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ORIGINAL RESEARCH

An evaluation of satisfaction with emergency department care in children and adolescents with mental health concerns

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Abstract

Objectives We hypothesized that an association exists between satisfaction with ED mental health care delivery and patient and system characteristics. Primary: To evaluate overall satisfaction with ED mental health care delivery. Secondary: To explore aspects of ED mental health care delivery associated with general satisfaction, and patient and ED visit characteristic associated with total satisfaction scores and reported care experience themes.

Methods We enrolled patients < 18 years of age presenting with a mental health concern between February 1, 2020 and January 31, 2021, to two pediatric EDs in Alberta, Canada. Satisfaction data were collected using the Service Satisfaction Scale, a measure of global satisfaction with mental health services. Association of general satisfaction with ED mental health care was evaluated using Pearson's correlation coefficient and variables associated with total satisfaction score was assessed using multivariable regression analyses. Inductive thematic analysis of qualitative feedback identified satisfaction and patient experience themes.

Results 646 participants were enrolled. 71.2% were Caucasian and 56.3% female. Median age was 13 years (IQR 11–15). Parents/caregivers ($n=606$) and adolescents ($n=40$) were most satisfied with confidentiality and respect in the ED and least satisfied with how ED services helped reduce symptoms and/or problems. General satisfaction was associated with perceived amount of help received in the ED ($r=0.85$) and total satisfaction with evaluation by a mental health team member ($p=0.004$) and psychiatrist consultation ($p=0.05$). Comments demonstrated satisfaction with ED provider attitudes and interpersonal skills and dissatisfaction with access to mental health and addictions care, wait time, and the impact of COVID-19.

Conclusions There is a need to improve ED mental health care delivery, with a focus on timely access to ED mental health providers. Access to outpatient/community-based mental health care is needed to complement care received in the ED and to provide continuity of care for youth with mental health concerns

Keywords Patient satisfaction · Mental health · Pediatric · Emergency department

Résumé

Objectifs Nous avons émis l'hypothèse qu'il existe un lien entre la satisfaction à l'égard de la prestation de soins de santé mentale aux urgences et les caractéristiques des patients et du système. Primaire : Évaluer la satisfaction globale à l'égard de la prestation des soins de santé mentale aux urgences. Secondaire : Explorer les aspects de la prestation des soins de

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santé mentale aux urgences associés à la satisfaction générale, et les caractéristiques du patient et de la visite aux urgences associées aux scores de satisfaction totale et aux thèmes d'expérience de soins signalés.

Méthodes Nous avons inscrit des patients de moins de 18 ans présentant un problème de santé mentale entre le 1er février 2020 et le 31 janvier 2021 à deux services d'urgence pédiatriques en Alberta, au Canada. Les données relatives à la satisfaction ont été recueillies à l'aide de l'échelle de satisfaction du service, une mesure de la satisfaction globale à l'égard des services de santé mentale. L'association entre la satisfaction générale et les soins de santé mentale dispensés aux urgences a été évaluée à l'aide du coefficient de corrélation de Pearson et les variables associées au score total de satisfaction ont été évaluées à l'aide d'analyses de régression multivariables. L'analyse thématique inductive des commentaires qualitatifs a permis d'identifier des thèmes liés à la satisfaction et à l'expérience des patients.

Résultats 646 participants ont été inscrits. 71,2 % étaient de race blanche et 56,3 % de sexe féminin. L'âge médian était de 13 ans (IQR, 11-15). Les parents/aidants (n = 606) et les adolescents (n = 40) étaient les plus satisfaits de la confidentialité et du respect à l'urgence et les moins satisfaits de la façon dont les services d'urgence ont contribué à réduire les symptômes et/ou les problèmes. La satisfaction générale était associée à la perception de l'aide reçue aux urgences (r = 0,85) et à la satisfaction totale à l'égard de l'évaluation par un membre de l'équipe de santé mentale (p = 0,004) et de la consultation d'un psychiatre (p = 0,05). Les commentaires ont fait état d'une satisfaction à l'égard des attitudes et des compétences interpersonnelles des prestataires de soins d'urgence et d'une insatisfaction à l'égard de l'accès aux soins de santé mentale et de toxicomanie, du temps d'attente et de l'impact de l'étude COVID-19.

