

**Research Article**
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## Evaluating a Womens' Residential Treatment Centre for Gambling Harm

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### ABSTRACT

**Aims:** Gordon Moody opened a women's residential treatment facility for harmful gambling in the UK in 2021, responding to a growing need for residential treatment for women experiencing gambling harm. This paper evaluates the effectiveness of the programme.

**Design:** 68 women who attended residential treatment between November 2021 - November 2023 were evaluated for their gambling behaviours, psychological distress levels, anxiety and depression before and after treatment. Residents lived together in a purpose-built treatment building whilst undergoing treatment. This enabled them to support each other through the programme. Women were supported by trained therapists and support workers and took part in group and individual therapy sessions including: cognitive-behavioural therapy; motivational interviewing; interpersonal group therapy; and art therapy. Problem Gambling Severity Index (PGSI), Clinical Outcomes in Routine Evaluation (Core-10), Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder (GAD-7) questionnaires were administered to women before and after treatment. Women were encouraged to complete PGSI and Core-10 questionnaires at three- and six-months post treatment.

**Findings:** Gambling behaviours (measured by PGSI) significantly dropped after treatment, and remained at a lower level three months later. Psychological distress (Core-10) scores dropped following treatment, rising slightly three months after treatment (N=29). Before treatment, the majority of women scored above the clinical threshold for anxiety (measured by the GAD-7) and depression (measured by the PHQ-9). These levels fell significantly after treatment.

**Conclusion:** Participating in this programme reduces the level of gambling severity and levels of anxiety and depression, and improves psychological wellbeing, in women suffering from gambling harm.

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### Introduction

A large proportion of the British population gambles regularly, with 53% of men and 43% of women in Great Britain having gambled in the past four weeks [1]. GambleAware states that 35% of callers to the National Gambling Helpline are female, 23% of whom call about their own gambling and 84% about someone else's gambling [2]. Women are vulnerable to gambling-related harms, and often present with a different clinical and psychological profile to men [3,4]. McCarthy et al stated that there is a male bias in gambling harm research; there is limited understanding of the factors that influence women's engagement with gambling products, and the impact of industry tactics. It is therefore important to look specifically at gambling harm and treatment effectiveness for women [5,6].

Risk factors for both men and women experiencing gambling harm include: co-morbid mental and physical health conditions,

substance use disorders, and experience of trauma [7]. A further study reported that being between 18-24 years old, not speaking English at home, living in a home of multiple occupancy, being out of the workforce and gambling on fixed odds betting terminals are predictors of harmful gambling in both men and women [8]. Men who experience harmful gambling were more impulsive and higher sensation seekers, were more likely to have a low education and more affected by drug/alcohol abuse than women affected by harmful gambling [8].

Women experiencing harmful gambling are more likely to: gamble on private betting (i.e. a bet made between individuals who know each other), use scratch tickets or electronic gaming machines, be older, have dependent children, have a lower income and lower debts, and present as more anxious, with a poorer self-esteem and more depressive symptoms [9-13]. This suggests that negative affect could lead to some women being particularly susceptible to excessive gambling.

Women's motivations for gambling also differ from men; women experiencing social isolation, the need to escape from everyday stress, and psychological co-morbidity are more likely to experience harm from gambling than their peers [9]. Women's role as primary caregivers may limit their access to recreational and support options, which makes gambling opportunities appear to be accessible and 'safe' outlets for stress reduction [10].

As well as presenting with different risk factors for experiencing gambling harm, women also experience different help-seeking behaviours. Women are twice as likely as men to report stigma as a barrier to treatment and cite practical barriers such as cost, time or location to accessing treatment [14-16]. Women may also be fearful of what might happen to their children if they admit having a problem [17]. These gender differences have implications for treatment, as it cannot be assumed that existing models of service which are effective in men will be directly applicable for women.

