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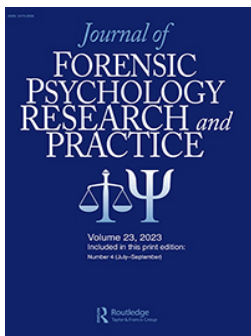
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The impact of COVID-19 restrictions on social relationships of forensic psychiatric outpatients with preexisting social network-related problems: A mixed methods study

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ABSTRACT

This study aimed to explore the impact of the COVID-19 restrictions on social relationships of forensic psychiatric outpatients with preexisting social network-related problems. Data from 70 participants of an ongoing randomized controlled trial, investigating the effectiveness of a social network intervention among forensic psychiatric outpatients, were examined. Demographic characteristics, quality of social relationships, loneliness, and social support were assessed at baseline. During the COVID-19 pandemic, an additional questionnaire that contained quantitative and qualitative questions regarding the impact of COVID-19 restrictions on social relationships was administered. Participants showed high levels of loneliness and dissatisfaction with social relationships before COVID-19. The majority of forensic outpatients perceived no changes on social relationships due to the COVID-19 restrictions. Qualitative results revealed some participants already lived socially isolated. Negative changes on social relationships were related to deterioration of social contacts, interruption of daytime activities, changed mental health care, and well-being. Emotional loneliness predicted deteriorated general and romantic relationships. These findings suggest that social relationships of forensic patients with preexisting social network-related problems remain of concern throughout the COVID-19 pandemic.

KEYWORDS

COVID-19; forensic psychiatry; social network; social relationships; mixed methods

Introduction

Worldwide, the social distancing measures, imposed by governments in response to the COVID-19 pandemic, have resulted in increased feelings of loneliness, disconnectedness, and psychological distress (Ponnet et al., 2020; Vindegaard & Benros, 2020), even more in psychiatric populations compared with general populations (Hoffart et al., 2020; Kraaij-

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Dirkzwager et al., 2021). The influence of close ties and social relationships on maintaining mental and physical health, in particular during stressful life events, such as a pandemic, has been widely acknowledged (Kawachi & Berkman, 2001; Ozbay et al., 2007). Previous COVID-19 studies have reported the protective effects of social contact on loneliness, well-being, and depressive symptoms in general populations (Macdonald et al., 2021; Sommerlad et al., 2021). At the same time, diminished contact with family and friends as well as reduced access to support from mental health-care providers and disruption of daily routines, was associated with deteriorated mental health states in psychiatric populations during the COVID-19 pandemic (Kølbæk et al., 2021; Rains et al., 2021). Therefore, in times of a pandemic, the importance of continuity of mental health care and maintenance of social relationships or resources of support for vulnerable and psychiatric populations, should not be underestimated.

To date, however, no research has focused on the impact of the COVID-19 restrictions on social relationships of forensic psychiatric patients – a vulnerable population characterized by severe mental disorders and delinquent behavior – who often lack a supportive social circle (Estroff et al., 1994; Murphy, 2000; Ter Haar-Pomp et al., 2015). During the COVID-19 pandemic, social and familiar bonds of forensic patients may further decrease, as distancing measures are expected to exacerbate avoidant and negative attitudes toward stigmatized groups, such as forensic psychiatric patients who are often portrayed as dangerous and risky (Chaimowitz et al., 2021; Murphy, 2000). Furthermore, forensic patients require consistent and qualitatively imputed care, as social support is predominantly provided by (mental) health-care professionals (e.g., social workers, nurses) and community services organizing daytime activities (Skeem et al., 2009). More specific, the importance of face-to-face appointments was emphasized, as a substantial part of forensic outpatients failed to use other sources of communication during the COVID-19 pandemic (De Beurs et al., 2021; Chaimowitz et al., 2021). The interruption of routine appointments and transformation to virtual care in response to the COVID-19 restrictions, as well as the limited availability of social relationships, assumably leads to deteriorated psychosocial well-being of forensic patients (De Cauwer et al., 2020; Chaimowitz et al., 2021; Rains et al., 2021). More knowledge regarding the psychosocial impact of social distancing on forensic psychiatric populations is necessary to effectively address potential future pandemics.