Conclusions Il est nécessaire d'améliorer la prestation des soins de santé mentale aux urgences, en mettant l'accent sur l'accès en temps opportun aux fournisseurs de services de santé mentale des services d'urgence. L'accès à des soins de santé mentale en consultation externe ou en milieu communautaire est nécessaire pour compléter les soins reçus aux urgences et pour assurer la continuité des soins aux jeunes ayant des problèmes de santé mentale.

Mots-clés Satisfaction des patients · Santé mentale · Pédiatrie · Service des urgences

Clinician's capsule

What is known about the topic?
While certain aspects of ED care are associated with satisfaction, no evaluations specific to children/adolescents with mental health concerns have been performed.

What did this study ask?
How satisfied are families/children with ED mental health care delivery, and which aspects are associated with satisfaction scores.

What did this study find?
We need to improve ED mental health care delivery, focusing on enhancing access to care by mental health providers.

Why does this study matter to clinicians?
To improve patient and family satisfaction, ED and mental health administrators need to adapt models of ED mental health care delivery that include streamlined access to mental health care practitioners and facilitate access to community-based mental health supports for ongoing care.

Background

Over the past decade, visits to emergency departments (EDs) by children and adolescents for mental health care have increased [1, 2], a trend exacerbated by the COVID-19 pandemic [3]. Although the process of assessing suicidal ideation is well-studied, little attention has been paid to understanding and improving patient-reported experiences.

Satisfaction is an important measure of patient experience and is a good indicator of service quality, future service usage and continuity of care adherence [4–6]. Knowledge of satisfaction can provide insight regarding expectations for care [7] and how services can be improved. Although certain aspects of pediatric ED care are known to be associated with satisfaction (e.g., interpersonal interactions, communication, provider skills, wait times) [8], no evaluations specific to ED mental health care delivery have been performed. Thus, we sought to assess child/adolescent and parent/caregiver satisfaction with ED mental health care, and to determine which aspects of ED care receive the highest and lowest satisfaction scores. Based on what is known about satisfaction with ED care, we hypothesized that positive associations would be identified between general satisfaction and perceived wait time [8–11] and ED provider courtesy and compassion [8, 10, 12].

Methods

Study design and setting

This cross-sectional study was embedded in a prospective implementation study conducted in two tertiary care pediatric EDs (Stollery Children's Hospital and the Alberta Children's Hospital) in Alberta, Canada [13]. Study outcome measures and processes were determined in collaboration with patient and parent partners. Data were collected between February 1, 2020, and January 31, 2021, and reflect care (Fig. 1) prior to implementation of a new clinical care pathway. Using a complete case ascertainment sampling strategy, all patients meeting the eligibility criteria were approached either in-person or via telephone after the ED visit. Research Ethics Board approval was obtained, and the caregivers of eligible participants provided consent; assent was obtained when appropriate. Adolescents ≥ 14 years of age who presented without a legal guardian participated as mature minors. Results are reported in accordance with the STROBE guidelines [14].

