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The Effectiveness of a Psycho-Educative Group Programme Regarding Relationships in the Treatment of Sexual Offenders: A Preliminary Study

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Purpose:

At a high-security psychiatric hospital in the UK, the Understanding Intimacy and Relationships (URI) psycho-educative group therapy was developed in an attempt to provide a therapeutic input for interpersonal difficulties displayed by patients with sex offending history. This study aimed to conduct a preliminary evaluation of the URI group effectiveness for sex offenders.

Design/Methods/Approach:

A longitudinal study with three groups of participants – sex offenders ($n = 9$) and non-sex offenders ($n = 9$) that completed the URI group, and the control group ($n = 10$), which were assessed at two time points was conducted at a high-security psychiatric hospital. Each group filled out three questionnaires at both time-points – IIP-C, UCLA Loneliness Scale, and ECR-R.

Findings:

The results suggest a decrease in feelings of loneliness for both groups of patients that completed the URI programme, and a limited reduction of interpersonal difficulties. Results of within-subject changes regarding interpersonal difficulties among patients in URI group did not statistically significantly differ from the result of the control group.

Research Limitations/Implications:

The most evident limitation of the study is a very small sample size and lack of objective measurement of patients' difficulties in interpersonal relations.

Practical Implications:

The findings suggest that the URI programme might have a limited effect on sex offenders due to the unsuccessful implementation of the Risk, Need, Responsivity Model, although several study limitations were present potentially affecting the outcome.

Originality/Value:

Longitudinal evaluation effectiveness of a clinical intervention for patients with sex offending history at a high-secure psychiatric hospital.

Keywords: sexual offenders, attachment style, loneliness, psycho-educative group therapy

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Učinkovitost psihoedukativnega skupinskega programa za medosebne odnose pri zdravljenju spolnih prestopnikov: preliminarna študija

Namen prispevka:

V visoko varovani psihiatrični bolnišnici v Veliki Britaniji (VB) so razvili skupinsko psihoedukativno terapijo Razumevanje intimnosti in odnosov (angl. *Understanding Intimacy and Relationships* (URI)) z namenom znižanja izraženosti težav v medosebnih odnosih, izraženih pri pacientih z zgodovino spolnega prestopništva. Namen raziskave je bilo izvesti preliminarno oceno učinkovitosti URI za spolne prestopnike.

Metode:

V visoko varovani psihiatrični bolnišnici v VB je bila izvedena longitudinalna študija, ki je vključevala tri skupine – udeleženci, ki so zaključili URI z zgodovino spolnega prestopništva (n = 9) in brez (n = 9) ter kontrolno skupino pacientov (n = 10), ki so bili ocenjeni na dveh časovnih točkah. Vsaka skupina udeležencev je izpolnila tri vprašalnike – IIP-C, lestvica osamljenosti UCLA in ECR-R.

Ugotovitve:

Rezultati nakazujejo na zmanjšanje občutka osamljenosti pri obeh skupinah, ki sta zaključili program URI ter omejeno zmanjšanje medosebnih težav. Rezultati niso pokazali statistično pomembnih sprememb na področju medosebnih težav pri posameznikih od prve točke testiranja do druge točke testiranja v kateri koli od treh skupin udeležencev.

Omejitve/uporabnost raziskave:

Ključna omejitev je majhen vzorec in pomanjkanje objektivnega merskega instrumenta pacientovih težav na področju medosebnih odnosov.

Praktična uporabnost:

Na podlagi rezultatov se tako nakazuje omejena stopnja učinkovitosti programa URI za spolne prestopnike zaradi neuspešne implementacije modela *Tveganje, potrebe, odzivnost*, vendar so predstavljene tudi omejitve študije, ki so lahko vplivale na rezultate.

Izvirnost/pomembnost prispevka:

Longitudinalna ocena učinkovitosti klinične intervencije za paciente z zgodovino spolnega prestopništva v visoko varovani psihiatrični bolnišnici.

Ključne besede: spolni prestopniki, oblika navezanosti, osamljenost, psihoedukativna skupinska terapija

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1 INTRODUCTION

Intimacy is one of the fundamental human needs that we require for general functioning (Popovic, 2005). Although there is no conclusive definition of intimacy, it can be broadly considered as a relational experience characterised by mutual exchange and proximity, the degree of which is contingent on the individual's perception of the experiences in a relationship (Marshall, 1989; Wynne & Wynne, 1986). The capacity to experience intimacy and form intimate relationships in adulthood is dependent on the attachment style, which first develops with a primary caregiver in childhood (Bowlby, 1973). More specifically, how a person interacts with his or her primary caregiver in infancy and childhood may influence the future personality organisation of that individual. With various experiences in different stages of life, the attachment style continues to develop and modify. It reflects one's manner of formation and engagement in interpersonal relationships (Mikulincer & Shaver, 2007). The attachments styles are broadly classified as secure and insecure. If the child experiences responsive and consistent care as well as supportive relationships, he or she will be more likely to develop internalised relational strategies, which will enable him or her to develop a coherent sense of self and maintain interpersonal relationships (Sroufe et al., 2009).

On the other hand, if the child is exposed to malignant early caregiving, the child's ability to organise and regulate internal affects and cognitions may be distorted on several levels. Consequently, the exposure to interpersonal experiences characterised predominantly by negative emotions may impair the child's organisation and integration of self and disrupt the ability to form and/ or maintain relationships in future (Carlson & Ruiz, 2016; Sroufe et al., 2009). Research results suggest that there are various forms of insecure attachment styles, depending on the one's experience with their primary care giver. More specifically, anxious or insecure-ambivalent attachment style, avoidant attachment style and disorganised attachment styles (Ainsworth & Bell, 1981; Ainsworth et al., 2015; Groh et al., 2017; Main & Solomon, 1990). The anxious attachment style, also referred to as insecure-ambivalent style, is characterised by simultaneous dependant and rejecting behavioural response pattern in interpersonal relationship – e.g. despite the desire to form a close intimate relationship one will be vary to do so. Individuals with the avoidant attachment style will exhibit high level of physical and emotional independence as interpersonal relationships bring them discomfort (Ainsworth & Bell, 1981; Ainsworth et al., 2015). Lastly, the disorganised attachment style reflects lack of coherent or consistent behaviour

in interpersonal relationship and is often seen in those who were maltreated or abused by their caregivers (Main & Solomon, 1990).

An inability to form and/or sustain intimate relationships as an adult is highly prevalent among individuals with a history of childhood trauma and is linked to a higher risk of developing psychiatric disorders in the future (Bowlby, 1973; Carlson & Ruiz, 2016; Carr et al., 2018; Cuoco et al., 2021; Maniglio, 2011; Marshall, 1989; Özcan et al., 2016; Waldinger et al., 2006). Moreover, Marshall (1989) proposed in his theory that an insecure attachment style can also be understood as the absence of intimacy and the presence of loneliness. Extant research shows a high prevalence of childhood neglect, physical and sexual abuse, experiences of intense feelings of loneliness, lack of social contact and long-term intimate relationships among offenders with mental disorders (Craissati, 2009; Levenson et al., 2015; Meloy & Gothard, 1995; Rice & Harris, 1997). In line with this, there is a substantial body of evidence supporting the relationship between an insecure attachment style, mental disorders, and offending behaviour (Armstrong & Mellor, 2016; Grady et al., 2018; Levinson & Fonagy, 2004; Ogilvie et al., 2014; Smallbone & Dadds, 1998; Van IJzendoorn et al., 1997; Ward et al., 1996).