Therefore, this mixed methods prospective cohort study aimed to explore the impact of the COVID-19 restrictions on social relationships of forensic psychiatric outpatients with preexisting social network-related problems. In this study, the following research questions and hypotheses for this forensic outpatient population were addressed:

- (1) What is the self-perceived quality of social relationships before the COVID-19 restrictions? *We expected high levels of dissatisfaction on social relationships.*
- (2a) What are the self-perceived changes in quality of social relationships due to the COVID-19 restrictions? *Deteriorated social relationships were expected.*
- (2b) What are the self-perceived changes in quality of social relationships due to the COVID-19 restrictions over time? *We expected more deteriorated social relationships over time.*
- (3) What is the effect of loneliness and social support on self-perceived changes in quality of social relationships due to the COVID-19 restrictions? *We expected that preexisting social network-related problems, such as loneliness and lower levels of social support, would predict adverse changes in social relationships.*

Materials and methods

Data from an ongoing randomized controlled trial (RCT) among forensic psychiatric outpatients at Inforsa Forensic Outpatient Care, a department of Arkin Mental Healthcare in Amsterdam, the Netherlands, was used in these mixed methods prospective cohort study (Swinkels et al., 2020). Inforsa provides mental health care in the community for youth and adult outpatients with complex addiction, psychiatric and personality disorders, at risk of engaging in delinquent behavior. Treatment consists of ambulatory psychotherapies (e.g., Cognitive Behavioral Therapy, Eye Movement Desensitization and Reprocessing) and/or Forensic Flexible Assertive Community Treatment (FACT; Van Veldhuizen, 2007). Our study sample contains 70 ethnically diverse, predominantly male patients (89%), in the age between 17 and 67 years ($M = 40.89$, $SD = 12.69$). Participants were included in the RCT before as well as during the COVID-19 pandemic (between April 2018 and April 2021), and still participated after the start of the restrictions announced by the Dutch government on the 12th of March 2020. They received either treatment as usual (TAU) or TAU with the addition of a social network intervention. Three of the participants reported being imprisoned at the time of the research assessments during the COVID-19 pandemic. The study was approved by the Medical Ethics Committee of the VU University Medical Center (NL60308.029.17) and preregistered at the Netherlands Trial Register, part of the Dutch Cochrane Center (NTR7163).

Data collection

Forensic outpatients were recruited for participation in the RCT, after at least three months of treatment, if they were 16 years or older, diagnosed with a DSM-IV-TR/5 disorder and identified with limitations in the area of

social network and social participation. Written informed consent was obtained from participants prior to baseline assessment. Assessments were conducted before randomization at baseline, and every three months after baseline up to 12 months (i.e. follow-up assessments). The last follow-up assessment was conducted 18 months after baseline. For this study, we used data from the baseline assessment (between April 2018 and April 2021), as well as the first and second follow-up assessment of participants during the COVID-19 restrictions (between May 2020 and March 2021).

Self-report questionnaires, assessed at baseline, were used to collect demographic characteristics, quality of social relationships, loneliness, and social support. Demographic characteristics such as ethnicity, age, gender, and daytime activities were gathered with a self-developed questionnaire. Quality of general social relationships, family relationships, and romantic relationships was measured with three items of the Manchester Short Assessment of Quality of Life (MANSA) on a 7-point Likert scale ranging from 1 (very dissatisfied) to 7 (very satisfied; Priebe et al., 1999). The Loneliness scale (LS), consisting of a 11-item 5-point Likert scale ranging from 1 (no) to 5 (yes), was used to determine emotional and social loneliness (De Jong Gierveld & Van Tilburg, 1999). Positive and negative social support was assessed with the Social Support Questionnaire (SSL-I) which consists of 41-items coded on a 5-point Likert-scale ranging from 1 (totally disagree) to 5 (totally agree; Van Sonderen, 2012). The psychometric properties of the MANSA, LS, and SSL-I were good (De Jong Gierveld & Van Tilburg, 2010; Priebe et al., 1999; Van Sonderen, 2012).

Furthermore, in response to the COVID-19 restrictions that had emerged during the RCT, researchers implemented a short self-developed Corona Questionnaire (CQ) to monitor the impact of the COVID-19 restrictions on social relationships. Four 7-point Likert-scale items, ranging from 1 (strong improvement) to 7 (strong deterioration), were used to define self-perceived changes in social relationships due to the COVID-19 restrictions. Different subcategories of social relationships are hereinafter referred to as follows: general social relationships, romantic relationships, family relationships, and contact frequency. In addition, participants were asked to answer one qualitative question, "How does corona affect your social network?" The CQ was added to the first (i.e. Time 1) and second (i.e. Time 2) follow-up assessment after the start of the COVID-19 restrictions.

Data analysis

Statistical analyses of the quantitative data were performed with the Statistical Package for the Social Sciences (SPSS), version 26. Our sample consisted of 70 participants included before the start of the COVID-19 restrictions in

March 2020 ($N = 49$), and during the COVID-19 restrictions between June 2020 and June 2021 ($N = 21$). Therefore, independent t -tests were conducted revealing no significant differences between those groups on all study variables.