A gendered approach shifts the focus onto the specific risk factors associated with women's gambling and allows the development and recognition of harm-reduction strategies which are salient to women's lives [5]. Despite the need for women-specific gambling related harm services, they are scarce and operate in silos. Gamblers Anonymous run "women preferred" 12 step groups, which are limited in terms of national coverage and women report barriers including lack of referral and signposting, lack of accessible meetings, costs of travel and a climate which is dismissive of women's experiences [16]. NHS clinics support both men and women in mixed groups, but to the best of our knowledge, no one currently runs gambling only specific support on a residential basis in the UK other than Gordon Moody.

There are a range of treatment options in the UK. These include: GP services, mental health services, specialist treatment services (e.g. National Gambling Treatment Service and NHS specialist services), other addiction services (e.g. drug or alcohol), online therapy for gambling (e.g. CBT), face to face therapy for gambling and residential therapy. However, barriers to treatment include: a desire to handle the problem alone; embarrassment/stigma; unwillingness to recognise that gambling is problematic; lack of knowledge about treatment options and practical issues regarding attending treatment [6,17].

Residential gambling treatment is accessed by people experiencing severe gambling harm. Being immersed in a supportive environment, away from day-to-day challenges and stressors, is particularly beneficial for service users with complex needs and comorbid conditions [18]. However, a significant proportion of people drop out of gambling treatment. Predictors of treatment dropout in men included: older age; higher levels of education; higher levels of debt; gambling type (i.e. online gambling, poker, gaming machines and sports events), shorter duration of treatment, depression, having undergone treatment previously and adverse childhood experiences [19,20]. To the best of our knowledge, no research has investigated predictors of drop-out in women accessing treatment for gambling harm.

Women in particular may benefit from residential treatment, as the encompassing nature of residential treatment, away from caregiving and other responsibilities, allows them the time and space to address trauma and learn coping strategies. Risk factors for gambling harm commonly seen in women, such as anxiety, low self-esteem and depressive symptoms can also be addressed holistically through residential treatment for gambling harm, allowing deeper reflection and healing [21].

A new residential treatment centre specifically for women gamblers was opened by Gordon Moody in November 2021 in the UK. The centre offers a unique, safe environment to treat women who are severely affected by gambling.

This paper reports the findings of a retrospective evaluation that assesses the effectiveness of a residential treatment programme for gambling disorder in women. We hypothesise that harmful gambling behaviours and levels of psychological distress will drop significantly after treatment compared to baseline.

## Methods

### Participants

Sixty-eight women attended Gordon Moody's female residential programme between November 2021 and November 2023. Participants started gambling on average at 25.1 years old, with their gambling becoming harmful at around 30.5 years old. Average age when entering residential treatment is 43.1 years (range: 21 – 64 years) (Table 1).

**Table 1: Sample Demographics**

<b>Sexual Orientation</b>	
Bisexual	5
Lesbian, gay or homosexual	11
Straight or heterosexual	44
Not stated	8
<b>Ethnic Origin</b>	
White British	56
White European	4
Asian, Asian British	2
Mixed: White and Black Caribbean	1
Mixed: Other	2
Not stated	3
<b>Employment Status</b>	
Employed	26
Unemployed	32
Looking after the family or home and not working or actively seeking work	2
Retired	1
Not Stated	1
<b>Relationship Status</b>	
Single	42
In a relationship	25
Not stated	1
<b>Religious Affiliation</b>	
Christian	18
Muslim	1
Sikh	1
Hindu	1
Other religion	3
No religion	44

## Programme

The programme spans six weeks: one for assessment, four for treatment, and one wind-down week. The length of the programme was determined after focus groups with prospective service users and other professionals providing women-specific mental health and addiction support. Gordon Moody offers specialised therapeutic support focusing on issues such as trauma, adverse childhood experiences, domestic abuse, dealing with guilt and shame, parenting, personality disorders and substance misuse.

