

RUNNING HEAD: SINGLE SESSION SERVICES

**Association between single session service attendance and clinical characteristics in
administrative data**

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Data availability statement

The data that support the findings of this study are available from the Child Outcomes Research Consortium. Restrictions apply to the availability of these data, which were used under license for this study. Data are available <https://www.corc.uk.net/media/1883/request-for-use-of-corc-dataset-27-09-2018.doc> with the permission of the Child Outcomes Research Consortium.

Abstract

Background: A large proportion of young people accessing specialist mental health services will do so for only a single session. The aim of the present study was to describe the characteristics of young people attending specialist mental health services for a single session and to examine the association between single session attendance and clinical characteristics.

Methods: To address this aim, a secondary analysis of administrative data on $N = 23,300$ young people (mean (SD) age = 12.73 (3.5) years, 57% female, 64% White British) was conducted.

Results: Overall, the mean (SD) number of sessions attended was 4.33 (7.19) (median = 2, mode = 1, range 1-184, 95% confidence interval = 4.24-4.42), and 46% (10,669) had attended for only a single session. Multilevel logistic regression analysis showed that boys; younger children; young people with behaviour difficulties, peer relationship difficulties, or low frequency problems; and young people with more complexity factors were more likely to attend services for only a single session. **Conclusions:** Based on these findings, the present study sets out three research questions to prompt future research and investigation on: 1) the experience of attending services for a single session, 2) identifying groups of single session attenders who do not require further support compared to those who are not able to sustain engagement with more sessions, and 3) whether new care pathways are needed for these groups of young people and families who currently access specialist mental health services for a single session.

Key practitioner message:

- A large proportion of young people accessing specialist mental health services will do so for only a single session, and new models of service utilization are organized around the needs and preferences of young people, the professional skill-mixed required to meet these needs, and the expected resources required
- In an analysis of a large administrative dataset, this study found that boys; younger children; young people with behaviour difficulties, peer relationship difficulties, or low frequency problems; and young people with more complexity factors were more likely to attend services for only a single session.
- Future research is needed to examine the experience of attending services for a single session, to identify groups of single session attenders who do not require further support compared to those who are not able to sustain engagement with more sessions, and to explore whether new care pathways are needed for these groups of young people and families who currently access specialist mental health services for a single session

Association between single session service attendance and clinical characteristics in administrative data

Children and young people have the highest levels of mental health difficulties across the lifespan (Kessler et al., 2005). Despite this, access to mental health services has been found to be the lowest in children and adolescents across ages (McGorry, Bates, & Birchwood, 2013). Low levels of treatment access have been repeatedly reported (Reardon et al., 2017), with a national survey in the United Kingdom (UK) reporting that 66% of young people with a mental health difficulty were in contact with professional services, though only 25% was through mental health specialists (Sadler et al., 2018). Research into factors influencing access to child and adolescent mental health services (CAMHS) has suggested that predictors of access include subjective perception, service location, service affordability, and cultural sensitivity (Pandiani, Banks, Simon, Van Vleck, & Pomeroy, 2005; Reardon et al., 2017). Furthermore, particular groups appear to have additional barriers to accessing services, with for example children and young people from ethnic minority groups, or those in contact with welfare or youth justice services, having lower levels of service access (Pandiani et al., 2005; Stein, Christie, Shah, Dabney, & Wolpert, 2003). A model aiming to understand how children and young people access to services and seek help, the Gateway Provider Model (Stiffman, Pescosolido, & Cabassa, 2004), stipulates that a central role in young people's access to treatment is the individual who identifies a problem and refers to treatment (i.e., the gateway provider). It is suggested that the providers' perception of need, knowledge of resources, environment (Stiffman et al., 2001; Stiffman et al., 2004), their trust of services (Logan & King, 2001), and the perceived stigma of mental health problems (Dempster, Wildman, & Keating, 2013) are predictors of the decision to refer to services. Parents/carers are often a primary gateway provider for young people, not only supporting access to appointments but also playing a critical role in ensuring adherence to treatment

(Reardon et al., 2017). Furthermore, parents/carers often play a critical role in care and treatment, for example, as co-service-users, co-therapists, or the direct focus of the intervention (e.g., parent training) (Creswell, Cartwright-Hatton, & Rodriguez, 2013; Wolpert et al., 2005). There is an increased focus on utilization rates as a prime measure of access to care (Styles, Boothroyd, Snyder, & Zong, 2002). Nevertheless, access to care extends beyond the first point of access and includes factors pertaining to both treatment processes and treatment outcomes.