First, we conducted descriptive analyses to examine the quality of social relationships, as well as demographic characteristics, loneliness and social support, of forensic outpatients before the COVID-19 restrictions. In addition, we conducted independent t -tests to compare social support means of our sample with a norm group consisting of a general population (Van Sonderen, 2012).

Second, descriptive analyses were conducted to examine whether forensic outpatients perceived changes in quality of social relationships due to the COVID-19 restrictions (i.e. changes in general social relationships, romantic relationships, family relationships, and contact frequency).

Third, to examine the self-perceived changes in quality of social relationships due to COVID-19 restrictions over time (i.e. Time 1 vs. Time 2), we conducted Wilcoxon signed-rank tests, as normality tests and Q-Q plots showed that the dependent variables were not normally distributed.

Subsequently, qualitative analyses were conducted to provide more in-depth answers to our second research questions (Creswell et al., 2003). Qualitative data, consisting of written responses of each participant, was saved and organized in Microsoft Excel. Two authors used thematic analysis to identify, analyze, and report emerging (sub)themes in the data (Boeije, 2005; Braun & Clarke, 2006). The inter-rater reliability for the coding process was good ($\kappa = 0.90$), and disagreements were resolved by consensus.

Lastly, Pearson correlations were calculated, and linear regression analyses were conducted to examine the effect of loneliness and social support on self-perceived changes in quality of social relationships due to the COVID-19 restrictions of forensic outpatients. More specifically, four separate forward stepwise linear regression analyses were conducted to identify possible predictors (i.e. emotional and social loneliness, positive and negative social support) of self-perceived changes in quality of social relationships (i.e. changes in general social relationships, romantic relationships, family relationships, and contact frequency). We controlled for age, gender, and daytime activities because loneliness during the COVID-19 pandemic was found to be more likely among females, within individuals under 60 years and when daytime activities were absent (Wickens et al., 2021). Power calculations in G*Power indicated a sample size of 70 participants for multiple linear regression analyses with a single regression coefficient given an alpha of 0.05 (two-tailed) and a power of 0.80. The assumptions for multiple linear regression analyses (i.e. normality, linearity, multicollinearity, independence of residuals, homoscedasticity and outliers) were approximately met.

Results

In total, 70 individuals participating in the RCT were included in our analyses as they completed follow-up assessments during the COVID-19 restrictions. Only 41 participants had completed the CQ at 2. Demographic characteristics of the participants are presented in [Table 1](#).

Social relationships before COVID-19

To evaluate the quality of social relationships of forensic outpatients before the COVID-19 restrictions, descriptive analyses of baseline data were conducted. At baseline, the majority of these participants showed mixed to high levels of dissatisfaction on general social relationships (69%), romantic relationships (60%) and family relationships (67%). Furthermore, 53% of these participants experienced severe levels of loneliness, 40% reported moderate levels of loneliness and 7% were not lonely. We found positive social support means comparable with a norm group consisting of a general population. However, negative social support means were significantly higher in our sample ($M = 13.7$, $SD = 3.8$), compared with a general population ($M = 9.9$, $SD = 2.7$), $t(348) = 9.554$, $p < .001$. This suggests that our forensic sample experienced more negative interactions. Means and standard deviations for the study variables are presented in [Table 3](#).

Table 1. Baseline Demographic Characteristics of Participants ($N = 70$)

Characteristics	N	%
Age ($M \pm SD$)	41.1 \pm 12.6	
Gender		
Male	63	90
Female	7	10
Racial background		
White	30	43
Black	13	19
Arabic	14	20
More than one race	13	19
Relationship status		
Partner	14	20
Single	56	80
Living situation		
Alone	21	30
With others	3	4
With parents	11	16
Supported housing/residential accommodation	26	37
Homeless	3	4
Other	6	9
Daily occupation		
Education	1	1
Employment	12	17
Supported activities	54	77
Other	3	4

Changes in social relationships due to COVID-19

Quantitative results

To evaluate the self-perceived changes in quality of social relationships due to the COVID-19 restrictions of forensic outpatients, descriptive analyses of the CQ at Time 1 were conducted. The descriptive statistics showed that the majority of participants reported no changes in the quality of social relationships (67%), romantic relationships (71%), family relationships (68%), and contact frequency (49%) due to the COVID-19 restrictions. Furthermore, 30% of the participants experienced a small to great deterioration on general social relationships, 6% on romantic relationships, 22% on family relationships, and 44% on contact frequency. Only 3% of the participants reported small enhancements on general social relationships, 24% reported moderate to great enhancements of romantic relationships, 10% reported small to great enhanced family relationships, and 7% reported enhanced contact due to COVID-19. Descriptive results of the responses on the CQ at Time 1 are visualized in Figure 1.