Therapeutic and clinical approaches include: cognitive-behavioural therapy; motivational interviewing; psycho-dynamic and analytic therapy; interpersonal group therapy; art and creative therapies; one to one counselling; reflective worksheets; self-awareness exercise and creative exercises. Sessions included, but are not limited to: Barriers to Change; Surviving trauma; Distorted thinking; and Negative core beliefs.

## Questionnaires

Service users completed the PGSI, Core-10, PHQ-9 and GAD-7 at the start and end of treatment. Participants self-reported symptoms and did not receive a diagnosis in response to any questionnaire. Service users were followed up three and six months later via email and asked to complete online PGSI and Core-10 questionnaires.

## Problem Gambling Severity Index (PGSI)

The PGSI includes nine questions assessed via a four-point scale: never (0), sometimes (1), most of the time almost always [2,3,21]. Scores are summed with a total ranging between 0 to 27. A PGSI score of eight+ represents a severe risk of gambling problems, scores between three and seven signify 'moderate risk' gambling and a score of two or one signifies 'low risk' gambling. A score of 0 shows no risk of problem gambling behaviours. Currie et al, report that the PGSI score is an effective measure when assessing problem gambling risk severity over time, as it has reasonably strong test-retest reliability ( $r = .75$ ) and the problem gambler category ( $PGSI > 7$ ) appears to be a distinct group on all dimensions [22].

## Clinical Outcomes in Routine Evaluation (Core-10)

The Clinical Outcomes in Routine Evaluation (Core-10) is a psychological wellbeing monitoring tool with items covering anxiety, depression, trauma, physical problems, social functioning and risk to self [23]. The measure has six high intensity/severity and four low intensity/severity items. Each item is assessed using a five-point scale: not at all (0), only occasionally (1), sometimes (2), often (3), and most of the time (4). Scores are summed with a total ranging between 0 to 40. Scores of 11 or above indicate clinically significant psychological distress, whilst scores above 13 indicate depression. The internal reliability (alpha) of the CORE-10 was .90 and the score for the CORE-10 correlated with the CORE-OM at .94 in a clinical sample and .92 in a non-clinical sample [24].

## Generalized Anxiety Disorder Questionnaire (GAD-7)

This brief measure assesses generalized anxiety disorder [25]. It consists of seven questions, to which respondents answer 'not at all', 'several days', 'more than half the days', and 'nearly every day'. Scores range between 0 and 21. Scores of 5, 10, and 15 are thresholds for mild, moderate, and severe anxiety respectively. This measure is considered reliable; one study found Cronbach's  $\alpha$  to be between 0.88 and 0.91, and it correlated positively with other measures of anxiety in a clinical population [26].

## Patient Health Questionnaire (PHQ-9)

The PHQ-9 is the 9-item depression module of the Patient Health Questionnaire [27]. Respondents are asked how many times over the past two weeks they have had each symptom. Each item is scored "not at all" (0), "several days" (1), "more than half the days" (2) or "nearly every day" (3). The nine responses are summed. A score  $\leq 4$  is considered no depressive symptoms; 5-9 is considered minimal symptoms; 10-14 is considered minor depression; 15-19 is considered major depression (moderately severe) and  $>20$  is considered major depression (severe). A report found good reliability and validity in a clinical population; the intraclass correlation coefficient between PHQ-9 total score and Hamilton Depression Scale of 0.59, whilst the Cronbach's  $\alpha$  coefficient was 0.892. and test-retest correlation coefficient was 0.74 [28].

## Statistical Analyses

Data were cleaned and collected in Excel and analysed using R [29]. PGSI and Core-10 data were collected at four timepoints (before treatment; end of treatment; three months post-treatment; and 6 months post-treatment). A Shapiro-Wilk test on PGSI data showed that the distribution of scores at each timepoint departed significantly from normality. Therefore, the Skillings-Mack non-parametric test was used to assess changes in PGSI and Core-10 over time. The Skillings-Mack test is a variation of Friedman's ANOVA for repeated measures data, when participants have missing data, but have data from two or three of the time points [30]. All data from all timepoints (i.e. including women who only provided data for one, two or three timepoints) were analysed and results presented below. GAD-7 and PHQ-9 data were collected at two timepoints (start of treatment and end of treatment). T-tests for all data (i.e. including women who only provided data for one timepoint) are presented in the results section.

