offenders take responsibility for their actions, which may explain the findings of this research. Residents with high levels of external attribution (who blame their offending on social circumstances, victims or society) may be more likely to struggle engaging in the therapeutic process and leave therapy prematurely. However, these findings are in contrast to the research conducted by [Hastings \(n.d.\)](#), which suggested attribution of blame for offending does not significantly influence length of stay in a TC. There is also a growing evidence base suggesting externalisation of blame and minimisation of responsibility may serve as a coping strategy ([Maruna and Mann, 2006](#)).

Intellectual ability, as measured by the Raven's SPM, was not significantly associated with length of stay in therapy. These findings did not support previous research ([Hastings, n.d.](#)), which found non-completers to be statistically less intelligent than offenders who remained in therapy. However, this research involved a sample of female offenders, which may account for differences in the research findings. [Genders and Player \(1995\)](#) and [Shine \(2001\)](#) found those who left treatment early tended to be less intelligent as measured by the Raven's SPM ([Raven et al., 2003](#)), which were not findings supported by the current research. One possible explanation for this may relate to increased understanding of cognitive functioning, aided by developments in the evidence base in the past 20 years. This has likely underpinned changes to clinical practice, including understanding the importance of responsivity considerations and adapting treatment to the individual needs of the resident.

Research by [Newberry and Shuker \(2011\)](#) supports this, suggesting adapted methods of working is necessary for offenders with lower intellectual ability; offenders with lower intellectual ability may have different psychological needs to more able offenders, which may increase their difficulty engaging with the TC and necessitate adaptations being made to support engagement. The *DTC Assessment Manual* ([Ministry of Justice, 2013a](#), p. 9) notes, "it takes a certain amount of cognitive ability to understand the social processes of a DTC and to generate new behaviour on the basis of feedback. If someone with insufficient ability is selected, it is likely that they may experience difficulties engaging in and benefiting from treatment". This highlights the importance of responsivity considerations and sufficient assessment of cognitive functioning during the assessment phase.

However, it is possible the sample used in the study is relevant to these findings. Participants from TC+ were not included in the current study, as they did not meet the inclusion criteria. As noted in the *DTC Assessment Manual* ([Ministry of Justice, 2013a](#), p. 10), "It should be noted that "TC plus", a contextualised format of DTC model has been established specifically for prisoners with learning disabilities during 2013". Participants who engaged in TC+ could not be included in the current study as they use a different psychometric battery during the assessment phase, which does not include the BAI. Therefore, this could have skewed the findings, with those included in the study having met a threshold of intellectual ability, to enable them to access a mainstream TC. Further, Raven's SPM provides a method of screening intellectual ability ([Raven et al., 2003](#)). Therefore, this could undermine practitioners' attempts to identify people at risk of dropout. Using an assessment of intellectual functioning, such as the WAIS-IV ([Wechsler, 2008](#)), may aid in offering more insight into cognitive functioning.

Implications for practice

The findings have several implications for the field of psychology, both in terms of academic understanding and clinical practice. Making a distinction between different types of premature leavers contributes to a previous gap in the existing evidence base.

Understanding factors influencing attrition has valuable implications for clinical practice, particularly in terms of increasing treatment engagement and reducing attrition levels.

Identifying residents at the start of therapy who may be more likely to leave prematurely gives staff the opportunity to provide an increased level of support to these individuals with the aim of keeping them engaged in the TC intervention. Previous research has argued that minimising attrition should be a primary focus for treatment providers in terms of reducing risk of reoffending; the evidence base suggests that non-completion of treatment may be a predictor of recidivism (McMurrin and Theodosi, 2007). Maximising retention within interventions is essential in supporting offenders to address risk-related needs, progress through their treatment pathway and improve their general well-being. This has wider implications for society in terms of rehabilitation of offenders and reducing future risks of offending.