Qualitative results

Several themes – negative change, little to no change, positive change – emerged through qualitative analyses of responses to the open-ended question regarding the self-perceived changes in social relationships due to the COVID-19 restrictions. In Table 2, an overview of themes and subthemes with corresponding

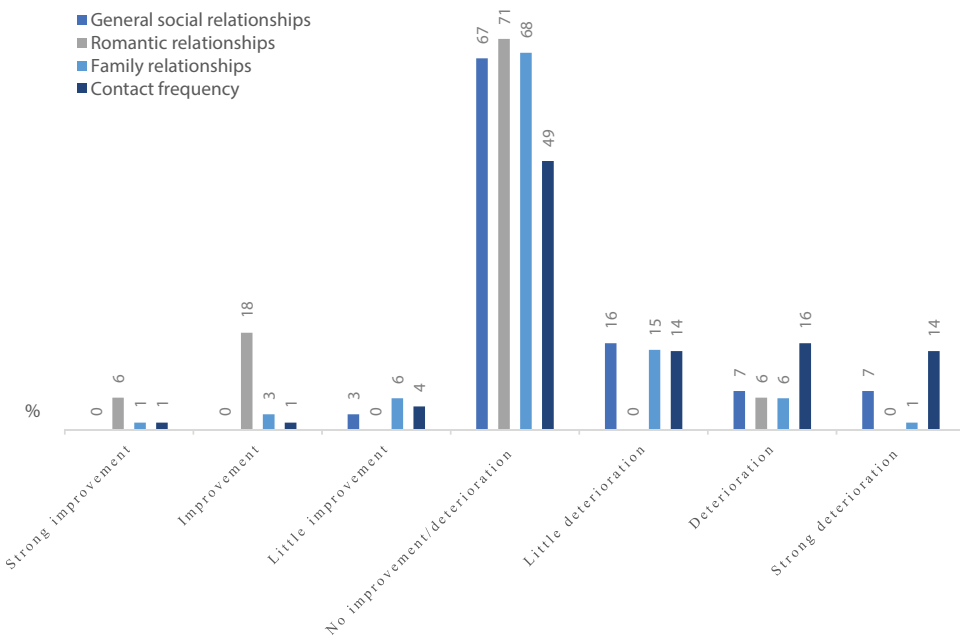


Figure 1. Descriptive results of the responses on the Corona Questionnaire at Time 1.


Table 2. Themes and Example Statements from Open-ended Responses about the Impact of COVID-19 on Social Network

Themes	Time 1 (N = 70)		Time 2 (N = 41)	
	n ¹	Example statements	n ¹	Example statements
Positive change	n = 2			
Social contact	n = 1	<ul style="list-style-type: none"> "... I do have more contact with my partner, because I started working from home." (male, 46 years) "Corona made me feel safer." (male, 30 years). 	n = 1	<ul style="list-style-type: none"> "... the contact with some people improved." (male, 38 years)
Health care and well-being	n = 1			
Little to no change	n = 32	<ul style="list-style-type: none"> "Not a lot of influence, my network stayed the same." (male, 61 years) "I hardly noticed any difference. I usually live like this." (male, 49 years) "No, it is better not to see those friends and family anyway." (male, 48 years) "No, just contact by phone as always." (male, 35 years). 	n = 16	<ul style="list-style-type: none"> "Nothing changed, because nobody in my network abides by the corona rules. Nobody takes it seriously." (male, 30 years) "No influence, it is just like normal." (male, 49 years) "At first it was scary, but it did not influence my social contacts. Luckily everybody is healthy." (male, 48 years)
Negative change	n = 33			
Social contact	n = 23	<ul style="list-style-type: none"> "It had become worse. I have less trust. People do not want to hang out with me." (Male, 49 years) "Very deteriorated, I haven't seen my parents in two months." (Male, 45 years) "I am not allowed to have visitors in prison." (Male, 55 years) "Big impact, I hardly see anybody. I have no contact with others, only through telephone." (Female, 56 years) "Daytime activities are interrupted because of corona." (Male, 62 years) "Less sport activities. I feel isolated, like the walls are coming at me." (Male, 43 years) "Before I was incarcerated, daytime activity services were closed. In prison, it is not possible to perform sports or to receive visitors." (Male, 57 years) "There is a tense atmosphere at the mental health-care department." (male, 59 years) "Maintaining one and a half meter distance creates problems, screaming, and people are less friendly." (male, 42 years) "There are no health-care providers in the house." (male, 32 years) 	n = 27 n = 19	<ul style="list-style-type: none"> "Big impact. I do not see other people anymore and I am not able to see my buddy." (female, 46 years) "I am scared to meet up with my parents and friends." (male, 38 years) "I cannot receive visits." (male, 24 years) "It is quiet. People do not contact me and I already did not contact others." (female, 51 years) "Bad influence. My volunteer work got interrupted." (male, 23 years) "I lost my company due to corona. I cannot go anywhere." (male, 35 years) "I don't go outside much." (male, 35 years) "I have less contact with my clinician." (male, 48 years) "Clinicians do not visit me at home anymore." (male, 32 years) "I am vulnerable and more afraid compared to normal people." (male, 54 years)
Daily activities and work	n = 7		n = 6	
Health care and well-being	n = 3		n = 3	