1.1 Attachment style, intimacy and loneliness in sex offenders

The above findings appear relevant for sex offenders in particular as there is a high prevalence of childhood physical and sexual abuse among this group of offenders, thus raising the likelihood of suffering consequences such as insecure attachment and related feelings of loneliness (Jespersen et al., 2006). Studies have found a high prevalence of insecure attachment amongst sex offenders (e.g. in one study 75% of sex offenders reported insecure attachment style in adulthood), more fearfulness of intimacy and rejection compared to other groups of offenders (Bumby & Hansesn, 1997; McCormack et al., 2002; Ward et al., 1997). They tend to engage less in practices that stimulate intimacy, which is associated with low self-esteem, shame, loneliness and use of sexual activities as means of coping with stressors – all of which are linked to sexual offending (Bumby & Hansen, 1997; Cortoni & Marshall, 2001; Marshall et al., 2009).

However, despite certain similarities in their interpersonal difficulties among sex offenders, researchers report that different types of sex offenders have been found not to share similar early interpersonal experiences and thus, have distinct attachment styles. Rapists compared to child molesters had fewer boundaries set by their caregivers, were subjected to more physical abuse and felt less safe. Child molesters, on the other hand, are two times more likely to report the presence of sexual abuse in childhood than rapists (McCormack et al., 2002; Seghorn et al., 1987). Furthermore, rapists' sexual aggressive behaviour does not necessarily reflect their struggle to form social bonds, but rather their preference to avoid intimacy with close-ones and avoidant attachment style. In contrast, child molesters' intimacy issues may be explained by their fear of intimacy, social anxiety and anxious attachment style (Martin & Tardif, 2014; Ward et al., 1996). Sexual recidivism has been associated with the presence of problematic ways of

relating to other people and specific patterns adopted when engaging in intimate relationships (Thornton, 2002).

Insecure attachment, intimacy deficits, and loneliness as significant aspects of sexual offending behaviour were first proposed by Marshall (1989, 1993) and then further elaborated by Marshall and Marshall (2000). They theorised that insecure attachment has a negative effect on a child's development of self-esteem and flexible social skills resulting in an inability to engage in satisfying interpersonal relationships. Consequently, in order to compensate for the lack of intimacy and sexuality, in adolescence, the individual would start to rely on autoeroticism and adopt sexual coping for life stressors. During masturbation, the individual would start incorporating deviant sexual fantasies in order to release sexual frustration and compensate for the lack of intimacy. The sexually aggressive tendencies would be further entrenched by the use of cognitive distortions, which could lead to the realisation of sexually violent fantasies if the opportunity arose. Several researchers have tested Marshall's (1989, 1993) theory, and have supported the presence of intimacy deficits and loneliness among sex offenders (Bumby & Hansen, 1997; Martin & Tardif, 2015; Seidman et al., 1994). Additionally, attachment difficulties among sex offenders have been repeatedly found by various researchers (Martin & Tardif, 2015; McKillop et al., 2012; Smallbone & Dadds, 1998; Ward et al., 1996) further supporting the association between attachment styles and sex offending behaviour.

1.2 Sex offenders, and the understanding relationships and intimacy programme

Over the years, various treatment approaches have been adopted to reduce sexual recidivism. Most of these treatment programmes follow the principles of cognitive-behavioural therapy (CBT) and relapse prevention, which have been found to have some positive effects on sexual recidivism (Kim et al., 2016). Recently, Grady and colleagues (2016) reported a significant decrease in insecure attachment among incarcerated sex offenders after undergoing a CBT-based treatment programme targeting their specific criminogenic needs. In a review of 48 empirical studies, Jennings and Deming (2017) found that group cohesion, i.e. "the degree to which the group works together, supports and challenges one another" (p. 742), has a highly significant effect on the treatment outcome for the sex offenders, regardless of the treatment modality adopted (e.g. CBT, psychoanalytical). Group cohesion nurtures disclosure and engagement, which in turn reduces denial, which was found to explain 60% of treatment outcome differences (Levenson & Macgowan, 2004; Levenson et al., 2009). Moreover, Lord (2016) also pointed out the benefit of adopting the Good Lives Model (Ward et al., 2007) for enhancing the treatment motivation of sex offenders with mental disorder, as it helps them develop a realistic narrative for personal change leading to greater self-reliance.

However, there is limited focus on psychoeducational programmes that aim to improve sex offenders' understanding of relationships and intimacy as means of reducing recidivism. An example of such a programme has been

developed and implemented in a high secure forensic hospital in the UK. The Understanding Relationships and Intimacy (URI) programme is a 20-week group-based psycho-educational programme lasting approximately 2 hours per session on a weekly basis. The URI is intended for individuals who have historically experienced difficulties with interpersonal relationships in one or more social contexts. The different social contexts can be for example within the family, and workplace, including committing an offence. Moreover, the URI programme also targets individuals who have experienced aggression, hostility, loneliness, mistrust or any other form of distress within interpersonal relationships. The overall aim of the URI group programme is to support the development and maintenance of healthy relationships intended for offenders with mental disorder that exhibit problems with establishing and/or maintaining relationships in a prosocial manner. This is done by addressing three key topics: *What makes a healthy relationship* (ideas of reciprocity, mutual respect and sharing); *Identifying healthy sexuality* (informed consent, avoiding pressure, combining affection with sexual behaviour); and *Increasing knowledge about boundaries and respecting the limits* (understanding boundaries in different types of relationship, professional boundaries, consequences of not respecting boundaries). Although this group therapy is primarily psycho-educational, it aims to foster a supportive environment supporting patients' active involvement in the discussions, offering support to other patients or challenging one another on the topics discussed.

The current study aims to conduct a preliminary evaluation of the effectiveness of the URI programme specifically for sex offenders, examining its effects on improving their interpersonal relations and intimacy. Based on extant literature it is hypothesised that sex offenders will show less insecure attachment; experience less loneliness; and will report to have improved their interpersonal skills after completing the URI programme. Additionally, their attachment style, levels of self-reported loneliness, and interpersonal skills will be compared to a control group consisting of patients that have not and will not be referred to the URI programme to control for the influence of other factors and programmes offered to the patient in the hospital (e.g. antilibidinal medication, individual therapy).

2 METHODOLOGY

2.1 Sample

The study was conducted with male patients at Broadmoor Hospital, a high secure psychiatric treatment facility in the UK for people detained under the Mental Health Act. Participants were chosen based on the patients' responsible clinician's assessment of suitability (e.g. mental health status) to participate in the study and allocated to three groups: (a) sex offender treatment group (SO-TG), (b) non-sex offender treatment group (NSO-TG), and (c) control group (CG). The SO-TG included patients with history of sexual offending behaviour and were participating in the URI programme. The NSO-TG were patients undertaking the URI programme but did not have a history of sexually offending behaviour. The

CG comprised of patients who at the time of the study were not participating in the URI programme or completed the same programme in the past.

Both of the treatment groups were referred to the URI programme by their multidisciplinary clinical teams based on the patients' past experienced distress in relationships (e.g., aggression, distrust, hostility, loneliness). The sample size used in the study is as follows: SO-TG $n = 9$, NSO-TG $n = 9$, and CG $n = 10$.

2.2 Measures and design

All participants completed the following test battery: (a) Inventory of Interpersonal Problems-C [IIP-C] (Horowitz et al., 2000), (b) UCLA Loneliness Scale (Russell et al., 1980), and (c) Experience in Close Relationship Scale [ECR-R] (Fraley et al., 2000).