Enhancing understanding of attrition within the TC intervention has direct implications for reducing attrition rates. High attrition rates has several consequences, including draining resources and financial costs, with a constant pressure to fill vacant spaces. Previous research has argued that minimising attrition should be a primary focus for treatment providers in terms of maximising both cost-efficiency of resources and retention (McMurrin et al., 2010). Non-completion of treatment is a major concern in the provision of treatment and interventions, including within TCs, with adverse consequences for services, therapists and other patients. This includes disruption of therapy groups and reduced morale for staff involved in the therapeutic process (McMurrin et al., 2010).

Limitations of the current study

This study focused on participant factors, which affect attrition within the TC intervention. This included two variables, external attribution and intellectual ability. Additional variables, which may contribute to attrition, including previous treatment experience, were not explored. No distinction was made between reasons for attrition due to the availability of data, e.g. whether participants chose to withdraw or were deselected from therapy. This is a factor highlighted as relevant to attrition in previous psychological research (Miller et al., 2004; Olver et al., 2011). Future research could develop this further by distinguishing between different categories of therapy leavers when investigating reasons for non-completion.

The evidence base has suggested there are various factors that can affect treatment engagement, in addition to participant factors. These include relationships between group members (Marshall and Burton, 2010), therapeutic alliance (Horvath and Symonds, 1991) and the wider social climate (Blud et al., 2003). Similarly, the Multifactorial Offender Readiness Model (Ward et al., 2004) suggests factors relating to the participant, therapist and therapeutic environment can affect treatment engagement in offender populations. The *DTC Assessment Manual* (Ministry of Justice, 2013a) also identifies low levels of psychological mindedness as a factor, which can contribute to an individual struggling to engage in the therapeutic intervention.

Previous research has indicated that time in treatment within prison-based DTCs is associated with personality traits, particularly traits of psychopathy. Shine and Hobson (2000) highlighted psychopathy to be a factor associated with shorter periods in therapy. Due to the availability of data, psychopathy was not a factor included in the current study. However, this would be encouraged within future research, to develop academic understanding of the relationship psychopathy has with attrition within DTCs and implications this has for practice.

The data collected in the current study involved self-report psychometric data, which could be influenced by self-report biasing and demand characteristics; individuals may have formed an interpretation of the questionnaires purpose and unconsciously changed their responses to fit that interpretation, e.g. wanting to engage in the TC and therefore

presenting themselves in the most positive light. A number of factors could have influenced how the participants responded to the questions, including emotional state and subjectivity in terms of how the participants' interpreted the statements. Self-report methodology does not always gain an accurate measure of an internal thought processes. In addition, residents complete the psychometric battery during the initial stages of TC. However, some residents may leave the TC before they have completed the psychometric battery, and therefore would not be included in the current sample.

Suggestions for future research

Due to the limitations of the current study, future research is needed to assess the validity of these findings as well as to investigate the influence other factors have on treatment attrition. Other potentially confounding factors could be scrutinised, e.g. offence type, ethnicity, personality traits and length of time in treatment. Future research could develop the current findings further by distinguishing between different categories of therapy leavers when investigating reasons for non-completion, e.g. whether participants withdrew or were deselected from therapy.

It would be beneficial for this research to be replicated to assess the reliability of these findings. As suggested in previous research (Hastings, n.d.), a qualitative research approach could be beneficial in interviewing those who were identified at risk of dropout but stayed, to explore their perspective and enhance understanding surrounding factors which influence attrition. To the authors' knowledge, such qualitative research has not been conducted. However, this would provide rich and valuable insight into this area. Future research could include a follow-up with residents who have left therapy prematurely, to identify whether they have continued to have difficulties engaging in alternative treatment interventions, or whether they have engaged effectively following their time on a TC. This could potentially shed insight into whether difficulties are on an individual level and occur across different treatment interventions, or whether they were specific to difficulties engaging in the TC.

Conclusion

The current study contributes to understanding of attrition and characteristics associated with this. The findings are relevant to the TC treatment intervention within a male offender population. These findings highlight factors, specifically levels of external blame, which can predict residents who may be more likely to leave therapy prematurely. This has valuable implications for reducing attrition rates and developing clinical practice. Additional support should be targeted at those residents with a higher risk of leaving TC prematurely, to enhance their treatment engagement.

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