¹n = number of participants.

example statements at Time 1 is presented. Statements of six participants, which included off-topic answers (i.e. complaints about the COVID-19 virus and misinterpretations of the question), were excluded from the analysis. In line with the quantitative results, both neutral and negative statements were reported at Time 1. Neutral statements indicated that many participants experienced little to no change of their social network. Results showed that this might be due to their preexisting isolated situation – social relationships already being scarce – or preexisting avoidant attitude toward others before the COVID-19 restrictions. Participants reported negative changes in social contact, daily activities and work, mental health care, and well-being which emphasized the negative impact of the COVID-19 restrictions on multiple areas of social life and well-being. Participants experienced difficulties in maintaining social contact with others. Besides, less daytime activities due to the closure of activity centers and social services were reported. Regarding mental health care and well-being, two participants stated restrictions lead to verbal aggression in general and tenseness in mental health-care departments. Positive responses showed improvements in personal safety and enhanced contact with a partner.

Changes in social relationships due to COVID-19 over time

Quantitative results

Next, to examine the self-perceived changes in quality of social relationships due to the COVID-19 restrictions of forensic outpatients over time (Time 1 vs. Time 2), Wilcoxon signed-rank tests were conducted. No significant differences in general social relationships, romantic relationships, and contact frequency between Time 1 and Time 2 were found. Only in family relationships a significant higher score was found on Time 2 ($M = 4.366$, $SD = .915$), compared to Time 1, indicating that family relationships had deteriorated over time ($Z = -2.251$, $p = .024$).

Qualitative results

In [Table 2](#), an overview of themes and subthemes with corresponding example statements at Time 2 are presented. One participant was excluded from the analyses because the answer contained unclear information. In line with the quantitative results, themes that emerged after qualitative analyses at Time 2, were similar to themes at Time 1.

Loneliness, social support and changes in social relationships due to COVID-19

We then examined whether loneliness and social support in forensic outpatients, as well as age, gender, and daytime activities, were correlated with self-perceived changes in quality of social relationships due to the COVID-19 restrictions. Correlations between study variables are shown in [Table 3](#). Emotional loneliness

Table 3. Pearson Correlations, Means, and Standard Deviations of Study Variables (N = 70)

Variable	1	2	3	4	5	6	7	8	9	10	11
Age	–										
Gender ¹	-.127	–									
Daytime activities ²	-.107	-.059	–								
Social loneliness	-.129	-.036	.316**	–							
Emotional loneliness	.121	-.065	-.224	-.448**	–						
Positive social support	.052	-.243*	-.024	.455**	-.329**	–					
Negative social support	-.114	.008	-.039	-.043	.069	.332**	–				
Change social relationships ³	.157	.020	.020	.061	.239*	-.011	.068	–			
Change partner relationships ⁴	.085	-.032	-.007	-.070	.534*	-.234	-.229	.220	–		
Change family relationships ⁵	.054	-.107	-.041	.061	.221	.116	.111	.157	.345	–	
Contact frequency	.216	.088	.024	.020	.036	-.014	-.054	.279*	.354	.239*	–
M	41.100			13.843	20.286	72.986	13.657	4.486	3.588	4.145	4.771
SD	12.613			4.141	5.937	18.762	3.768	.944	1.176	.896	1.310

**p < 0.01, *p < 0.05, ¹ 1-male, 0-female, ² 1-yes, 0-no, ³ general social relationships, ⁴ N = 17, ⁵ N = 69.

correlated significantly with change in general social relationships ($r = .239, p = .023$) and change in romantic relationships ($r = .502, p = .040$) due to COVID-19 restrictions. Higher levels of emotional loneliness were associated with greater negative changes in general social relationships and romantic relationships. Besides, change in contact frequency was significantly correlated with change in general social relationships ($r = .279, p = .019$) and family relationships ($r = .239, p = .048$). This indicates that decreased contact frequency was associated with greater deteriorations of general and family relationships of the participants. Four forward stepwise multiple regression analyses were conducted to examine whether emotional and social loneliness, positive and negative social support, while controlling for age, gender, and daytime activities, predicted change in social relationships due to the COVID-19 restrictions (i.e. changes in general social relationships, romantic relationships, family relationships, and contact frequency). Only emotional loneliness significantly predicted change in general social relationships ($B = 0.038, t(68) = 2.026, p = .047$) and change in romantic relationships ($B = 0.106, t(15) = 2.446, p = .027$). Emotional loneliness explained 5.7% of the variance in change in general social relationships ($F(1,68) = 4.106, p = .047$) and 28.5% of the variance in change in romantic relationships ($F(1,15) = 5.984, p = .027$). Social support, age, gender, and daytime activities did not significantly contribute to the models. Besides, none of the variables significantly predicted change in family relationships and contact frequency. Our results indicate that higher levels of emotional loneliness predicted more negative changes in general social relationships and romantic relationships.