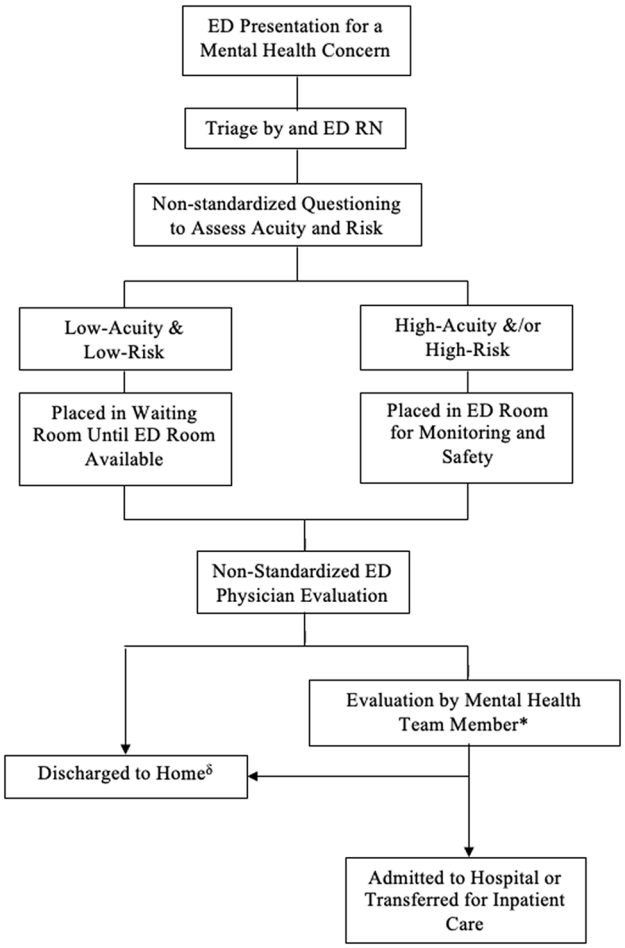


Fig. 1 Standard of care for mental health patients in the participating emergency departments. ED, Emergency Department; RN, Registered Nurse. *Mental health team member can include a mental health nurse, counsellor, or psychiatrist. δ Discharge resources can include nothing (e.g., follow-up with family physician or existing mental health provider), provision of pamphlets with options to family to coordinate follow-up, provision of mental health care coordination phone number, referral to a specific program, and/or follow-up by a hospital-based mental health, outreach home care team

Population

Eligible participants were < 18 years old and presented with any of the following Canadian Emergency Department Information System [15] presenting complaints documented at triage: anxiety, bizarre behaviour, concern for patient's welfare, depression/suicidal, disruptive behaviour, homicidal behaviour, insomnia, self-harm, situational crisis, or violent behaviour. Those with acute medical and/or physical safety concerns were ineligible including children brought by protective/police services or ambulance, chief complaints relating to schizophrenia/psychosis, behavioural syndromes requiring medical clearance, or significant self-harm. Children who had previously participated were also ineligible.

Outcome measures

The primary outcome was total satisfaction with ED mental health care delivery quantified by the Service Satisfaction Scale (SSS-10) [16, 17]; Online Resource 1. The scale is comprised of 10 items (child/adolescent version) or 12 items (parent/caregiver version) that utilize a 5-point Likert-scale plus three open-ended questions that elicit opinions on what worked well during care, and what should be changed [16]. SSS-10 items are divided into two subscales: manner and skills of the staff (5 items) and perceived outcomes (5 items for child/adolescent version; 7 items for parent/caregiver version). Total scale scores range from 10 to 50 (child/adolescent version) or 12 to 60 (parent/caregiver version), with higher scores indicating greater satisfaction [16]. Secondary outcomes were SSS-10 item associations with the SSS-10 general satisfaction question, patient and ED visit characteristic associations with the total satisfaction score (i.e., sum of SSS-10 elements), and experiences with ED mental health care.

Data collection

Data were collected as soon as possible following the ED visit, as parent partners advised that to minimize stress, research recruitment would ideally be performed following the ED visit. Care experiences, satisfaction, and demographic data were collected via a questionnaire completed by telephone or

online. Telephone-based questionnaires followed a standardized process led by a trained research assistant. Online data collection occurred within the study's REDCap database. ED visit characteristic data were collected via medical record review. Data collected included International Classification of Diseases, Version 10, Canada (ICD-10-CA) discharge diagnoses code assigned based on chief complaint and physician notes: F codes for mental and behavioural disorders and R and X codes for intentional self-harm that did not require medical care. Length of stay (LOS) was defined as the time the child/adolescent was in the ED from triage to discharge; triage time was defined as the time of ED triage.