The IPP-C (Horowitz et al., 2000) is a 32-item self-report questionnaire measuring the presence of interpersonal difficulties. The participants rate the statements on a Likert-type scale ranging from 0 (*not at all*) to 4 (*extremely)* based on their belief in how well the short statements describe them. The IIP-C has 8 dimensions measuring potential difficulties one might experience in relations: *Dominance* (difficulties with aggressive, controlling and/or manipulative behaviour), *Intrusiveness* (attention seeking, being too open and overly intrusive), *Self-Sacrifice* (too caring, overly trusting, and attempting too hard to please others), *Over Accommodation* (exploitive and finds it hard to expressing anger), *Non-Assertive* (difficulties with being assertive), *Social Inhibition* (overly socially anxious and inhibited), *Coldness* (struggles to express emotions and sympathy) and *Vindictiveness* (being suspicious, distrusting and egocentric) (Barkham et al., 1996).

The UCLA Loneliness Scale (Russell et al., 1980) was designed to measure one's subjective experience of loneliness and social isolation. It is a self-report inventory consisting of 20 short statements, which participants rate on a Likert-type scale from 1 (*never*) to 4 (*often*). It has high internal consistency (coefficient alpha ranging from 0.86 to 0.94) and test-retest reliability ($r = 0.73$) over 1-year period (Russell, 1996).

The ECR-R (Fraley et al., 2000) is a 36-item self-reported questionnaire measuring adult attachment. The responders are asked to rate short statements with a Likert-like scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) based on how they generally feel in an intimate relationship. It has two subscales, which measure *Anxious* and *Avoidant* attachment styles. The former is characterised by fear of abandonment and rejection, whereas the latter represents avoidance of intimacy and purist of independence. Studies on undergraduates found high internal consistency for both subscales – i.e. for the Anxiety alpha ranges from 0.89 to 0.92, and for the Avoidance subscale, the alpha ranges from 0.91 to 0.95 (Lopez & Gormley, 2002; Wei et al., 2004).

Participants were assessed at two time-points, that is, T1 pre- and T2 post-treatment, with a period of 20 weeks between the two test times. Additionally, the nursing staff, who have the most contact with the patients, were asked to fill out the Chart of Interpersonal Relationships in Closed Living Environments

[CIRCLE] (Blackburn & Renwick, 1996) for each patient pre- and post-treatment. The purpose of this was to provide another objective measure of the interpersonal behaviour exhibited by the patients in addition to the self-report questionnaires completed by the patients. However, due to the low numbers of questionnaires being filled out by the nursing staff the data on CIRCLE was subsequently excluded from the study.

2.3 Procedure

The list of participants was formed based on their referral to the URI programme and their offence history – i.e. whether or not they committed a sexual offence. Before approaching the patients, permission to do so from their responsible clinicians and team psychologists. All potential concerns regarding any of the potential participants were discussed at the Clinical Team Meeting with the multidisciplinary team [MDT], and patients who were deemed unsuitable to participate (for example, due to mental health deterioration or upcoming move to a different facility before the end of study) were taken off the list. The patients included in the control group were also suggested by the MDTs and permission from their responsible clinicians were obtained before approaching the patients with an invitation to participate in the study.

Subsequently, the patients were approached individually and asked to participate in the study which would help determine the effectiveness of the URI programme. The patients were assured that they could decline without any consequences and that their responses would be strictly confidential. It was explained to them that there would be two time-points of testing – the second one being after 20 weeks. They were reassured that everything would be anonymous and if they would wish to withdraw from the study at a later point they can do that again without any consequences.

The patients who agreed to participate were first given a consent form, which the researchers explained and checked that the patients fully understood. Subsequently, patients were asked to fill out the ECR-R, the IIP-32 and the UCLA, with researchers being available to answer any potential questions. After the tests were filled out the patients were thanked and told they would be approached once more after 20 weeks for the second testing time.

In 20 weeks, the follow-up testing was conducted, with each patient being once more asked whether he still wishes to participate in the study and once more reassured that he can decline to do so without consequences.

The primary nurses of each participant were asked to fill out the CIRCLE for the patients also at two time-points. The rationale of the study and the purpose of the CIRCLE was explained to them. After 20 weeks, they were kindly reminded to fill out the CIRCLE again.

A positive ethical opinion was obtained for conducting the present study in the NHS (or private sector) by the Nottingham Centre Research Ethics Committee and the West London Mental Health Trust Research and Development Group.

2.4 Data analysis

Prior to choosing the statistical tests the normal distribution for the data was first assessed. Although most of the data was normally distributed, several data were nonnormally distributed as well (see Appendix 1). Due to the small sample size, the outliers were not taken out from the data set. Consequently, the non-parametric tests were used for the statistical analysis. Although there were only a few nonnormally distributed results, it has been found that the nonparametric tests' (e.g. Mann-Whitney U test) power is superior to parametric tests' power (e.g. ANCOVA, two-way ANOVA) for small sample sizes when nonnormally distributed results are present (Vickers, 2005).

More specifically, the Wilcoxon signed ranks test and the Mann-Whitney U test were used. The Wilcoxon signed ranks test was used to determine whether post-treatment scores of the SO-TG indicate lower levels of loneliness, insecure attachment, and more prosocial interpersonal skills compared to pre-treatment. Subsequently, the Mann-Whitney U test was used to compare the difference in the test results from pre- to post-test of the SO-TG with the difference in the results of the NSO-TG, and the CG. This was used to explore if the emerging changes in the SO-TG were predominantly due to the URI programme rather than other treatment programmes offered at the research site, including anti-libidinal medication.

As only two statistical tests were used, no corrections for multiple comparisons were conducted. Nonetheless, this might have resulted in a higher number of erroneous statistically significant results and therefore, interpretation of the statistically significant results must be made with caution.

3 RESULTS

3.1 Participants

The average age of the patients involved in the study was 43.45 years (*SD* = 10.23), ranging from 25 years to 61 years. On average, the participants were in-patients at the high secure psychiatric hospital for 7 years and 10 months (*SD* = 6.46 years), with the longest stay of 24 years and the shortest stay of 7 months. Predominantly patients were White British (57.1%), followed by 10.7% of Black British, 10.7% of Mixed Race, 3.6% Asian, and 17.6% not identifying with either of the ethnicity categories. There was no significant difference in ethnicity between the SO-TG, NSO-TG and CG ($p = 0.26$).

Based on the ICD-10 (World Health Organisation, 1992), 35.7% ($n = 10$) of the patients were diagnosed with Dissocial Personality Disorder, 21% ($n = 6$) with Paranoid Schizophrenia, 10.7% ($n = 3$) with Specific Personality Disorder, 7.1% ($n = 3$) with Mixed and Other Personality Disorder, 7.1% ($n = 3$) with Unspecified Personality Disorder. Additionally, one patient was diagnosed with Emotionally Unstable Personality Disorder, one with Schizophrenia Unspecified, and one with Schizoaffective Disorder. Again, there was no significant difference between the three groups ($p = 0.54$).

While all of the participants in the SO-TG (n = 9) had a history of sexual offending behaviour and no participants in the NSO-TG (n = 9) had a sexual offence on their criminal record, 60% of the patients (n = 6) in the CG had no history of a sexual offence. No statistically significant difference between the groups was found (p = 0.61).

3.2 Between-subjects change from pre- to post-treatment

The differences in scores from the first to second time-point of assessment were calculated for each group. The difference in scores was then statistically analysed by using the Mann-Whitney U test to see if there was a difference between the SO-TG, NSO-TG and CG in the adult attachment style, experiences of loneliness and social isolation, and interpersonal difficulties after completing the URI programme.