Discussion

Worldwide the COVID-19 restrictions have impacted social relationships and increased feelings of loneliness and disconnectedness (Hoffart et al., 2020; Kraaij-Dirkzwager et al., 2021; Ponnet et al., 2020; Vindegaard & Benros, 2020), yet no knowledge regarding the experience of forensic psychiatric outpatients with preexisting social network-related problems was available. Therefore, this mixed methods prospective cohort study explored the impact of the COVID-19 restrictions on the quality of social relationships of a forensic psychiatric population.

First, quantitative data revealed that feelings of dissatisfaction with the quality of social relationships, loneliness, and negative social support were evident in forensic outpatients, before onset of the COVID-19 restrictions. These findings are in line with our expectations and previous research on social networks in forensic psychiatric populations (Estroff et al., 1994; Murphy, 2000; Ter Haar-Pomp et al., 2015).

Second, contrary to our expectations, quantitative data revealed that the vast majority of forensic outpatients perceived no changes in social relationships throughout the period of the COVID-19 restrictions. A smaller group

experienced negative changes on social relationships. This could be explained by the fact that a substantial part of our sample was socially isolated before COVID-19, which minimized the deterioration in quality of social relationships after the introduction of the restrictions in March 2020.

Third, we found that only family relationships lightly deteriorated throughout the COVID-19 period. These findings partially met our expectations and may suggest that family relationships are more at risk over time during the COVID-19 restrictions. However, whether these deteriorated family relationships lead to interpersonal problems of forensic outpatients, such as elevated aggression between family members or psychological distress of patients and family members, remains unknown.

In addition, qualitative data supported our quantitative data. Neutral themes emerged, revealing that forensic outpatients experienced no changes in social relationships due to COVID-19 restrictions, as social isolation and avoidant attitudes toward others were already present before the COVID-19 restrictions. Furthermore, negative changes on social relationships were related to multiple areas of social life, in particular a deterioration of social contacts, interruption of daytime activities, and changed mental health care and well-being. These areas of change also appeared in previous COVID-19-studies on other psychiatric populations (Chaimowitz et al., 202; De Cauwer et al., 2020; Kølbaek et al., 2021; Kraaij-Dirkzwager et al., 2021; Rains et al., 2021)

Lastly, we found that emotional loneliness, but not social loneliness, predicted more adverse changes in general social relationships and romantic relationships of forensic outpatients due to COVID-19 restrictions. These findings are in line with our expectations as well as previous research that distinguished between social and emotional loneliness (Weiss, 1973). Social loneliness refers to a lack of belonging to a certain group (e.g., friends, acquaintances) or a community, while emotional loneliness refers to a lack of attachment with other individuals (DiTommaso & Spinner, 1997). Emotional loneliness, in contrast to social loneliness, is associated with the quantity of social contact as well as quality of these contacts (Murphy, 2000). Admittedly, the presence of social bonds could prevent deterioration in social relationships and mental well-being during adverse life events, such as a pandemic. In contrast to our expectations, social support did not predict changes in social relationships due to the COVID-19 restrictions.

To our knowledge, this is the first empirical exploration of the impact of COVID-19 on social relationships within a forensic psychiatric population. Although data were limited because information regarding the impact of COVID-19 was gathered through a self-developed, brief questionnaire, this study contributes directly to knowledge regarding a complex, underexposed population during the unusual circumstances of the COVID-19 pandemic.

Next, a mixed methods approach was used, which provided broader and more in-depth information. Finally, this study distinguished between social and emotional loneliness, confirming the difference between these constructs in a forensic outpatient population. Several methodological issues should be noted. Time and resources were limited, as questionnaires had to be implemented alongside ongoing assessments of an RCT, and due to the rapidity of the changing circumstances (the COVID-19 crisis) during the study. Besides, since this study examined a specific population of forensic outpatients with pre-identified social network-related problems, generalization of the results to other forensic populations might not be justified. Finally, this study focused on social relationships in particular. Therefore, other outcomes that might have been of interest were not considered.

