‘The world somehow stopped moving’: impact of the COVID-19 pandemic on adolescent psychiatric outpatients and the implementation of teletherapy

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Background: The COVID-19 pandemic results in disproportional consequences for psychiatric patients. Due to restraints in physical contacts, providers switched from face-to-face contacts to teletherapy, but prior experiences were mostly limited. The study aimed at assessing symptom dynamics, potentially increased adversities and factors influencing a successful transition into teletherapy in adolescent psychiatric outpatients during the COVID-19 pandemic. Method: Thirty adolescent psychiatric outpatients participated in an interview-based study. The differential impact of the COVID-19 pandemic was measured by integrating patients’ and psychiatrists’ judgements. Results: Patients who reported deteriorated symptoms and patients who showed (partial) improvement of symptomatology could be separated by feelings of isolation (specific to deterioration) and perceived reduction in school-associated stress (unique to improvement). Patients with worsening symptomatology showed a significantly higher degree of psychosocial disability before lockdown and at the first interview. Patients who deteriorated in their level of psychosocial functioning also reported negatively on teletherapy. These patients were verbally less differentiated concerning emotions and affect, reported introspection and rumination, and stated distinctly lower levels of perceived social support. Concerning adversities, no clear trend could be identified, but some patients reported increased domestic violence and neglect. Conclusions: Patients with a higher degree of psychosocial disability suffer disproportionally from the crisis, so that an assessment of functioning should serve as a triage tool. Also, a screening of the perceived level of social support should be established before offering teletherapy. Additionally, the provision of strategies to enhance verbalisation and differentiation of emotions and affect might be beneficial.

Key Practitioner Message

- The COVID-19 pandemic entails disproportional consequences for psychiatric patients. According to the literature, teletherapy generally seems to be beneficial. Despite the pre-existing body of literature on teletherapy, many departments of child and adolescent psychiatry were unprepared to use these offers, mainly due to legal restrictions.
- Most patients in our sample reported at least partial improvement of symptoms and did not deteriorate in their level of psychosocial functioning. Independent of dynamics in symptomatology and level of psychosocial functioning, most patients reported changes in their structure of thought.
- It was possible to hold the therapeutic relationship during teletherapy, albeit the abrupt switch of setting and the limited prior experiences, affecting patients and providers.
- Given the reported changes in the structure of thoughts, this domain should be explored explicitly and coping strategies to handle insecurity and irritation should be discussed with patients.
- Patients who deteriorated in their level of psychosocial functioning rated teletherapy negatively, so that screening seems sensible if there is an alternative offer (face-to-face). An initially low level of psychosocial functioning, limited social support and a low degree of differentiation and verbalisation of emotions and affect might serve as landmarks for screening.

Keywords: Child and adolescent psychiatry; adolescents; mental health; psychiatric disorders; COVID-19; pandemic; teletherapy

Background

The COVID-19 pandemic continues to have a huge impact on affected countries worldwide, demanding adaptations from individuals and systems. Restrictions set to ensure minimum spreading of SARS-CoV-2 (severe acute respiratory syndrome by the novel coronavirus, discovery 2019) entailed considerable changes in many aspects of daily life, including clinical work. First observations of the COVID-19 pandemic clearly state...
disproportional consequences for psychiatric patients (Cui, Li, Zheng, & the Chinese Society of Child & Adolescent Psychiatry, 2020; Fegert, Vitiello, Plener, & Clemens, 2020; Hao et al., 2020), increased levels of self-harming behaviour (lob, Steptoe, & Fancourt, 2020), a potentially increased suicide risk (Hao et al., 2020) and an increase in adversities (lob et al., 2020). Following an extensive literature research, the group of adolescents suffering from mental health disorders has gained much research attention neither in prior situations including measures of quarantine and school closures, nor in association with the current COVID-19 pandemic. It seems that research focus mainly concentrates on overall mental health aspects, especially on stress reactions and service provision to mitigate the effects of the crisis for the general population (Rajkumar, 2020; Tran, Ha, et al., 2020).