Using the SPSS version 23, the Mann-Whitney U test was run. The first step of interpreting the result was to examine the histograms to determine whether the data is similarly distributed or not. If the data distribution was not similar, based on which the usage of medians (if the distribution is similar) or mean ranks (if the distribution is not similar) was used for the interpretation of the results. The results are presented in tables 1–3.

3.2.1 Feelings of loneliness and social isolation

The loneliness scores for the SO-TG (mean rank = 6.50) and NSO-TG (mean rank = 12.50) were statistically different, U = 13.50, z = -2.39, p = 0.014, R = 0.56. Similarly, the difference in the UCLA scores for the SO-TG (mean rank = 7.11) and CG (mean rank = 12.60) was statistically significant as well, U = 19.00, z = -2.13, p = 0.035, R = 0.49.

3.2.2 Difficulties with interpersonal relationships

When exploring the differences between groups, there were no statistically significant results obtained between either of the groups as presented in tables 1–3. Furthermore, there were no significant results found on any of the subscales of the IIP-32 questionnaire when comparing the SO-TG with the NSO-TG or control group. However, one statistically significantly different between the NSO-TG and CG was found in the *Vindictiveness* dimension was statistically significant, U = 81.00, z = 2.96, p = 0.002, R = 0.68.

3.2.3 Adult attachment style

Similarly, when exploring the differences between groups in the attachment style shift from the first to the second time-point of the assessment, no statistically significant results emerged. Neither did the results show a statistically significant difference when comparing the anxious attachment style subscale and the avoidant attachment style subscales between the three groups.

Table 1: Between SO-TG and control group comparison of change from pre- to post-treatment

	SO-TG (n = 9)	Control Group (n = 10)				
	Mean Rank	Mean Rank	Mann-Whitney U	Exact Sig.	*Z*	*R*
ECR-R: Total	9.67	10.30	42.00	0.84	-0.25	0.06
ECR-R: Anxious attachment style	9.50	10.45	40.50	0.72	-0.37	0.08
ECR-R: Avoidant attachment style	11.11	9.00	55.00	0.45	0.82	0.19
UCLA	7.11	12.60	19.00	0.04*	-2.13	0.49
IIP-32: Social Inhibition	9.94	10.05	44.50	0.97	-0.04	0.01
IIP-32: Non-Assertiveness	8.83	11.05	34.50	0.40	-0.87	0.09
IIP-32: Dominance	9.44	10.50	40.00	0.72	-0.42	0.09
IIP-32: Vindictiveness	10.72	9.35	51.50	0.60	0.53	0.12
IIP-32: Self-Sacrifice	7.67	12.10	24.00	0.09	-1.73	0.39
IIP-32: Coldness	9.61	10.35	41.50	0.78	-0.29	0.07
IIP-32: Intrusive	8.39	11.45	30.50	0.24	-1.19	0.27
IIP-32: Over Accommodation	9.00	10.90	36.00	0.49	-0.76	0.17
IIP-32: Total	9.22	10.70	38.00	0.6	-0.57	0.13

Note: * $p < 0.05$

Table 2: Between SO-TG and NSO-TG comparison of change from pre- to post-treatment

	SO-TG (n = 9)	NSO-TG (n = 9)				
	Mean Rank	Mean Rank	Mann-Whitney U	Exact Sig.	*Z*	*R*
ECR-R: Total	11.44	7.56	58.00	0.14	1.55	0.36
ECR-R: Anxious attachment style	9.39	9.61	39.50	0.93	-0.09	0.02
ECR-R: Avoidant attachment style	11.22	7.78	56.00	0.19	1.37	0.32
UCLA	6.50	12.50	13.50	0.01**	-2.39	0.56
IIP-32: Social Inhibition	8.17	10.83	28.50	0.29	-1.09	0.26
IIP-32: Non-Assertiveness	8.06	10.94	27.50	0.58	-1.174	0.28
IIP-32: Dominance	7.72	11.28	24.50	0.16	-1.42	0.34
IIP-32: Vindictiveness	8.17	10.83	28.50	0.29	1.07	0.08
IIP-32: Self-Sacrifice	9.89	9.11	44.00	0.79	0.32	0.25
IIP-32: Coldness	7.72	11.28	24.50	0.16	-1.43	0.34
IIP-32: Intrusive	7.33	11.67	21.00	0.09	-1.76	0.41
IIP-32: Over Accommodation	9.22	9.78	38.00	0.86	-0.22	0.05
IIP-32: Total	7.17	11.83	19.50	0.06	-1.86	0.44

Note: ** $p < 0.01$

Table 3: Between NSO-TG and control group comparison of change from pre- to post-treatment

	NSO-TG (n = 9) Mean Rank	Control Group (n = 10) Mean Rank	Mann-Whitney U	Exact Sig.	Z	R
ECR-R: Total	8.11	11.70	28.00	0.18	-1.39	0.32
ECR-R: Anxious attachment style	9.28	10.65	38.50	0.60	-0.53	0.12
ECR-R: Avoidant attachment style	9.00	10.90	36.00	0.49	-0.74	0.17
UCLA	10.22	9.80	47.00	0.91	0.16	0.68
IIP-32: Social Inhibition	11.50	8.65	58.50	0.28	1.12	0.26
IIP-32: Non-Assertiveness	10.50	9.55	49.50	0.72	0.37	0.09
IIP-32: Dominance	11.28	8.85	56.50	0.36	0.94	0.22
IIP-32: Vindictiveness	14.00	6.40	81.00	0.02*	2.96	0.68
IIP-32: Self-Sacrifice	7.78	12.00	25.00	0.11	-1.64	0.38
IIP-32: Coldness	11.44	8.70	58.00	0.31	1.07	0.25
IIP-32: Intrusive	10.78	9.30	52.00	0.60	0.58	0.25
IIP-32: Over Accommodation	9.61	10.35	41.50	0.78	-0.29	0.07
IIP-32: Total	12.28	7.95	65.50	0.09	1.68	0.38

Note: * $p < 0.05$

3.3 3.3 Individual improvement from pre- to post-treatment

A Wilcoxon signed-rank test was conducted to explore whether there was a significant difference in feelings of loneliness, and difficulties with interpersonal relationships and whether the was a shift from insecure towards more secure attachment after completing the 20-week URI programme in sex offenders and non-sex offenders.

3.3.1 Feelings of loneliness and social isolation

The results showed that out of 9 patients with a history of sexual offending, 8 patients reported feeling less lonely and socially isolated (mean rank = 4.5) and one patient reported an increase in the subjective perception of loneliness (mean rank = 9.0). There were no ties. The difference (*Mdn* = -0.3) in a subjective feeling of loneliness and social isolation was not statistically significant, z = -1.60, p = 0.11, r = 0.38 from pre- (*Mdn* = 2.6) to post-treatment (*Mdn* = 2.4).

Among NSO-TG the results suggest that out of 9 patients, 5 perceived to be lonelier and socially isolated (mean rank = 5.4) than prior to completion of the URI programme. There was one tie – i.e. there was no change in the experience of loneliness and social isolation, and 3 patients appear to feel less lonely (mean rank = 3.0). The results showed that the difference (*Mdn* = 0.047) of feelings of loneliness from pre - (*Mdn* = 1.95) to post-treatment (*Mdn* = 2.20) was not statistically significant, z = -1.26, p = 0.21, r = 0.29.