## Results

### Programme

59 of the 68 women successfully completed the programme. Three women did not complete their assessment week and were discharged with support into the community. Five women dropped out during treatment and one was discharged by mutual agreement following advice and support. This leads to a completion rate of 87.0%.

### Gambling Behaviours (PGSI)

We predicted that harmful gambling behaviours and psychological distress will decrease following residential treatment. 64 women completed the PGSI at the start of treatment; 54 at the end of treatment; 31 women three months post-treatment and 23 women 6 months post-treatment.

Figure 1 shows that all women who started the programme scored in the high risk category for gambling behaviours (score  $\geq 8$  on PGSI). Six months post treatment, nearly half of service users showed no gambling behaviours, and 13% were low risk.

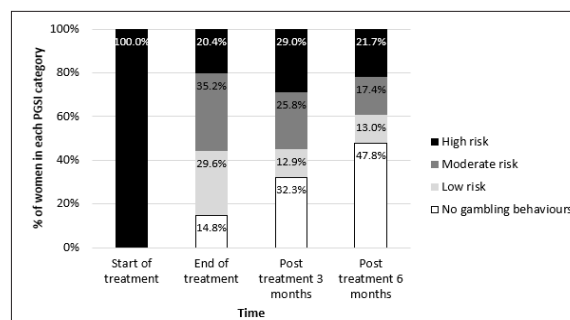


Figure 1: Percentage of Women in Each PGSI Category at Each Timepoint

At the start of the programme, women scored an average of 21.2 on the PGSI (SD = 3.8). After treatment, the average score dropped to 5.1 (SD = 4.8), staying at an average of 5.9 after three months and 4.8 after 6 months (see Figure 2).

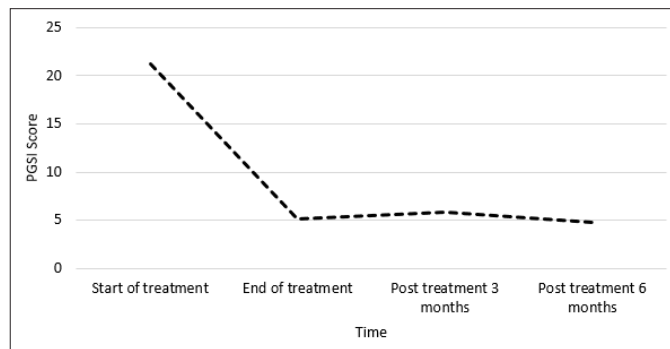


Figure 2: PGSI Scores Over Time

A Skillings-Mack test found a significant difference for timepoints (Chi squared = 54.54,  $p < 0.001$ ,  $df = 3$ ). Post-hoc analyses are reported in Table 2.

Table 2: Post-Hoc Within-Subjects T Tests for Average PGSI Scores Over Time

Contrast	Difference	P value
Start vs End	-16.2	<0.001
Start vs Post treatment 3 months	-15.0	<0.001
Start vs Post treatment 6 months	-17.1	<0.001
End vs Post treatment 3 months	1.1	0.527
End vs Post treatment 6 months	0.3	0.850
Post treatment 3 months vs Post treatment 6 months	0.5	0.791

### Psychological Distress (Core-10)

We hypothesised that levels of psychological distress would drop significantly after treatment compared to baseline. All 68 women completed the Core-10 at the start of treatment; 57 at the end of treatment; 29 women three months post-treatment and 23 women 6 months post-treatment.

Figure 3 shows that the majority of women entering the treatment programme were likely to present symptoms of depression. Six months post treatment, over 50% of women reported no depression or general psychological distress.