Given the need to continuously serve patients in times of restrictions on physical contacts, a lot of effort went into the provision of services through other means of care, such as teletherapeutic offers (Ho, Chee, & Ho, 2020; Torous, Jan Myrick, Rauseo-Ricupero, & Firth, 2020). In line with this argument, and given COVID-19-associated restrictions and changes in several legal regulations, an ad hoc switch from face-to-face appointments to teletherapy for current outpatients took place in many departments of child and adolescent psychiatry (Witt, Ordóñez, Martin, Vitiello, & Fegert, 2020). While stressing the chances of teletherapy, it has been suggested that service provision should be based on a systematic approach rather than a mere switch of setting (Tran, Hoang, et al., 2020). Despite the pre-existing body of literature on telemental health (AACAP, 2017; Pesàmaa et al., 2004; Soh, Ho, Ho, & Tam, 2020) – including data on cost-effectiveness (Zhang & Ho, 2017) – many countries were unprepared, also lacking a legal framework on the provision of teletherapy (Nittari et al., 2020). Given the massive implications on everyday life and also expecting potential sequelae of the COVID-19 pandemic (Lee, 2020; Liu, Bao, Huang, Shi, & Lu, 2020; Ornell, Schuch, Sordi, & Kessler, 2020), we aimed at systematically evaluating patients' needs during the crisis and teletherapy as such. Topics evolving and insights from teletherapy. The focus has been put on the safety of teletherapy, themes relevant for screening, specific evaluation and decision-making in the sense of individualisation of treatment, patient safety in the sense of identifying patients who are at higher risk of deterioration and identification of overarching themes that warrant consideration and inclusion in therapeutic processes in order to be able to give preliminary recommendations for adaption of setting and inclusion of specific content. Financial support for this project was granted by the Medical Scientific Fund of the Mayor of the City of Vienna (#COVID066).

Methods
Participants
Patients between 12 and 18 years of age in well-established, frequent outpatient treatment – that is at least weekly contacts for 50 min prior to lockdown – were invited to participate by their respective psychiatrists. 32 adolescent patients with premorbid mental health disorders diagnosed according to the criteria of ICD-10 were eligible and agreed to participate in the study. Two participants refused to participate. The mean age of the sample was 16.21 years (SD = 1.567; ranging from 12 to 18). 87% were female, 83% of the patients went to school or to work (at the time via distance learning), 10% were the only child in the family, and 90% lived with both or at least one parent in the same household. Table 1 gives an overview of the sample characteristics and diagnoses, whereby in case of comorbidity only the leading diagnosis, as assigned by the case-managing psychiatrist, is presented.

Procedure
We used the means of teletherapy available at our Department. Instahelp (brand of Insta Communications GmbH/Up to Eleven Digital Solutions GmbH), an existing platform conforming to Austrian data safeguarding measures, provided the platform for video calls. Treatment was offered as weekly video call, lasting for 50 min per appointment. Providing mental health professionals continued to work within their individual therapeutic expertise and framework. 26 patients received cognitive behavioural therapy, and 4 patients received psychodynamic therapy. The study was set up as a multilayered project targeting differential research questions, so that a series of interviews (around 30 min each) was planned. Upon interest, patients and guardians were contacted and informed by the study team. Our recruitment started at a time when lockdown measures were still at their maximum (i.e. home quarantine). Upon arrival of a mailed written informed consent, dates for the interviews were set. Patients were asked whether they would rather be interviewed via telephone or via video call. Interviews were carried out by two 5-year residents in child and adolescent psychiatry working at the outpatient unit, also both psychologists trained and experienced in the conduction of clinical interviews. In order to avoid potential bias, interview partners were assigned so that the interviewer was not involved in the ongoing treatment of the respective interviewee. The data presented here comprise the analysis of all first interviews and aimed at understanding the impact of COVID-19-associated challenges in adolescent psychiatric outpatients, especially concerning symptom dynamics and specific needs, as well as to gain insight into factors influencing the transition from face-to-face contacts into teletherapy.

Table 1. Description of the study sample (N = 30)