A recent study examining classification approaches to understanding young people's utilization of CAMHS (Martin et al., 2017), found that the modal number of appointments attended was one, with a 24% of all appointments being closed after the first appointment (Wolpert et al., 2015). When examined in terms of resource use, both presenting problem and severity of impairment independently predicted number of sessions up to case closure. Across ages, young people with emotional difficulties, where high impairment was also reported by the clinician, accessed a greater number of sessions than other young people presenting at services. However, young people aged six-to-twelve years presenting with conduct problems and autism were found to access a greater number of sessions. Conversely, young people aged 13 years or over presenting with psychosis or eating disorders were found to have accessed the greatest number of sessions across ages and problem types. Nevertheless, the authors noted that there was variation, both within presenting problems, but also within services (Martin et al., 2017). Building on this, clinical expertise developed a classification system of 18 needs-based groups across three overarching categories: getting advice, getting help, and getting more help (Martin et al., 2017). Resource and service use within the getting advice group tended to be lower than the getting help and getting more help groups, but again there was considerable variation within this (Martin et al., 2017). These groupings have since been used to form the basis of the THRIVE model (Wolpert et al., 2015) (see Figure 1).

[INSERT FIGURE 1 HERE]

THRIVE is an integrated and person-centred model for children, young people, and parents/carers focussed with addressing the needs of families at its heart (Wolpert et al., 2015). It conceptualises need into five categories: Thriving, Getting Advice, Getting Help, Getting More Help, and Getting Risk Support. Each section of the model is unique in terms of: 1) the needs and choices of patients, 2) the skill mix required by professionals who help and support young people, 3) the language used to describe need, and 4) the resources required to meet the needs and choices of patients. Based on this model, 'getting advice' is the least resource intensive and may only attend for a single session. This may include those who have mild difficulties or who are adjusting to life circumstances, where support can be provided in the community, including within schools or self-support. In addition, it may also include individuals who have continuing difficulties, where a shared decision is made not to start treatment at this stage, and those who feel that self-help with such difficulties is sufficient. There is an urgent need for further research on this 'getting advice' group of young people who access mental health services for only a single session.

To address this aim, the present study examined administrative data to describe the characteristics of young people attending specialist mental health services for a single session, and to examine the association between single session attendance and clinical characteristics, to further understanding of this group and to prompt further investigation.

Methods

Participants and procedure

The data corpus was collected from child and adolescent mental health services participating in a programme to implement evidence-based practice between 2011 and 2015 (Wolpert et al., 2016). Episodes of care were included in the present analysis if the young

people were aged ≤ 25 years, had complete demographic characteristics (i.e., age, gender, ethnicity), and had attended at least one session or event. We also included only those with complete presenting problem and complexity factor information (see Measures), which was available for 40% of the sample, resulting in a final dataset of $N = 23,300$ episodes of care¹ (mean (SD) age = 12.73 (3.5) years, 57% female, 64% White British). Detailed demographic characteristics and descriptive information on all study variables are shown in Table 1.

[INSERT TABLE 1 HERE]

Ethical considerations

The present analysis involved secondary analysis of anonymised administrative data and therefore, ethical review was not required (NHS Health Research Authority, 2015).

Demographic characteristics. Age, gender, and ethnicity were recorded by services as part of routine data recording. For the main analysis, age was coded as 0-12 years, 13–15 years, and 16+ years. Ethnicity was captured using the categories from the 2001 Census and based on youth-report and/or parent/carer-report. As used in previous research (Edbrooke-Childs & Patalay, 2019) these were grouped for analysis as: White British (as the ethnic majority group), White Other (including Irish and Other White background), mixed-race (including Mixed White and Black Caribbean, Mixed White and Black African, Mixed White and Asian, and any other mixed background), Asian (including Indian, Pakistani, Bangladeshi, and Other), Black or Black British (including Caribbean, African, and Other), other ethnic groups (including Chinese and Other), and not stated.

Presenting problems. To identify presenting problems, 30 items of the Current View (CV; Jones et al., 2013) questionnaire was used. Clinicians rated the presence of 30 presenting problems, nevertheless we minimized the inclusion of under-powered groups in the main analysis by using 21 presenting problems and categorised those occurring with a frequency of $\leq 10\%$ as “Other” problems (e.g., bipolar disorder, psychosis, substance abuse, elimination

problems, selective mutism, gender identity, unexplained physical symptoms, self-care issues, unexplained developmental difficulties, and adjustment to health issues). Presenting problems were coded 1 for present (rated at least mild) or 0 for absent (no problems).

Complexity factors. Complexity factors were identified using 14 items of the CV questionnaire (Jones et al., 2013). Clinicians rated the extent to which young people were experiencing complex factors (e.g., contact with youth justice, in need of social care input) and the total number present was computed.