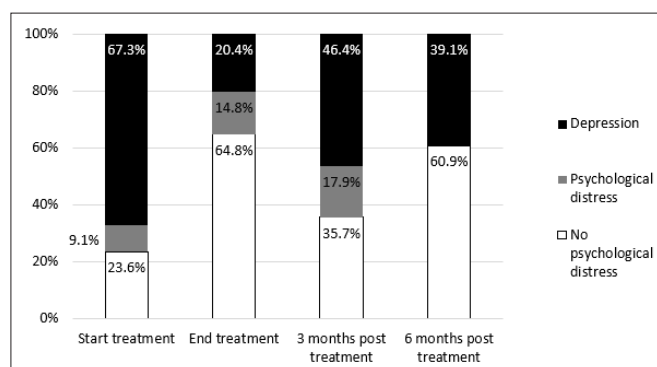


Figure 3: Percentage of Service Users in Each Core-10 Category at Each Timepoint

At the start of the programme, women scored an average of 15.1 on the Core-10. After treatment, the average score significantly dropped to 9.1, rising to an average of 13.1 after three months and 10.7 after 6 months (see Figure 4).

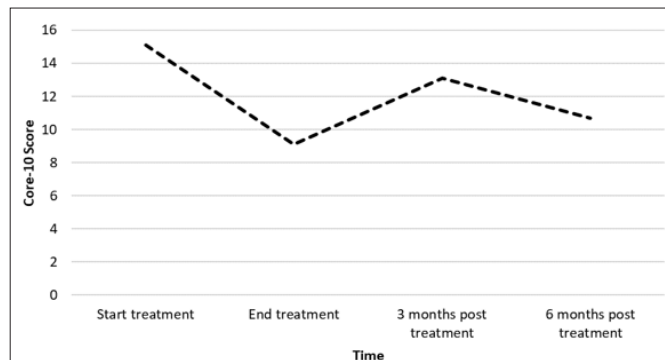


Figure 4: Average Core-10 Scores Over Time

A Skillings-Mack test found a significant difference for timepoints (Chi squared = 29.58,  $p < 0.001$ ,  $df = 3$ ). Post-hoc analyses are reported in Table 3.

Table 3: Post-Hoc Within-Subjects T Tests for Average Core-10 Scores Over Time

Contrast	Difference	P value
Start vs End	-5.8	<0.001
Start vs Post treatment 3 months	-2.7	0.055
Start vs Post treatment 6 months	-5.7	0.003
End vs Post treatment 3 months	3.6	0.052
End vs Post treatment 6 months	0.86	0.618
Post treatment 3 months vs Post treatment 6 months	1.57	0.535

### GAD-7

65 women completed the GAD-7 at the start of treatment; 55 at the end of treatment. Figure 5 shows that 35.3% of service users self-reported severe anxiety symptoms before treatment, with only 19.6% under clinical threshold for anxiety. After treatment, over half were under clinical thresholds for anxiety and no one scored in the severe anxiety range.

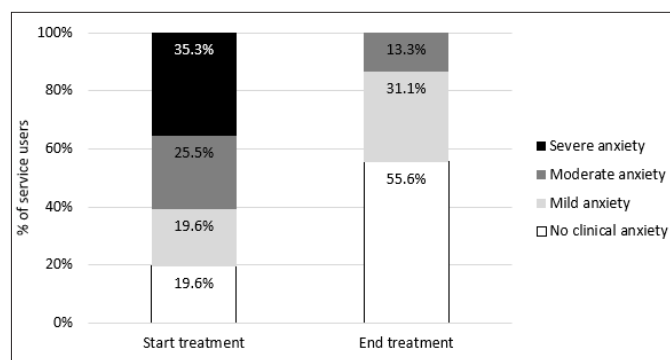
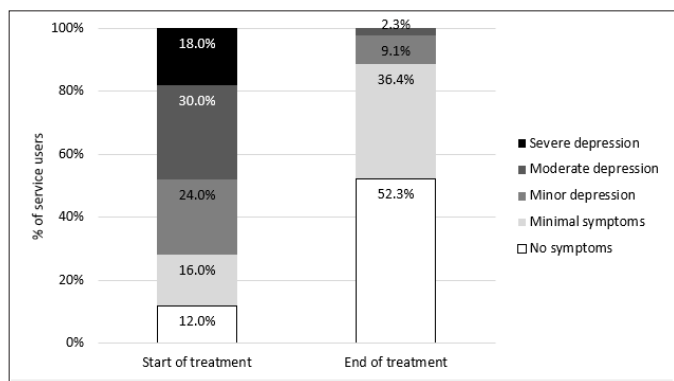