| No. (%)                          |          |
|---------------------------------|----------|
| Hardware used for Internet-based therapy |          |
| Smartphone                       | 9 (30%)  |
| Laptop/PC                        | 14 (46.7%) |
| Other                            | 7 (23.3%) |
| Siblings                         |          |
| No siblings                      | 2 (6.7%)  |
| One sibling                      | 14 (46.7%) |
| Two or more                      | 13 (42.4%) |
| No answer                        | 1 (3%)    |
| Persons living in the same household |          |
| Two to three                     | 16 (53.3%) |
| Four or more                     | 14 (46.7%) |
| Diagnosis                        |          |
| F28: Psychotic disorders, otherwise specified | 1 (3%) |
| F32: Depressive episode          | 11 (37.1%) |
| F41.0: Panic disorder episodic paroxysmal anxiety | 1 (3%) |
| F43.1: Post-traumatic stress disorder | 6 (20.0%) |
| F42.2: Obsessive-compulsive disorder | 2 (7%)   |
| F50: Eating disorders            | 4 (13.3%) |
| F60.3: Emotionally unstable personality disorder | 1 (3%) |
| F60.8: Personality disorder, otherwise specified | 1 (3%) |
| F62.0: Enduring personality change after catastrophic experience | 2 (7%) |
Measurements
Interviews were semi-structured, containing questions to be rated on 3-4 or 5-point Likert scales, respectively, as well as open questions. Questions centred around the following contents: basic demographic data (as provided in Table 1), teletherapy (subjective rating in contrast to face-to-face contacts, device used, advantages and disadvantages), symptoms (subjective changes, specific psychopathology – thought disorder, anxiety, obsessions, compulsions, mood, tension, nonsuicidal self-injury (NSSI), suicidal ideations), substance use (alcohol and cigarettes), social context (family, friends, perceived social support) and perception of COVID-19-associated measures including advantages and disadvantages and current thoughts. Specific symptoms were addressed by closed starter questions (e.g. ‘Do you suffer from anxiety?’). In case of an affirmation, patients were asked to describe their symptoms in more detail. If necessary, clarifying questions were asked until the interviewer was able to rate symptoms. Where applicable, questions always included a contrast in the sense of relative change (before the start of the pandemic-associated lockdown measures and at the time of the interview). Questions were created by the study group following evidence from prior epidemics and pandemics, as well as natural catastrophes. The resulting semi-structured interview was not evaluated beforehand. Traumatic experiences (past and present) in the areas of physical and sexual abuse, as well as neglect, were captured by three selective items from the Adverse Childhood Experiences (ACE) Study (Felitti et al., 1998). In case of reports of child abuse or neglect, patients were explored in-depth concerning the potential need for immediate childhood protection measures and relevant steps were taken (as communicated beforehand with patients and guardians when obtaining informed consent). Assessment of functioning (before the start of the pandemic and in the process) was obtained from the treating psychiatrists and cross-checked with the interview data, applying the criteria of axis VI of the multiaxial classification of child and adolescent psychiatric disorders, ICD-10. Therefore, psychosocial functioning/disability is assessed in three domains (psychological, social and occupational) with values ranging from 0 (superior functioning in all domains) to 8 (profound and pervasive social disability) (WHO & Rutter, 1996).

Data analysis
Descriptive statistics have been calculated using IBM SPSS version 23 (SPSS, Inc., Chicago, IL, USA). In-depth qualitative analysis was conducted with aid of the computerised qualitative data analysis tool ATLAS.ti 8 (ATLAS.ti Scientific Software Development GmbH, Berlin, Germany). Owing to the novelty of the situation, the lack of prior information, the size and heterogeneity of our sample and the applied measurements, the study was designed as an exploratory pilot study focusing on qualitative data analysis. All interviews were analysed, narrowingcoding in the process. The analysis targeted three main areas, adversities, symptom dynamics and transition to and perception of teletherapy. In order to gain maximum output of the question of which factors possibly contribute to a successful transition to teletherapy (operationalised as stagnation or improvement in the level of psychosocial functioning), qualitative data analysis concerning this research question was conducted starting with the interview of the patient who showed an increase in the level of functioning (only one in our sample), followed by a 2:1 analysis of the interviews from those who held the highest level of psychosocial functioning against those who showed a deterioration. Saturation, in the sense of no further codes arising, was reached after analysis of 19 interviews. The remaining 11 interviews were all cross-checked against codes and narrative.

Results
Adversities
Considering the evidence of potentially increased levels of adversities, especially domestic violence, in times of crisis and quarantine, we asked all patients regarding adverse experiences during lockdown measures (Usher, Bhullar, Darkin, Giamfi, & Jackson, 2020). 20% of the patients reported childhood adversities. 3% of patients reported that they experienced an increase in physical violence in the household within the first two months of lockdown [‘My mom screams at me and hits me when she’s drunk; now she drinks a lot more…’, female, 17; ‘There is a lot of verbal aggression at home. This really increased since the lockdown’, female, 15], while 10% of patients reported a decrease in physical violence in the same time period. Moreover, 80% of the patients who reported a history of sexual abuse noted a decrease in sexual abuse during the crisis, while 20% stated that there was no change since the onset of the lockdown. In addition, 50% of the patients stating a history of neglect reported increased neglect in the family within the first two months of lockdown, while 40% of these patients reported a decrease in neglect during the crisis. All other participants reported adverse experiences neither before nor during the crisis. As defined in the study protocol and the respective consent forms, in cases of suspected child abuse or neglect, patients’ reports were immediately communicated to the case-managing psychiatrist in order to ensure patient safety and required further steps were taken.