Similarly, out of 10 control participants, 7 reported an increase in feelings of loneliness and social isolation (mean rank = 5.29) and 3 reported feeling lonely less often (mean rank = 6). From pre- (*Mdn* = 2.25) to post-treatment (*Mdn* = 2.35) the emerging difference (*Mdn* = 0.075) was not statistically significant, $z = -0.97$, $p = 0.33$, $r = 0.22$.

3.3.2 Difficulties with interpersonal relationships

When exploring the interpersonal difficulties, the results suggested that 5 out of 9 SO-TG patients reported having less overall interpersonal difficulties (mean rank = 5.4) after treatment. There was one tie and 3 patients experienced an increase in interpersonal difficulties (mean rank = 3). The overall difference (*Mdn* = -0.22) from pre- (*Mdn* = 1.25) to post-treatment (*Mdn* = 1.09) was not found to be statistically significant, $z = -1.36$, $p = 0.17$, $r = 0.32$. Neither was there any statistically significant difference from pre- to post-treatment found on the dimensions of *Social Inhibition* ($z = -1.29$, $p = 0.19$, $r = 0.30$), *Non-Assertiveness* ($z = -1.89$, $p = 0.058$, $r = 0.45$), *Intrusiveness* ($z = -1.69$, $p = 0.092$, $r = 0.39$), *Self- Sacrifice* ($z = -1.21$, $p = 0.23$, $r = 0.29$), and *Over Accommodation* ($z = -1.81$, $p = 0.071$, $r = 0.43$). However, the results implied that on the *Dominance* dimension there was a statistically significant decrease in experiencing difficulties with aggression for 6 out of 9 patients (mean rank = 3.5), $z = -1.69$, $p = 0.027$, $r = 0.52$. There were 3 ties as well. Furthermore, 5 out of 9 patients scored lower on the *Coldness* dimension (mean rank = 3), and for 3 patients there appears to be no change in score. The difference (*Mdn* = -0.25) from pre- (*Mdn* = 1.25) to post-treatment (*Mdn* = 0.75) was found to be statistically significant, $z = -2.032$, $p = 0.042$, $r = 0.48$. Lastly, out of 9 participants, 6 participants were less *Vindictive* (mean rank = 3.5) and for 3 participants there was no change. The results indicated that the difference (*Mdn* = -0.5) from pre- (*Mdn* = 1.25) to post-completion (*Mdn* = 0) of the URI programme was statistically significant, $z = -2.207$, $p = 0.027$, $r = 0.52$.

The analysis of the pre- and post-treatment result for the NSO-TG the results indicated that 7 out of 9 patients experienced more relationship difficulties after attending the URI programme (mean rank = 4.93), whereas for 2 patients there appeared to be a reduction in their interpersonal difficulties (mean rank = 5.25). The difference (*Mdn* = 0.16) from pre- (*Mdn* = 0.94) to post-treatment (*Mdn* = 1.03) was not statistically significant, $z = -1.42$, $p = 0.16$, $r = 0.34$. When examining the dimension, only the *Intrusiveness* dimension was found to be statistically significant, $Z = -2.67$, $p = 0.008$, $r = 0.63$. More specifically, the results suggest that for all 9 patients there was an increase (*Mdn* = 1.25) in their difficulties with intrusive behaviour in an interpersonal relationship (mean rank = 5.00) from pre- (*Mdn* = 0.75) to post-treatment (*Mdn* = 2.00). For the remaining 7 dimensions the change from pre- to post-treatment was found to be statistically nonsignificant – i.e. *Social Inhibition* ($z = -0.43$, $p = 0.67$, $r = 0.10$), *Non-Assertiveness* ($z = -0.64$, $p = 0.52$, $r = 0.15$), *Dominance* ($z = -0.12$, $p = 0.91$, $r = 0.028$), *Self-Sacrifice* ($z = -0.95$, $p = 0.34$, $r = 0.22$), *Coldness* ($z = -0.77$, $p = 0.44$, $r = 0.18$), *Vindictiveness* ($z = -0.21$, $p = 0.83$, $r = 0.049$) and *Over Accommodation* ($z = -1.40$, $p = 0.16$, $r = 0.33$).

Similar results were also obtained for the control group where overall 7 out of 10 patients had fewer interpersonal difficulties at the second testing time (mean

rank = 5.50). On the other hand, results suggested that 3 patients experienced more interpersonal issues (mean rank = 5.5). Nonetheless, the difference (*Mdn* = -0.17) between first (*Mdn* = 1.11) and second (*Mdn* = 1.05) time-point was statistically not significant, z = -1.12, p = 0.26, r = 0.25. There was no statistically significant change from first assessment to second assessment point on 7 of the interpersonal difficulties dimensions – i.e. *Social Inhibition* (z = -0.72, p = 0.46, r = 0.16), *Non-Assertiveness* (z = -1.34, p = 0.18, r = 0.29), *Dominance* (z = -1.19, p = 0.23, r = 0.27), *Coldness* (z = -0.92, p = 0.36, r = 0.20), *Vindictiveness* (z = -1.49, p = 0.14, r = 0.33) and *Over Accommodation* (z = -1.38, p = 0.17, r = 0.31). For the *Self-Sacrifice* dimension there was a statistically different (*Mdn* = 1.25) result found between the first point of time (*Mdn* = 0.88) and second point of time (*Mdn* = 2.50), z = -2.65, p = 0.008, r = 0.33.

3.3.3 Adult attachment style

The Wilcoxon signed-rank test showed that for 3 out of 9 SO-TG participants there was no change in the attachment style. For 4 of the patients their results implied that there was an increase in an insecure attachment style (mean rank = 3.5), whereas for 2 patients there appears to be a change towards a more secure attachment style after the URI programme (mean rank = 3.5). However, the difference (*Mdn* = 0) from pre- (*Mdn* = 4.53) to post-treatment (*Mdn* = 4.67) was statistically insignificant, z = -0.73, p = 0.46, r = 0.17. When exploring the change in Anxious attachment style, the results suggest that for 4 out of 9 patients there was a decrease in their insecure attachment (mean rank = 5.50), for one patient there was no change, and for the remaining 4 there was an increase in their Anxious attachment style (mean rank = 3.50). Neither of the changes were statistically significant – i.e. Anxious attachment style (z = -0.56, p = 0.58, r = 0.13) and Avoidant attachment style (z = -0.98, p = 0.33, r = 0.23) attachment style.

For the NSO-TG results showed that for 7 out of 9 patients there was a shift from insecure attachment towards a more secure attachment style (mean rank = 4.79). The results for two patients indicated an increase in an insecure attachment style (mean rank = 5.75). The difference (*Mdn* = -0.22) in insecure attachment from pre- (*Mdn* = 4.47) to post-treatment (*Mdn* = 4.36) was statistically not significant, z = -1.30, p = 0.19, r = 0.24. Out of 9 participants, 6 patients had a lower Anxious attachment style after treatment (mean rank = 4.50), although 3 participants exhibited an increase in Anxious attachment style (mean rank = 6.00). Likewise, there was no statistically significant change on the subscales measuring the Anxious attachment style (z = -0.53, p = 0.59, r = 0.31) and Avoidant attachment style (z = -1.01, p = 0.31, r = 0.13).