Analytic strategy

Multilevel logistic regressions were conducted in STATA 14. In Model 0 (null model) the variance explained in single session attendance at the service-level was examined and no predictors were added. The intraclass correlation coefficient was 27% indicating there was significant service-level variation and confirming that multilevel regression was the correct analytical approach. In Model 1, demographic characteristics were added: female, age coded 13-15 years and 16+ years (where 0-12 years was selected as the reference category to facilitate interpretation), and ethnicity (where the White British group was selected as the reference category as it was the largest group). In Model 2, presenting problems and grand-mean centred total number of complexity factors were added. The likelihood ratio test was used to compare successive models, which were significant and all variables were therefore retained; in particular, Model 2 was significant compared to Model 1: $\chi^2(22) = 183, p < .001$.

Results

Overall, the mean (SD) number of sessions attended was 4.33 (7.19) (median = 2, mode = 1, range 1-184, 95% confidence interval 4.24-4.42), and 46% (10,669) had attended for only a single session. The results of the final model (Model 2) are shown in Table 2. Girls and older children were less likely to attend for only a single session. In terms of presenting problems, young people with separation anxiety, generalized anxiety, obsessive compulsive disorder,

panic disorder, specific phobia, eating disorder, depression, or self-harm were less likely to attend for only a single session than young people without these presenting problems. In contrast, young people with peer relationship difficulties or low frequency problems were more likely to attend for only a single session than young people without these problems. In terms of complexity factors, young people with more complexity factors were more likely to attend for only a single session than young people with fewer complexity factors.

[INSERT TABLE 2 HERE]

Discussion

The aim of the present study was to describe the characteristics of young people attending specialist mental health services for a single session, and to examine the association between single session attendance and clinical characteristics, to further understanding of this group and to prompt further investigation. Boys; younger children; young people with behaviour difficulties, peer relationship difficulties, or low frequency problems; and young people with more complexity factors were more likely to access services for only a single session.

The findings of the present research are in line with the THRIVE ‘getting advice’ group, where young people and families requiring the least intensive resource, and may access services for only a single session, include those who have mild difficulties or who are adjusting to life circumstances, where support can be provided in the community, including within schools or self-support. Moreover, the finding that young people with more complexity factors were more likely to attend for only a single session is also in line with the ‘getting advice’ group referring to individuals who have continuing difficulties, where a shared decision is made not to start treatment at this stage.

Overall, almost half the sample (46%) attended only a single session, which is in line with previous studies examining dropout rates. For example, studies in the UK have found dropout rates of between 30-40% in youth mental health services (Wolpert et al., 2012) and

58% in adult mental health services (Gaglia, Essletzbichler, Barnicot, Bhatti, & Priebe, 2013). Moreover, similar dropout rates of 57% are reported in mental health services in other countries for young adults 18-32 years (Reneses, Munoz & López-Ibor, 2009). Interestingly, physical health services (i.e., child diabetes) also report comparable dropout rates of 63% (Reinehr, 2013). Notably, a direct comparison with other studies is not clear-cut, given that dropout has been defined differently across studies (deHaan, Boon, de Jong, Hoeve, & Vermeiren, 2013; O’Keeffe et al., 2018). Future research is needed to examine whether young people and families attending specialist mental health services for a single session are ‘dropouts’ or whether a single session has been sufficient to meet their needs.

The findings of the present research suggest that boys, younger children, or those with behaviour difficulties were more likely to attend a single session. Taken together, these findings are in line with research suggesting that families with behaviour problems are more likely to dropout from care, with the aforementioned caveat on ‘dropouts’ (Koerting et al., 2013). Notwithstanding, the findings of the present research suggest an exploration of additional support is needed to help identify mechanisms that will promote engagement among this population, especially as behavioural problems often coexist with complex problems such as learning difficulties, family relationship difficulties, and peer relationship difficulties (Cantwell & Baker, 1991).

Limitations of the present study include use of administrative data meaning there may have been differences in how services collected and coded the data. The focus of the present research was on single session attendance, therefore more detailed examinations of service engagement were not possible. Moreover, it is unclear whether these young people attended a single session because further support was not required or because they disengaged with further support. To begin to unpick these questions, the present study sets out three research questions to prompt future research and investigation. One, what are young people’s and parents’/carers’

experience of attending services for a single session? Two, are there sub-groups within those attending single sessions, such as those needing only signposting support, those who perhaps found the session less helpful and chose not to continue, and those who were not able to sustain engagement with more sessions? And three, are new care pathways needed for these groups of young people and parents'/carers' who currently access specialist mental health services for a single session? We hope the present study will promote future empirical investigation of these important, unanswered questions.

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Footnotes

¹In the data corpus, pseudonymised data are uploaded according to episodes of care.

Therefore, it is possible that a young person may have been included under more than one episode of care.