Data analysis

The total SSS-10 score, representing an individual's satisfaction with care, was calculated by summing the individual item scores. Individual SSS-10 item scores were used to identify aspects of ED mental health care respondents were most and least satisfied with. We evaluated associations of general satisfaction with ED mental health care using Pearson's correlation coefficient, associations between total satisfaction score with patient and ED visit characteristics using multivariable regression analyses, and compared satisfaction scores between the two participating EDs using student's *t* test (Online Resource 2).

An inductive thematic analysis was conducted using the open-ended SSS-10 question responses to identify positive and negative care experience themes. Thematic coding was performed by one author to identify and categorize excerpts to find emerging themes and patterns. To ensure consistency and accuracy, two independent reviewers reviewed the codes and assigned themes to 50 randomly selected participants. Themes are reported using frequency (frequency of each theme divided by the total number of responses) and intensity (proportion of codes describing a particular theme divided by the total number of codes) effect sizes [18]. Ratios of positive to negative feedback were calculated to permit interpretation of the relationship between theme frequency and intensity and to determine which themes were most strongly associated with dissatisfaction and satisfaction.

Analyses were conducted using R software (Version 1.14.4, Vienna, Austria). Statistical tests were two-tailed and *P* values of < 0.05 were considered statistically significant.

Results

Study participants

Of 970 potentially eligible children and adolescents, 73.0% consented and 66.6% of those that consented provided data for analysis; Fig. 2. Sixty-five percent of participants received care at the Alberta Children's Hospital. The median time to data collection was 14 days (IQR 8–22). Participants were predominantly female (56.3%) and Caucasian (71.2%), with a median age of 13 years (IQR 11–15 years); Table 1. Anxiety and stress-related disorders (39.5%), suicidal ideation (26.0%), and mood disorders (25.0%) were the most common discharge diagnoses.