When comparing the attachment style change in CG after 20 weeks, the results suggest that insecure attachment increased for 6 out of 10 (mean rank = 5.83) and decreased for the other 4 patients (mean rank = 5.00). The difference (*Mdn* = 0.75) between levels of insecure attachment at the first time-point of testing (*Mdn* = 3.96) and at the second time-point of testing (*Mdn* = 4.22) was statistically nonsignificant, z = -0.77, p = 0.44, r = 0.057. Furthermore, for half of the patients, there was an increase in Anxious attachment style (mean rank = 5.30) and for the other half, there was a decrease in Anxious attachment style (mean rank = 5.70). Similarly,

there was a decrease in Avoidant attachment style for 6 patients (mean rank = 4.17) and an increase for the remaining 4 patients (mean rank = 7.50). The change was not statistically significant for the Anxious attachment style (z = -0.10, p = 0.92, r = 0.17) nor for the Avoidant attachment style (z = -0.26, p = 0.79, r = 0.023).

4 DISCUSSION

The present study aimed to conduct a preliminary evaluation of the effectiveness of the Understanding Relationships and Intimacy (URI) psycho-educative group therapy for sex offenders. It was hypothesised that after completion of the URI programme the sex offenders would report significantly fewer experiences of interpersonal difficulties, feelings of loneliness and social isolation, and would become more securely attached. Thus, if the results would support the hypothesis, it would imply that the URI programme has a beneficial effect on sex offenders' understanding of intimacy and relationships, which might in turn reduce their future recidivism risk.

The results showed that after completing the URI psycho-educative group therapy, SO-TG experienced significantly fewer feelings of loneliness and social isolation compared to the control group. Furthermore, SO-TG reported fewer feelings of loneliness and social isolation in comparison to NSO-TG who also undertook the URI treatment programme. The reduction in loneliness could be because the URI programme is being conducted in a group setting, which was found to be a preferred therapeutic setting by sex offenders (Levenson et al., 2014). Sex offenders, especially child molesters, tend to be highly stigmatised, not only by the general public but also within the criminal system, which promotes their social isolation and loneliness (Ferguson & Ireland, 2006; Ricciardelli & Moir, 2013; Tewksbury, 2012). Group therapy setting, on the other hand, might be the only social setting in which sex offenders disclose their stigmatisation and feel supported (Frost & Connolly, 2004; Jennings & Deming, 2017), thus, reducing their feeling of loneliness and social isolation. Moreover, NSO-TG also reported feeling less lonely after completing the URI programme compared to the control group, which supports the importance of group cohesion on treatment outcomes as pointed out by Jennings and Deming (2017).

However, when examining the within-subject changes in the subjective experience of loneliness and social isolation, the results for none of the three groups of participants were statistically significant. One possible explanation could be that no change was found due to the small sample size and the use of only self-reported questionnaires. The effect sizes for all three groups were small, allowing the possibility that there might have been different results found if the sample size would be bigger. An alternative explanation could be the different criminogenic needs of the URI group therapy participants. More specifically, the patients involved in the URI programme had different ICD-10 diagnoses, varying from personality disorders to schizophrenic disorders, and offending history. The high diversity of the patients involved in the group therapy might have impaired the Need and Responsivity factors of the Risk, Need, Responsivity (RNR) Model (Andrews & Bonta, 1998) by requiring excessive flexibility in the programme, yet

failing to adapt sufficiently to different needs patients with different diagnosis present with and consequently, reducing the treatment effectiveness. Additionally, because the URI programme is psycho-educational, it might not foster group cohesion and expressiveness of one's affects sufficiently enough.

When comparing the presence of interpersonal difficulties between the SG-TG and NSO-TG who completed the URI group therapy, there was no statistically significant difference found. Similarly, no differences were found when comparing the SG-TG to the control group and the NSO-TG to the control group. All of the effect sizes were small to medium, which implies that if the study were to be conducted on a larger sample size, there would be a statistically significant difference. However, when examining the effect sizes, there was a medium effect size when comparing the SO-TG with NSO-TG and NSO-TG with CG. On the other hand, when comparing SO-TG with the control group the effect size was small. This suggests that SO-TG had more interpersonal difficulties before completing the URI group than did the NSO-TG, and thus had a greater reduction in their interpersonal difficulties after undertaking the programme. This notion is also supported by analysing the within-subject difference from pre- to post-treatment. More specifically, although once more the results were statistically not significant, when examining the mean ranks of SO-TG and NSO-TG it can be seen that there was a greater reduction for SO-TG than for the NSO-TG. Moreover, the median difference for the SO-TG implied a reduction in interpersonal difficulties from pre- to post-treatment, whereas the median difference from pre- to post-treatment for NSO-TG implied an increase in interpersonal difficulties. The decrease in interpersonal difficulties for the SO-TG and an increase in interpersonal difficulties for NSO-TG might again reflect the aforementioned high diversity of the patients in the URI programme, again supporting the proposition that the URI programme did not efficiently adopt the need and responsivity factors of the RNR (Andrews & Bonta, 1998) model.

Further exploration of SO-TG interpersonal difficulties was made by examining the eight dimensions of interpersonal issues, namely: dominance, intrusiveness, self-sacrifice, over accommodation, non-assertiveness, social inhibition, coldness and vindictiveness. The results showed that there was no statistically significant difference between SO-TG and NSO-TG or the control group on any of the dimensions. However, there was a statistically significant difference with a strong effect size between NSO-TG and CG on the Vindictiveness dimension. Yet when examining the within-subject difference from the first to the second point of assessment on the Vindictiveness dimension, there was no statistical difference for NSO-TG or CG although the effect sizes were small. Interestingly, there was a statistically significant difference with medium effect size on the Vindictiveness dimension for SO-TG. This suggests that SO-TG compared to NSO-TG and CG had more interpersonal difficulties associated with being egocentric, suspicious and distrusting. Moreover, a statistically significant decrease from pre- to post-competition of the URI programme in the Dominance and Coldness dimensions was also found in SO-TG. Although there was no statistically significant difference found for the Dominance or Coldness dimensions in the NSO-TG, there was a statistically significant reduction in the Intrusiveness dimension.

The diverse findings on the URI group's impact on interpersonal difficulties further support the suggestion that the URI programme still has room for improvement with the implementation of the RNR model (Andrews & Bonta, 1998). Moreover, as the URI is a psycho-educational programme with a more structured agenda this might hinder open expression of affects for all of the patients and group cohesion, the latter being found to be highly important for the treatment outcome for the sex offenders (Jennings & Deming, 2017).

Lastly, the effect of the URI group on the adult attachment styles was explored. There was no statistical difference in overall adult attachment style when comparing the SO-TG with the NSO-TG or the control group. Neither was a statistically significant difference found on the subscales of Anxious attachment style or Avoidant attachment style. Similarly, there was no statistically significant change from pre- to post-treatment in attachment styles in the SO-TG or the NSO-TG. One possible explanation for this is the difference in attachment styles between different types of sex offenders. While rapists tend to exhibit a more avoidant attachment style, child molesters tend to have an anxious attachment style, originating from different childhood experiences and consequently leading to different interpersonal difficulties in adulthood (Martin & Tardif, 2014; McCormack et al., 2002; Ward et al., 1996). Therefore, the lack of statistically significant results cannot be solely contributed to the URI programme, but may also reflect the small sample size used in the study which prevented further exploration of the attachment styles among different types of sex offenders.

Taken all together, the results of the present research suggest that the URI programme fails to effectively achieve its own primary aim for participants with sex-offending history – i.e. to support the development and maintenance of healthy relationships among offenders with mental disorder that exhibit problems with establishing and/or maintaining relationships in a prosocial manner. The manner in which one engages in interpersonal relationships is significantly more complex than solely possessing a rational understanding on »*how they work*«. It is affected by the person's attachment style, which is a complex reflection of early experiences with primary caregiver, social competences and quality of their close relationships (Bowlby, 1973; Fraley et al., 2013; Özcan et al., 2016). Numerous researchers have found significantly high levels of childhood trauma among sex offenders (e.g. Levenson et al., 2014; McCormack et al., 2002; Seghorn et al., 1987), which is also closely linked to insecure attachment styles (e.g. Maniglio, 2011; Özcan et al., 2016). Therefore, with focusing predominately solely on the cognitive aspect of the social skills the URI programme appears to neglect the need and responsivity aspect of the RNR model by underestimating the complex interpersonal dynamics needed for formation and retention of healthy interpersonal relationships.