Figure 5: Percentage of Service Users in Each GAD-7 Category at Each Timepoint

A within-subjects t test found that service users' GAD-7 scores were significantly lower at the end of residential treatment (mean score = 4.42, SD = 3.49) compared to start of treatment (mean score = 11.68, SD = 6.31;  $t = 9.33$ ,  $df = 53$ ,  $p < 0.001$ ).

## PHQ-9

63 women completed the PHQ-9 at the start of treatment; 55 at the end of treatment. Figure 6 shows that 18% of service users self-reported severe depression before treatment, with only 12% under clinical threshold for depression. After treatment, 52.3% were under the threshold for depressive symptoms and no one scored in the severe depression range.



**Figure 6:** Percentage of Service Users in Each PHQ-9 Category at Each Timepoint

A within-subjects t-test found that service users' PHQ-9 scores were significantly lower at the end of residential treatment (mean score = 4.73, SD = 4.21) compared to start of treatment (13.60, SD = 7.28;  $t = 10.56$ ,  $df = 53$ ,  $p < 0.001$ ).

## Missing Data Analyses

Missing data analyses are included in Appendix 1. Whilst accounting for missing data, PGSI scores are significantly lower post-treatment, with drops of 13 to 16 points compared to baseline. Higher Core-10 scores are associated with greater levels of PGSI severity. These findings support the non-parametric analyses, and indicate the findings are robust to the presence of missing data.

## Discussion

This assessment of the UK's first residential treatment for women with harmful gambling saw notable improvements. Post-treatment, PGSI scores decreased by 16.2, Core-10 by 5.8, PHQ-9 by 9.4, and GAD-7 by 7.3, indicating reduced gambling severity, anxiety, depression, and improved psychological well-being.

However, 20.4% of participants remained high-risk for gambling harm post-treatment, suggesting some women require further support, such as treatment for comorbid psychological condition. Another study reported that between 8% - 40% of women receiving CBT treatment for gambling harm remained high risk for gambling harm post-treatment [31]. Effectiveness of residential treatment for other addiction types is mixed, which may reflect different treatment populations and methods [32,33]. It could be elucidating to follow up with these women to discover why residential treatment did not work for them. For example, mental health difficulties, social functioning issues (such as housing, employment, or family situation), or other environmental factors (i.e. cost of living crisis) may have impacted their recovery.

The importance of positive environmental factors in maintaining long-term recovery is known as recovery capital [34]. Recovery capital is higher in those in recovery from addiction compared to those experiencing addiction [35,36]. Whilst treatment with Gordon Moody includes recognising and putting positive environmental factors in place, some service users may find

these hard to continue. One study found that 92% of women who received individual CBT sessions were no longer at risk for harmful gambling six-months post treatment, whilst 60% of women who received group treatment were no longer at risk for gambling harm [31]. Inclusion of individual CBT sessions in the Gordon Moody programme may reduce the number of service users who score in the high-risk category for gambling harm post-treatment.

None of the women scored in the "severe anxiety" or "severe depression" categories of the GAD-7 and PHQ-9 after treatment. No follow-up data for anxiety or depression was collected so it is unclear whether these effects were sustained or even improved further after treatment. Previous research found associations between depressive and anxiety symptoms and gambling harm in clinical samples [37,38]. There may be several pathways to the relationship between depression and gambling; some people use gambling to reduce or escape states of chronic depression while others experience depression as an emotional reaction to problems created by gambling behaviours [39]. Each has a significant implication on determining appropriate treatment interventions. Women who scored in the clinical range pre-treatment and the sub-clinical range after treatment may be those on the second pathway, where depression was caused by gambling. Those who stayed in the clinical range post-treatment may be those who gambled as a response to depressive symptoms, and so further clinical intervention is required to treat the cause of depression.