Satisfaction with ED mental health care

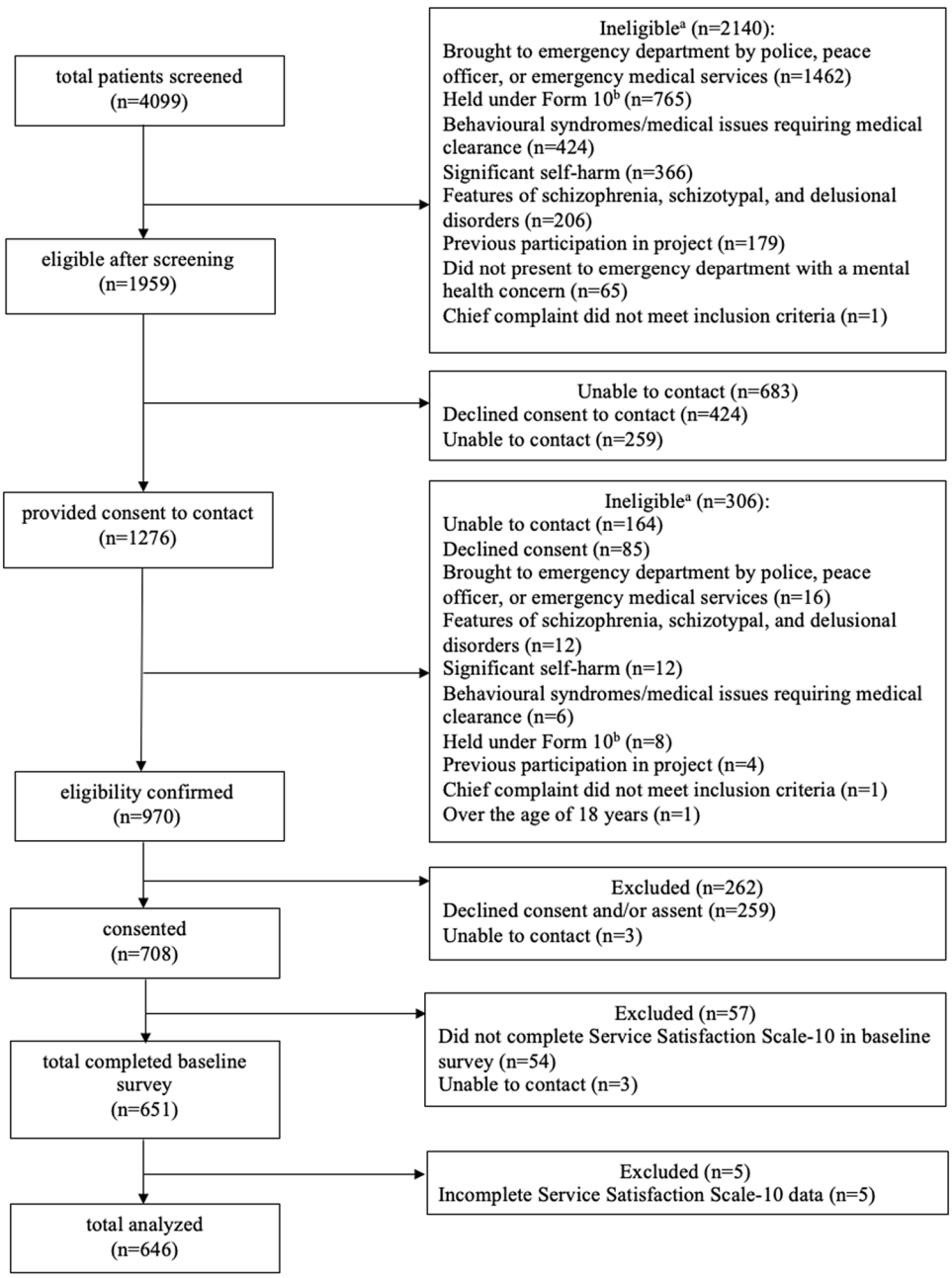
Parents/caregivers and adolescents were most satisfied with confidentiality and respect for their child's rights; Table 2, Online Resource 3. Parents/caregivers were least satisfied with how ED services helped reduce their child's symptoms/problems (mean 3.0, SD 1.2) and how ED services helped their child get well and stay well (mean 3.1, SD 1.2). Adolescents were least satisfied with how ED services helped reduce their symptoms/problems (mean 3.0, SD 1.0). Aspects of care satisfaction differed between sites; Table 2. Greater satisfaction with care was reported for parents/caregivers whose child received care at Alberta Children's Hospital (mean 42.4, SD 9.8, $p = 0.003$).

Correlations with satisfaction

The amount of help a child/adolescent received had the strongest, positive association with general satisfaction ($r = 0.85$, 95% CI 0.83–0.87), with the weakest association for how long the child/adolescent had to wait ($r = 0.31$, 95% CI 0.23–0.38); Online Resource 4. Receipt of an evaluation by a mental health team member (OR = 15.39, 95% CI 5.40–43.90, $p = 0.004$) and psychiatry consultation (OR = 8.97, 95% CI 3.15–25.58, $p = 0.05$) were positively associated with the total satisfaction score; Online Resource 5. Self-identification as Asian (OR = 90.83, 95% CI 31.85–259.00, $p = 0.01$) and 'other' ethnicities (OR = 51.26, 95% CI 17.98–146.18, $p = 0.04$) was positively associated with total satisfaction score compared to Caucasian participants; self-identification as being of mixed ethnicity (OR = 0.04, 95% CI 0.01–0.10, $p = 0.04$) was negatively associated with total satisfaction score.

Themes for ED mental health care

Qualitative feedback was provided by 57.0% of participants, with respondents representing older children than non-respondents; Online Resource 6. Twelve themes were created, and the greatest amount of positive feedback (frequency



[a]Participants may be ineligible due to more than one exclusion criteria
[b]Participant was apprehended by a peace officer

Fig. 2 Overall study screening and enrollment

and intensity) pertained to ED provider attitude and interpersonal skills; Table 3. Expectations regarding standards of care received the most negative feedback followed by wait times and access to mental health and addictions specialists. The latter theme also had the greatest negative to positive ratio in terms of frequency (66:1) and intensity (81:1), followed by the wait time and COVID-19 themes; Table 3. Online Resource 7 provides information on themes and their definitions.