4.1 Limitations

The current study has several limitations, the most crucial being the small sample size. The small number of participants in the study is a consequence of the patients either not wishing to participate or dropping out at the second time-point of assessment for various reasons (e.g. discharged to a different facility, did not »feel

like it«, mental health deterioration). This prevented a more detailed examination of the URI's effectiveness on different types of sex offenders. Furthermore, the small sample is also partly reflective of the fact that there was a 20-week waiting period in between two time-points of testing and that there was a time constraint on the research, limiting the possibility of expanding the sample size further. Moreover, as pointed out in the discussion section, because of a small sample the question remains whether the statistically insignificant results represent the actual absence of improvement on the tested constructs or whether a different trend would emerge if a bigger sample size would be at the disposal.

The additional limitation is the absence of objective measurements of patients' interpersonal relations. Although the initial study design attempted to include the CIRCLE (Blackburn & Renwick, 1996) it had to be taken out because it was completed only for a few participants. Given that the sample size was very small, the only option was to exclude CIRCLE rather than to exclude the patients for whom the CIRCLE was not filled out. Thus, the entire study is based on self-reported questionnaires without evaluating the validity of patients' responses, leaving the possibility of the results not being representative of the patients' genuine attachment styles, feelings of loneliness and difficulties with intimacy.

Additionally, results would be more informative if a wait-list for the URI programme group would be included. That is if we could compare patients who have completed the URI programme already and patients who have been identified that would benefit from the URI programme but have not yet completed it. Lastly, in order to see whether the URI programme is indeed effective, another follow-up testing after 20 weeks should be conducted in order to assess whether the emerging changes are stable over time. This would make the assessment of the URI group's effectiveness significantly more representative and valid.

5 CONCLUSIONS AND FUTURE RESEARCH

The URI programme was effective in reducing the subjective experience of loneliness when comparing sex offenders that have completed the URI group with the non-sex offenders that completed the URI group and the control group. Furthermore, it reduced SO-TG's egocentrism, suspiciousness and distrustfulness. Overall, URI treatment is not effectively targeting sex offenders' insecure attachment styles, interpersonal difficulties, or feelings of loneliness and social isolation. This appears to be due to the overly diverse treatment group in terms of the ICD-10 diagnoses and the offending history of the patients, reducing the ability to successfully apply the RNR model to the group therapy. Although the URI is not specifically intended for sex offenders, one possible solution might be to form groups based on their attachment styles. That would enable them to adapt the URI programme more according to the RNR model.

Future research should strive to repeat the current study on bigger sample size (e. g. $N = 100$ per group), including the treatment group, wait-list group and control group in order to assess the effectiveness of the URI programme. The sex offenders involved in the study should be split into two different groups – i.e. rapists and child molesters, in order to see whether there are indeed different

emerging trends between these two types of sexual offenders and if so, what are the differences and what are the similarities. It should include observational psychometric instruments (e.g. CIRCLE), and interviews, which would allow a more in-depth exploration of the patients' attachment style, difficulties with interpersonal relationships and intimacy, and feelings of loneliness. Additionally, it should include a third time-point of testing to determine the perseverance of change which might result from the URI programme in order to obtain a genuine reflection of the effectiveness of the URI programme for sex offenders.

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APPENDIX

Appendix 1

Table 4: Normal distribution assessment of the Sex offending treatment group data

	N	Mean	Std. Deviation	Skewness		Kurtosis		*Zs*	*Zk*
Variables	**Statistic**	**Statistic**	**Statistic**	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**		
Pre- ECR-R: Total	9	4.47	0.64	-0.10	0.72	-0.98	1.40	-0.15	-0.69
Post- ECR-R: Total	9	4.63	0.39	0.19	0.72	0.51	1.40	0.28	0.36
Pre- ECR-R: Anxious attachment style	9	4.27	0.39	1.06	0.72	0.69	1.40	1.49	0.49
Post- ECR-R: Anxious attachment style	9	4.17	0.41	-1.12	0.72	2.10	1.40	-1.56	1.50
Pre- ECR-R: Avoidant attachment style	9	4.69	1.12	0.16	0.72	-1.48	1.40	0.23	-1.05
Post- ECR-R: Avoidant attachment style	9	5.09	0.69	0.18	0.72	0.24	1.40	0.26	0.17
Pre- UCLA	9	2.48	0.58	-1.60	0.72	3.46	1.40	**-2.24**	**2.47**
Post- UCLA	9	2.28	0.31	-0.90	0.72	-0.17	1.40	-1.27	-0.12
Pre- IIP-32: Social Inhibition	9	1.14	0.85	-0.15	0.72	-1.39	1.40	-0.21	-0.99
Post- IIP-32: Social Inhibition	9	0.94	0.77	0.87	0.72	0.98	1.40	1.21	0.70
Pre- IIP-32: Non-Assertiveness	9	1.72	1.61	0.38	0.72	-1.71	1.40	0.53	-1.22
Post- IIP-32: Non-Assertiveness	9	1.0	0.97	0.54	0.72	-1.44	1.40	0.76	-1.03
Pre- IIP-32: Dominance	9	1.53	1.48	0.45	0.72	-1.19	1.40	0.64	-0.85
Post- IIP-32: Dominance	9	0.89	1.09	1.11	0.72	0.19	1.40	1.55	0.14
Pre- IIP-32: Vindictiveness	9	1.33	0.98	0.67	0.72	0.69	1.40	0.93	0.49
Post- IIP-32: Vindictiveness	9	2.03	0.64	0.01	0.72	-0.67	1.40	0.02	-0.48
Pre- IIP-32: Self-Sacrifice	9	0.53	0.59	0.48	0.72	-1.61	1.40	0.68	-1.15
Post- IIP-32: Self-Sacrifice	9	1.11	1.54	1.09	0.72	-0.22	1.40	1.53	-0.16

Pre- IIP-32: Coldness	9	1.33	1.15	0.42	0.72	-1.15	1.40	0.59	-0.82
Post- IIP-32: Coldness	9	0.97	0.99	1.16	0.72	0.92	1.40	1.62	0.66
Pre- IIP-32: Intrusive	9	1.36	1.47	0.74	0.72	-0.65	1.40	1.03	-0.47
Post- IIP-32: Intrusive	9	0.53	0.71	1.19	0.72	0.84	1.40	**1.66**	0.59
Pre- IIP-32: Over Accommodation	9	1.64	1.39	0.73	0.72	-0.71	1.40	1.02	-0.51
Post- IIP-32: Over Accommodation	9	1.17	1.02	0.08	0.72	-1.55	1.40	0.12	-1.11
Pre- IIP-32: Total	9	1.32	1.09	0.44	0.72	-0.82	1.40	0.62	-0.59
Post- IIP-32: Total	9	0.98	0.65	0.98	0.72	1.02	1.40	1.37	0.73
Valid N (listwise)	9								

Note: The cut-off score $Z = 1.64$ was used to determine whether or not the data is normally distributed. Nonnormally distributed data is marked in bold.