Conclusions

This study provides an exploration of the impact of the COVID-19 restrictions on social relationships of forensic psychiatric outpatients. During the worldwide COVID-19 crisis mental health-care treatments and social services were interrupted. Our findings highlight that social relationships of forensic outpatients with preexisting social network-related problems remain of concern throughout the COVID-19 pandemic. We suggest that assertive providing of social network interventions, focusing on the development and maintenance of social bonds, in particular among emotionally lonely forensic psychiatric outpatients, may be important during future times of pandemics. For future research, it is recommended to examine the impact of adverse events, such as the COVID-19 pandemic, over time and to include family perspectives. Given the novelty of COVID-19, more extensive research, combining quantitative and qualitative measurements, focusing on broader mental health aspects and criminal behavior, is recommended to elaborate clinical guidelines for forensic health care.

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Data availability statement

Supporting data are not available for this study. Due to the nature of this research, permission to publicly share quantitative and qualitative data was not obtained from participants.

References

- Boeije, H. (2005). *Analyseren in kwalitatief onderzoek: Denken en doen*. Boom uitgevers Amsterdam.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Chaimowitz, G. A., Upfold, C., Géa, L. P., Qureshi, A., Moulden, H. M., Mamak, M., & Bradford, J. M. W. (2021). Stigmatization of psychiatric and justice-involved populations during the COVID-19 pandemic. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 106, 110150. <https://doi.org/10.1016/j.pnpbp.2020.110150>
- Creswell, J. W., Plano Clark, V., Gutmann, M. L., & Hanson, W. E. (2003). An expanded typology for classifying mixed methods research into designs. In A. Tashakkori y C. teddlie, *handbook of mixed methods in social and behavioral research* (pp. 209–240).
- De Beurs, E., Blankers, M., Goudriaan, A., De Koning, M., & Dekker, J. (2021). Mental health care in times of Corona: Experiences of professionals with eHealth. *Tijdschrift voor Psychiatrie*, 63(4), 242–249. <https://www.tijdschriftvoorpsychiatrie.nl/assets/articles/63-2021-4-artikel-debeurs.pdf>

- De Cauwer, H., Leenders, J., Vloemans, P., Mondelaers, R., & Viaene, M. (2020). [Transmural addiction care in times of COVID-19 outbreak]. *Tijdschrift voor Psychiatrie*, 62(5), 329–331. www.tijdschriftvoorpsychiatrie.nl/assets/articles/62-2020-5-artikel-cauwer.pdf
- De Jong Gierveld, J., & Van Tilburg, T. (1999). *Manual of the loneliness scale*. Vrije Universiteit Amsterdam, Department of Social Research Methodology. (ISBN 90-9012523-X). <http://hdl.handle.net/1871/18954>
- De Jong Gierveld, J., & Van Tilburg, T. (2010). The De Jong Gierveld short scales for emotional and social loneliness: Tested on data from 7 countries in the UN generations and gender surveys. *European Journal of Ageing*, 7(2), 121–130. <https://doi.org/10.1007/s10433-010-0144-6>
- DiTommaso, E., & Spinner, B. (1997). Social and emotional loneliness: A re-examination of Weiss' typology of loneliness. *Personality and Individual Differences*, 22(3), 417–427. [https://doi.org/10.1016/S0191-8869\(96\)00204-8](https://doi.org/10.1016/S0191-8869(96)00204-8)
- Estroff, S. E., Zimmer, C., Lachicotte, W. S., & Benoit, J. (1994). The influence of social networks and social support on violence by persons with serious mental illness. *Psychiatric Services*, 45(7), 669–679. <https://doi.org/10.1176/ps.45.7.669>
- Hoffart, A., Johnson, S. U., & Ebrahimi, O. V. (2020). Loneliness and social distancing during the COVID-19 pandemic: Risk factors and associations with psychopathology. *Frontiers in Psychiatry*, 11, 1297. <https://doi.org/10.3389/fpsyt.2020.589127>
- Kawachi, I Berkman, L. F. (2001). Social ties and mental health. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 78(3), 458–467. <https://doi.org/10.1093/jurban/78.3.458>
- Kølbæk, P., Jepsen, O. H., Speed, M., & Østergaard, S. D. (2021). Mental health of patients with mental illness during the COVID-19 pandemic lockdown: A questionnaire-based survey weighted for attrition. *Nordic Journal of Psychiatry*. <https://db-i-org.vu-nl.idm.odc.org/10.1080/08039488.2021.1970222>
- Kraaij-Dirkzwager, M. M., Tromp, M. U. Y., & van der Torn, P. (2021). Vulnerable groups for COVID-19. *Control Measures TSG - Tijdschrift voor Gezondheidswetenschappen*, 99(1), 24–29. <https://doi.org/10.1007/s12508-020-00290-8>
- Macdonald, B., Hülür, G., & Meeks, S. (2021). Well-being and loneliness in Swiss older adults during the COVID-19 pandemic: The role of social relationships. *The Gerontologist*, 61(2), 240–250. <https://doi.org/10.1093/geront/gnaa194>
- Murphy, D. (2000). An exploration of the concept of loneliness in forensic psychiatry. *Medicine, Science and the Law*, 40(1), 33–38. <https://doi.org/10.1177/002580240004000108>
- Ozbay, F., Johnson, D. C., Dimoulas, E., Morgan III, C., Charney, D., & Southwick, S. (2007). Social support and resilience to stress: From neurobiology to clinical practice. *Psychiatry (Edgmont)*, 4(5), 35. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2921311/>
- Ponnet, K., Hardyns, W., Anrijs, S., & Schokkenbroek, J. M. (2020). *Welzijn en relaties in tijden van Corona: Bevindingen van een survey-onderzoek in België van 3-17 April 2020*. Universiteit Gent. <https://doi.org/10.6084/m9.figshare.14498106>
- Priebe, S., Huxley, P., Knight, S., & Evans, S. (1999). Application and results of the Manchester short assessment of quality of life (MANSA). *International Journal of Social Psychiatry*, 45(1), 7–12. <https://doi.org/10.1177/002076409904500102>
- Rains, L. S., Johnson, S., Barnett, P., Steare, T., Needle, J. J., Carr, S., Taylor, B. L., Bentivegna, F., Edbrooke-Childs, J., Scott, H. R., Rees, J., Shah, P., Lomani, J., Chipp, B., Barber, N., Dedat, Z., Oram, S., Morant, N., Simpson, A., ... Cavero, V. (2021). Early impacts of the COVID-19 pandemic on mental health care and on people with mental health conditions: Framework synthesis of international experiences and responses. *Social Psychiatry and Psychiatric Epidemiology*, 56(1), 13–24. <https://doi.org/10.1007/s00127-020-01924-7>