A scoping review published in 2024 found that people from ethnic minorities were disproportionately impacted by gambling related harms. Factors underlying this increased sensitivity may be due to structural racism, inequality, and discrimination. No women who identified as Black British, and only one woman who identified as Mixed: White and Black Caribbean attended the programme, suggesting that Gordon Moody needs to collaborate with people from this community to identify how to better engage with underrepresented communities. Furthermore, research should look at how to engage with women from underrepresented communities who may be less likely to seek treatment. It would also be beneficial to explore individual and environmental characteristics supporting long term recovery, as well as exploring whether elements of the programme have a greater impact on women's recovery.

Research has shown that the prevalence of gambling related harm is higher in LGBTQ+ communities [40,41]. 24% of women attending the female residential programme identified as lesbian, gay, or bisexual, which is almost ten times higher than the UK average (2.8% of women in the UK identify as lesbian, gay or bisexual [42]). Research shows that LGBTQ+ women are 2.5 times more likely to experience gambling harm than heterosexual women, but this doesn't explain why LGBTQ+ women are more likely to seek treatment [41]. Future projects could investigate why women who identify as LGBTQ+ are more likely to experience harm from gambling, as well as being more likely to seek treatment for gambling harm, which in turn could inform whether future treatment programmes should include tailored sessions around gender identity, sexuality, and gambling. Additionally, transgender/gender diverse youth are significantly more likely to engage in harmful gambling than their cisgender peers, suggesting that residential services need to be inclusive and cognisant of gender identity in their treatment offer [43].

The slight Core-10 average score rise three months after treatment may indicate stress as users reintegrate into daily life. Future research should explore if psychological distress post-treatment reacts non-linearly to environmental changes. Additionally, research could assess the enduring positive effects on women's psychological well-being over an extended period, examining the adaptability of behavioural interventions and coping mechanisms throughout women's recovery.

### Study Limitations

The current evaluation method may be biased, focusing on women with two or more data points. Despite a low dropout rate, this population's representativeness is uncertain. While the sample is adequate for detecting treatment effects, it may lack sensitivity for smaller post-treatment changes. Additionally, Gordon Moody's diverse treatment elements make the amount which each specific factor contributes to women's recovery unclear. As the majority of Gordon Moody's service users self-refer themselves to treatment services, there may also be some self-selection bias present in this sample [44-48].

Whilst they are frequently used, the PGSI and CORE-10 were not designed as outcome tools to measure effectiveness of gambling treatment interventions, and so their use in this context may not be valid. The PGSI fails to capture several important dimensions of harm, including those experienced by people close to the gambler (affected others). Therefore, the PGSI may underestimate the scale of harm experienced. Future research should design a valid and reliable outcome measure for gambling harm, to include harm experienced by affected others.

In conclusion, preliminary data from the first female residential treatment programme for harmful gambling in the UK shows promising results at reducing gambling behaviours and increasing psychological wellbeing in a cohort of women experiencing gambling harm. More women than ever before are gambling and consequently experiencing gambling-related problems and seeking help [9]. Affected women are in urgent need of better quality and more extensive support and treatment. Gordon Moody has been addressing this challenge for several years through its

programmes, but much more women-focussed treatment and more expert therapists are clearly needed.