Table 5: Normal distribution assessment of the non-sex offending treatment group data

	N	Mean	Std. Deviation	Skewness		Kurtosis		*Zs*	*Zk*
Variables	**Statistic**	**Statistic**	**Statistic**	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**		
Pre- ECR-R: Total	9	4.29	0.50	-0.47	0.72	-1.24	1.40	-0.66	-0.88
Post- ECR-R: Total	9	4.14	0.59	-1.19	0.72	1.19	1.40	**-1.67**	0.85
Pre- ECR-R: Anxious attachment style	9	3.81	0.47	-0.63	0.72	-0.21	1.40	-0.87	-0.15
Post- ECR-R: Anxious attachment style	9	3.74	0.52	-0.40	0.72	0.24	1.40	-0.56	0.17
Pre- ECR-R: Avoidant attachment style	9	4.53	0.98	-0.25	0.72	-1.29	1.40	-0.35	-0.92
Post- ECR-R: Avoidant attachment style	9	4.77	0.88	0.19	0.72	-1.50	1.40	0.26	-1.07
Pre- UCLA	9	2.05	0.52	0.59	0.72	-0.96	1.40	0.83	-0.69
Post- UCLA	9	2.21	0.47	-0.60	0.72	1.50	1.40	-0.84	1.07
Pre- IIP-32: Social Inhibition	9	1.19	0.74	0.81	0.72	2.64	1.40	1.12	**1.89**
Post- IIP-32: Social Inhibition	9	1.39	0.76	0.55	0.72	-1.32	1.40	0.76	-0.94

Pre- IIP-32: Non-Assertiveness	9	1.19	0.72	-0.25	0.72	-0.92	1.40	-0.35	-0.66
Post- IIP-32: Non-Assertiveness	9	1.06	0.61	-0.53	0.72	-0.81	1.40	-0.74	-0.58
Pre- IIP-32: Dominance	9	0.94	0.81	-0.26	0.72	-2.19	1.40	-0.36	-1.56
Post- IIP-32: Dominance	9	0.89	0.64	0.35	0.72	-0.52	1.40	0.49	-0.37
Pre- IIP-32: Vindictiveness	9	1.06	0.73	0.74	0.72	1.00	1.40	1.03	0.72
Post- IIP-32: Vindictiveness	9	3.33	3.64	2.95	0.72	8.79	1.40	**4.12**	**6.28**
Pre- IIP-32: Self-Sacrifice	9	0.56	0.65	1.19	0.72	0.21	1.40	**1.66**	0.15
Post- IIP-32: Self-Sacrifice	9	1.44	2.29	1.29	0.72	0.29	1.40	**1.79**	0.21
Pre- IIP-32: Coldness	9	1.06	0.77	0.66	0.72	0.10	1.40	0.92	0.07
Post- IIP-32: Coldness	9	1.36	0.80	-0.52	0.72	-0.96	1.40	-0.72	-0.69
Pre- IIP-32: Intrusive	9	0.81	0.54	-0.56	0.72	-0.95	1.40	-0.77	-0.68
Post- IIP-32: Intrusive	9	0.81	0.70	0.66	0.72	-0.55	1.40	0.92	-0.39
Pre- IIP-32: Over Accommodation	9	1.31	0.81	0.94	0.72	-0.73	1.40	1.32	-0.52
Post- IIP-32: Over Accommodation	9	0.97	1.00	1.64	0.72	2.98	1.40	**2.29**	**2.13**
Pre- IIP-32: Total	9	1.01	0.56	0.85	0.72	0.66	1.40	1.19	0.47
Post- IIP-32: Total	9	1.27	0.81	1.55	0.72	2.34	1.40	**2.17**	**1.67**
Valid N (listwise)	9								

Note: The cut-off score $Z = 1.64$ was used to determine whether or not the data is normally distributed. Nonnormally distributed data is marked in bold.

Table 6: Normal distribution assessment of the control group data

	N	Mean	Std. Deviation	Skewness		Kurtosis			
Variables	**Statistic**	**Statistic**	**Statistic**	**Statistic**	**Std. Err**	**Statistic**	**Std. Err**	***Zs***	***Zk***
Pre- ECR-R: Total	10	4.01	0.51	0.89	0.69	0.61	1.33	1.29	0.46
Post- ECR-R: Total	10	4.22	0.59	-0.16	0.69	-1.01	1.33	-0.23	-0.76
Pre- ECR-R: Anxious attachment style	10	3.78	0.53	-0.59	0.69	0.46	1.33	-0.86	0.34
Post- ECR-R: Anxious attachment style	10	3.97	0.51	0.78	0.69	1.14	1.33	1.13	0.86
Pre- ECR-R: Avoidant attachment style	10	4.48	0.86	-0.53	0.69	-0.88	1.33	-0.77	-0.66
Post- ECR-R: Avoidant attachment style	10	4.23	0.94	0.16	0.69	-1.33	1.33	0.23	-0.99
Pre- UCLA	10	2.28	0.39	-0.24	0.69	-0.78	1.33	-0.35	-0.58
Post- UCLA	10	2.35	0.38	-0.70	0.69	0.06	1.33	-1.02	0.05
Pre- IIP-32: Social Inhibition	10	1.50	1.05	0.06	0.69	-1.92	1.33	0.08	-1.44
Post- IIP-32: Social Inhibition	10	1.30	0.76	-0.06	0.69	-1.12	1.33	-0.09	-0.84
Pre- IIP-32: Non-Assertiveness	10	1.80	0.75	0.13	0.69	-1.49	1.33	0.19	-1.12
Post- IIP-32: Non-Assertiveness	10	1.40	0.64	-0.04	0.69	-1.01	1.33	-0.06	-0.75
Pre- IIP-32: Dominance	10	1.40	0.91	0.28	0.69	-0.49	1.33	0.41	-0.37
Post- IIP-32: Dominance	10	1.03	0.64	0.21	0.69	0.60	1.33	0.31	0.45
Pre- IIP-32: Vindictiveness	10	1.23	0.46	0.18	0.69	-0.63	1.33	0.26	-0.47
Post- IIP-32: Vindictiveness	10	1.53	0.45	-0.77	0.69	-0.95	1.33	-1.11	-0.72
Pre- IIP-32: Self-Sacrifice	10	0.93	0.73	0.98	0.69	1.46	1.33	1.43	1.09
Post- IIP-32: Self-Sacrifice	10	3.40	3.63	1.74	0.69	3.07	1.33	**2.54**	**2.30**
Pre- IIP-32: Coldness	10	1.20	0.85	1.09	0.69	0.88	1.33	1.59	0.66
Post- IIP-32: Coldness	10	0.95	0.64	0.77	0.69	-0.51	1.33	1.11	-0.39
Pre- IIP-32: Intrusive	10	1.43	1.21	1.26	0.69	0.97	1.33	**1.83**	0.73

Post- IIP-32: Intrusive	10	0.95	0.51	-0.06	0.69	-1.01	1.33	-0.08	-0.76
Pre- IIP-32: Over Accommodation	10	1.03	0.64	0.46	0.69	-0.87	1.33	0.67	-0.65
Post- IIP-32: Over Accommodation	10	0.75	0.46	-0.55	0.69	-1.39	1.33	-0.79	-1.04
Pre- IIP-32: Total	10	1.31	0.55	0.75	0.69	-0.99	1.33	1.09	-0.75
Post- IIP-32: Total	10	1.09	0.35	0.35	0.69	-0.47	1.33	0.51	-0.35
Valid N (listwise)	10								

Note: The cut-off score $Z = 1.64$ was used to determine whether or not the data is normally distributed. Nonnormally distributed data is marked in bold.