Discussion

Interpretation

In this study, which explored satisfaction with care delivered to children presenting for ED care with acute mental health concerns, study participants were most satisfied with confidentiality and respect in the ED and least satisfied with how

Table 1 Participant and ED visit characteristics

Characteristic	Overall
Age in years, median (IQR)	13 (11–15)
Gender, *n* (%)	
Female	364 (56.3)
Male	246 (38.2)
Genderqueer/nonconforming	13 (2.0)
TransMale	12 (1.9)
TransFemale	2 (0.3)
Other[a]	6 (0.9)
Declined to answer	3 (0.5)
Ethnicity, *n* (%)	
Caucasian	460 (71.2)
Canadian first nations, Inuit, or metis	50 (7.7)
Mixed[b]	46 (7.1)
Asian	42 (6.5)
Black or African American	12 (1.9)
Other[c]	36 (5.6)
Discharge diagnosis, *n* (%)[d, e]	
Neurotic, stress-related, and somatoform disorders	245 (39.5)
Suicidal ideation	161 (26.0)
Mood disorders	155 (25.0)
Behavioral and emotional disorders/syndromes	130 (21.0)
Intentional self-harm not requiring medical care	23 (3.7)
Disorders of adult personality and behaviour	14 (2.3)
Disorders of psychological development	14 (2.3)
Other or unspecified	40 (6.5)
None documented	13 (12.1)
Length of stay in minutes, median (IQR)	264 (170–404)
Evaluation by mental health team member, *n* (%)	389 (62.7)
Psychiatry consult, *n* (%)	150 (24.2)
Hospital admission, *n* (%) ±	97 (15.6)

[a]Participants who self-identified as having a gender outside the categories listed in the table

[b]Participants who selected more than one ethnicity category

[c]Participants who self-identified as having an ethnicity outside the categories listed in the table

[d]Physician could identify more than one discharge diagnosis which could result in more than one category for some participants

[e]Missing data for 26 participants

ED services helped reduce the symptoms and/or problems that led them to seek ED care. Satisfaction was associated with perceived amount of help received in the ED, evaluation by a mental health team member, and psychiatrist consultation. Comments provided by participants demonstrated satisfaction with ED provider attitudes and interpersonal skills and dissatisfaction with access to mental health and addictions care, wait time, and the impact of COVID-19. Our findings indicate that there is a need to improve ED mental health care delivery, with a focus on enabling timely access to ED mental health providers. Access to outpatient/community-based mental health care is also needed to complement care received in the ED and to provide continuity of care for youth with mental health concerns.

Comparison to previous studies

Previous pediatric studies examining satisfaction with general ED care, utilizing satisfaction measures other than the SSS-10, report that positive ED provider attitude, interpersonal skills, and high-quality provider interactions are important to patients [8, 10, 19], and are positively associated with increased parent/caregiver satisfaction with ED care [10, 12]. However, in our study, how ED services help reduce symptoms and how they help the child/adolescent get and stay well, received the lowest satisfaction scores. This may reflect the inability of EDs to provide high-quality mental health care due to inadequate protocols, lack of standardized tools, limited ED provider training, and a shortage of mental health specialists [20–22].

Our findings that access to mental health and addictions care had the greatest ratio of negative to positive comments aligns with the adult ED literature. While a Canadian ED study of adults with mental health concerns reported similar reasons for dissatisfaction [23], an Australian adult study described receipt of a mental health team member and psychiatry consultation as being positively associated with satisfaction [24]. Since access to consultation by a mental health team member or psychiatrist is not a standard component of pediatric ED mental health care in Canada due to the lack of resources in most institutions, with the ED providers limiting access to those in greatest need (Fig. 1), patient expectations are often not met. Moreover, as comprehensive mental health care is not universally accessible under Canada's healthcare plan, and mental health services for children are under-resourced and under-funded [25], the limited availability of outpatient and community-based mental health care [26, 27] continues to place greater pressure on the ED to deliver mental health care.