Symptom dynamics
43% of patients reported that anxiety symptoms became worse, whereas 10% reported an improvement. The majority of patients reported a decline in mood (73%), although 17% reported an improvement in mood. 40% of patients described an increase in the frequency of feeling tense, while 30% reported less tension. Of the patients reporting NSSI (37% of the sample), 45% reported an increase and 18% a decrease. Obsessive-compulsive behaviour and thoughts were characterised as constant by over 80% of the patients suffering from these symptoms. Additionally, only 7% stated to drink more alcohol and 17% reported an increase in the number of tobacco usage; however, most of the patients reported no changes in both (67% and 70%, respectively).

Qualitative analysis yielded three main themes: changes in the structure of thoughts, feelings of isolation (independent of the perceived level of social support) and a reduction in school-associated stress. Changes in the structure of thoughts appear to be an overarching theme affecting patients independent of other subjective changes in symptomatology, degree of psychosocial disability/level of functioning, diagnosis and age. Patients who noted changes in this domain reported confusion, irritation, loose associations and a feeling of getting lost in thoughts [‘It’s so surreal and it feels endless. My thoughts are indecisive, torn and I somehow get lost within’, female, 17]. In order not to overlook potential (further) psychotic symptoms, all other domains were explored when patients reported changes in thoughts. In no case, (further) psychotic symptoms were reported. A subgroup of patients reported frequent ruminations. Interestingly, all of these patients actually showed a deterioration in their level of psychosocial functioning. The other two themes, feelings of isolation and reduction in school-related stress, were unique to either of two subgroups: the group of patients who reported partial or overall improvement of symptoms and the group of
patients who reported overall deterioration of symptoms. Patients with subjective (partial) symptom improvement described notable reductions in school-associated stress [‘I’m way less fidgety and stressed, because I have less stress with school’], female, 14; ‘It’s like holidays, only that I have a couple of assignments’], male, 14] and some added that they consequently had a lot more time for themselves (not only for leisure and relaxation, but also for reflection) [‘The world somehow stopped moving and I have the feeling nothing’s running away now’], female, 18]. Patients who reported a deterioration of symptoms did not mention school at all, but rather bewailed feeling isolated or caged [‘I feel like an animal’], female, 14; ‘I have way less contact with my friends. I feel isolated and caged’], female, 17]. When exploring further characteris-
tics of the two arising subgroups, differences in the degree of psychosocial disability could be found. The group of patients who reported a deterioration in symp-
toms showed a higher degree of psychosocial disability (lower level of psychosocial functioning) when compared to the group of patients who reported partial or overall improvement of symptomatology.

Transition to and perception of teletherapy
Further, we asked patients to rate teletherapy in con-
trast to face-to-face therapy and to provide perceived advantages and disadvantages of teletherapy. We found that 37% of the patients rated teletherapy as better than face-to-face treatment during the crisis. However, 27% rated teletherapy as worse than the face-to-face therapy regarding the effect on personal well-being and symptom improvement. The remaining patients rated the treat-
ment as neutral.

Patients who showed a deterioration in their level of psychosocial functioning distinctly reported quantita-
tively more and qualitatively more differentiated negative aspects of teletherapy with a focus on perceptions as unsafe, superficial and less private. In contrast to those who improved, or held their level of psychosocial func-
tioning, the reports of patients with a lowered level of functioning were verbally less differentiated concerning the expression of emotions and affective responses to the crisis. Additionally, these patients expressed a higher degree of introspection and rumination. Last, patients with a decrease in their level of functioning communi-
cated a lack of (perceived) social support from their fami-
lies, and especially their friends.