### Appendix 1: Missing Data Analyses

Some data were missing at each timepoint in the analyses above. The most common patterns in the current dataset are: complete data (n = 17), data at start and end of treatment only (n = 15), and data at start of treatment, end of treatment and three months post treatment (n = 6). To assess whether results are affected by this missing data, sensitivity analyses with two missing data procedures were conducted, repeating the analysis as a mixed effect model. The first used multiple imputation with chained equations (MICE) (44,45). MICE impute plausible imputations, where data are missing at random i.e. the missingness can be explained by other variables in the dataset, such as previous PGSI, CORE-10, GAD-7 and PHQ-9 scores. Because the data is repeated measures, multiple imputation was specified as a multilevel model, with participant ID as the clustering variable. PGSI score was imputed using the 2lnorm procedure, and Core-10, PHQ-9 and GAD-7 using predictive mean matching. PGSI imputations were constrained to range between 0 and 27 i.e. the range of the PGSI.

Further sensitivity analyses were conducted using a joint model, which accounts for longitudinal missing data across multiple variables that are time varying, specifically PGSI and Core-10. Joint modelling overcomes these issues by simultaneously estimating the imputation and analysis model. The joint model was estimated in a Bayesian framework using the JointAI model (46). The same multilevel model used in the MICE analysis was specified here, with 1000 iterations and 5 chains.

Table 4 below reports the findings of the mixed effect model approach, with PGSI scores as the outcome, and Time, Core-10 scores, and baseline PHQ and GAD-7 scores as independent variables. PGSI scores are significantly lower, with drops of 13 to 16 points in PGSI compared to baseline, and higher Core-10 scores are associated with greater levels of PGSI severity. These findings support the non-parametric analyses, and indicate the findings are robust to the presence of missing data.

**Table 4: Mixed Effect Model of PGSI Scores, Using Multiple Imputation with Chained Equations**

Effect	b	se	z	df	p
Intercept	17.381	1.486	11.699	139.161	0.00
Time (start vs end treatment)	-13.131	1.096	-11.977	179.293	0.00
Time (start vs 3 months post treatment)	-14.231	1.192	-11.939	116.480	0.00
Time (start vs 6 months post treatment)	-16.365	1.246	-13.134	105.079	0.00
Core-10	0.233	0.064	3.644	115.424	0.00
PHQ-9	-0.021	0.087	-0.248	129.142	0.805
GAD-10	-0.024	0.099	0.240	135.527	0.811

## Acknowledgements

We would like to thank the women who took part on Gordon Moody's residential treatment programme between November 2021 – November 2023.

## Conflicts of Interest

This work was conducted as part of the routine operations of Gordon Moody, who Rosalind Baker-Frampton and Dragos Dragomir are employed by. Gordon Moody is a charitable organisation funded by RET (Research, Education and Treatment) donations by British gambling operators, both indirectly via GambleAware, and directly as an organisation registered with the Gambling Commission to receive RET donations. In the last 5 years, Gordon Moody has also received funds from the Gambling Commission that have been sourced from regulatory settlements with gambling operators. The funders of Gordon Moody had no input into the programme design, choice of measures, data analysis or write up of this research.

Richard James has been principal investigator on projects in the last 5 years funded by GREO and the AFSG that have been supported by regulatory settlements paid to the Gambling Commission. He has also been a co-investigator on projects funded by GREO and the ICRG. The ICRG is funded by donations from the American gaming industry, administered by an independent scientific panel. None of these funding sources had any involvement in this research.

Steve Sharman currently receives funding from UKRI, Greo Evidence Insights, and the NIHR. He is a member of the AFSG, and the ABSG, which offers advice to the Gambling Commission. None of these funding sources or roles had any influence on the development, execution, or publication of this research.

Amanda Roberts is Co-Chair of the Executive Committee of the Academic Forum for the Study Gambling (AFSG). Funding for the AFSG is derived from regulatory settlements for socially responsible purposes that are approved by the Gambling Commission, and administered by Greo Evidence Insights. Amanda Roberts has received funding from the SSA, Greo, NIHR, Lincolnshire County Council, Ashfield District Council, Health and Care Research Wales, and Public Health Lincoln. She does not have any potential conflicts of interest in relation to gambling or the gambling industry.

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