- Skeem, J., Louden, J. E., Manchak, S., Vidal, S., & Haddad, E. (2009). Social networks and social control of probationers with co-occurring mental and substance abuse problems. *Law and Human Behavior*, 33(2), 122–135. <https://doi.org/10.1007/s10979-008-9140-1>
- Sommerlad, A., Marston, L., Huntley, J., Livingston, G., Lewis, G., Steptoe, A., & Fancourt, D. (2021). Social relationships and depression during the COVID-19 lockdown: Longitudinal analysis of the COVID-19 Social Study. *Psychological Medicine*, (1–10), 1–10. <https://doi.org/10.1017/S0033291721000039>
- Swinkels, L., Van Der Pol, T., Popma, A., Ter Harmse, J., & Dekker, J. (2020). Improving mental wellbeing of forensic psychiatric outpatients through the addition of an informal social network intervention to treatment as usual: A randomized controlled trial. *BMC Psychiatry*, 20(1), 1–15. <https://doi.org/10.1186/s12888-020-02819-2>
- Ter Haar-Pomp, L., Spreen, M., Bogaerts, S., & Volker, B. (2015). The personal social networks of personality disordered forensic psychiatric patients. *Journal of Social Work*, 15(3), 254–276. <https://doi.org/10.1177/1468017314537425>
- Van Sonderen, E. (2012). *Het meten van sociale steun met de Sociale Steun Lijst – Interacties (SSL-I) en Sociale Steun Lijst - Discrepanties (SSL-D): Een handleiding*. Research Institute SHARE. <https://docplayer.nl/6322541-Sociale-steun-lijst-interacties-ssl-i-en-sociale-steun-lijst-discrepanties-ssl-d.html>
- Van Veldhuizen, J. R. (2007). FACT: A Dutch version of ACT. *Community Mental Health Journal*, 43(4), 421–433. <https://doi.org/10.1007/s10597-007-9089-4>
- Vindgaard, N., & Benros, M. E. (2020). COVID-19 pandemic and mental health consequences: Systematic review of the current evidence. *Brain, Behavior, and Immunity*, 89, 531–542. <https://doi.org/10.1016/j.bbi.2020.05.048>
- Weiss, R. S. (1973). *Loneliness: The experience of emotional and social isolation*. The MIT Press.
- Wickens, C. M., McDonald, A. J., Elton-Marshall, T., Wells, S., Nigatu, Y. T., Jankowicz, D., & Hamilton, H. A. (2021). Loneliness in the COVID-19 pandemic: Associations with age, gender and their interaction. *Journal of Psychiatric Research*, 136, 103–108. <https://doi.org/10.1016/j.jpsychires.2021.01.047>