Discussion
It has been suggested that patients suffering from psy-
chiatric disorders might be at increased risk of deteriora-
tion in times of lockdown or quarantine (Druss, 2020; 
Yao, Chen, & Xu, 2020), including higher rates of NSSI, 
adversities and suicide risk (Cui et al., 2020; Fegert et al., 2020; Hao et al., 2020; Iob et al., 2020), but only very little data are available to differentially evaluate the involved processes and patients’ needs. A detailed look at the content of the available literature on teletherapy (AACAP, 2017; Vigerland et al., 2016) revealed that teletherapy generally seems to be beneficial, but none of these studies assessed a switch from ongoing face-to-
to-face therapy to teletherapy. Due to the immediate mea-
sures taken with regard to controlling the pandemic, we were able to follow up on this switch in a naturalistic
clinical setting. We conducted this study to understand the impact of COVID-19-associated challenges on adoles-
cent psychiatric outpatients and to identify relevant issues in the process of transition to teletherapy. The data presented here were collected when lockdown mea-
sures were at their maximum, that is home quarantine.

We provided evidence for a differentiated view on the impact of the COVID-19 pandemic on changes in symp-
tomatology and level of psychosocial functioning in ado-
lescent psychiatric outpatients. In both the patients’ subjective view concerning symptom dynamics and the psychiatrists’ assessment of the level of psychosocial functioning, most patients did not deteriorate. Most patients reported either improvement or partial improve-
ment of symptoms during lockdown, and psychiatrists assessed most patients as stable concerning their level of psychosocial functioning. Interestingly, the group of patients who reported deterioration in symptomatology and the group of patients who were assessed as deteriorating in their level of functioning by their respective psy-
chiatrist did not entirely overlap. Only three of the patients who reported deteriorated symptomatology were also assessed as deteriorating in terms of their level of psychosocial functioning. Independent of worsening in symptomatology or the level of functioning, most patients expressed changes in their structure of thoughts. Since this was identified as an overarching theme, we suggest therapists to explore this domain explicitly in their patients, especially in case of further waves of the pandemic, and consequently provide strategies to cope with according to irritation and insecurity.

Additionally, NSSI deserves critical consideration. Albeit the sample characteristics and the consequently limited comparability, our findings indicate overall high levels of NSSI as compared to established prevalence rates (Lim et al., 2019) and an increase in NSSI during the first weeks of lockdown.

None of our patients dropped out of teletherapy, so it was possible to hold the respective therapeutic relation-
ship. Although almost all patients experienced technical problems and expressed further negative aspects of teletherapy, the benefit of seamless frequent continua-
tion of treatment was valued by most of them. Only a subgroup of patients, those who showed a deterioration in their level of functioning, rated teletherapy negatively. When we explored those patients in more detail, they showed less differentiated verbalisation of emotions and affect, reported rumination and introspection, and reported a low level of perceived social support. Thus, the level of psychosocial functioning and social support, as well as the degree of differentiation/verbalisation of emotions and affect, might serve as landmarks for screening before offering teletherapy and to, if possible, continue face-to-face contacts if patients express low levels/degrees in these domains. The degree of differenti-
ation/verbalisation of emotions and affect provides strategies for patients who find it difficult to express themselves, since we found that patients who deteriorated in their level of psychosocial functioning all showed difficulties in this respect.

Generalisation of results is limited by the exploratory character of this study and the consequently applied methodology. Emphasis has been put on a thorough analysis that has been discussed alongside within the study group, but data have not been rated by an
in more detail. Also, the small sample size, the heterogeneity of the sample in terms of diagnosis and the homogeneity of the sample in terms of gender limit the transfer of results. Additionally, we relied on established diagnoses and assessed current symptomatology via self-created and not priorly evaluated questions, instead of using structured clinical interviews and biological assessments, which would have allowed greater precision (Ho, Lim, et al., 2020; Hussain et al., 2020). Albeit these limitations, we present first results on a differentiated view of the impact of the COVID-19 pandemic on changes in symptomatology and level of psychosocial functioning in adolescent psychiatric outpatients, as well as acceptance of teletherapy.

Conclusion

Despite the above-mentioned limitations, we present first results indicating that teletherapy can serve as an alternative treatment approach for adolescents with a psychiatric disorder in times of quarantine. Concerning the choice of setting, we suggest assessing the patient’s level of psychosocial functioning. Concerning specific symptoms, we suggest addressing irritation, insecurity and differentiation/verbalisation of emotions and affect and provide according coping strategies if patients express difficulties in these areas.

Albeit the promising character of the presented results, further research is necessary to challenge and refine these findings and explore teletherapeutic offers in more detail.

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Ethical information

Ethical approval has been granted by the Institutional Review Board of the Medical University of Vienna (#1383/2020), and patients and guardians gave written consent for study participation.

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