Strengths and limitations

A novel finding in our study was the positive association between being Asian or of another non-White ethnicity with satisfaction, while mixed ethnicity was negatively associated. Prior non-mental health specific studies suggest that ethnicity does play a role in patient satisfaction and perceptions of ED care [28, 29]. In Canada, First Nations patients often report negative ED experiences, and they may be exposed to discrimination and racism in the ED [30]. Mental health specific research from the United States has highlighted important racial and ethnic disparities in pediatric ED presentations for mental health concerns [31]. To the

Table 2 Parent/caregiver satisfaction with ED mental health care (means with standard deviations [SD])

SSS-10 item	Alberta children's hospital ($n=383$)	Stollery children's hospital ($n=223$)	Difference between hospitals P value[a]
Manner and skills of the ED providers			
The knowledge and skills of the ED providers working with your child/adolescent?	3.8 (0.9)	3.5 (1.0)	< 0.001*
The ability of ED providers to listen to and understand your child/adolescent's problems?	3.8 (1.0)	3.6 (1.1)	0.01
How involved and caring the ED providers are with your child/adolescent?	3.9 (1.0)	3.7 (1.0)	0.06
Confidentiality and respect for your child/adolescent's rights as an individual?	4.3 (0.8)	4.2 (0.9)	0.20
The way ED providers address your child/adolescent's most important concerns/needs?	3.6 (1.1)	3.4 (1.2)	0.01
Perceived outcomes			
How the services help your child/adolescent?	3.4 (1.0)	3.1 (1.2)	0.003*
The way services help your child/adolescent get well and stay well?	3.2 (1.1)	2.9 (1.2)	0.002*
The amount of help your child/adolescent receives?	3.3 (1.2)	3.0 (1.3)	0.002*
The way the services help reduce your child/adolescent's symptoms and/or problems?	3.1 (1.1)	2.9 (1.2)	0.04
In a general sense, how satisfied are you with the services your child/adolescent has received?	3.5 (1.1)	3.1 (1.2)	< 0.001*
The availability of appointment times that fit your child/adolescent's schedule?	3.3 (1.1)	3.2 (1.3)	0.08
How long your child/adolescent had to wait in the waiting room before appointments?	3.3 (1.1)	3.3 (1.4)	0.70
Total score	42.4 (9.8)	39.7 (11.0)	0.003*

[a]Bonferroni-corrected alpha: 0.05/13 = 0.004

best of our knowledge, only one Canadian ED mental health study has focused on race and ethnicity; it identified that First Nations adolescents are more likely to present to the ED for mental health concerns. However, this study did not examine whether race or ethnicity was associated with ED services provided or satisfaction [32].

As our consent rate was only 73.0%, the results may be subject to non-response and volunteer biases, and thus possibly underrepresenting the perspective of those with negative ED interactions. Limiting survey completion to English speaking participants resulted in the omission of perspectives from non-English speaking participants. We were not permitted to document reasons for, or characteristics of patients electing not to participate and thus cannot compare participants to non-participants or provide reasons for non-participation. Further, we lacked representation of children in foster care or group homes where consent from legal guardians could not be obtained. Although we attempted to capture the perspectives of adolescents, as only 40 mature minors participated, we cannot confirm if adolescent perspectives differ from those of parents/caregivers. Our eligibility criteria prevented the inclusion of children with certain mental health presentations which limits the generalizability of our findings to populations such as those with psychosis or self-harm requiring medical care [13]. Due to the multiple steps involved in obtaining consent to contact, consent and ultimately survey completion, many surveys were completed outside of our target survey completion window. In addition, the SSS-10 is not specifically designed for ED use and the items do not account for the dynamic processes and multiple care providers that are core components of ED care.

Clinical implications

This study demonstrates that while parents/caregivers and children and adolescents with mental health concerns are satisfied with ED providers and that satisfaction with ED care is associated with receipt of a mental health team member or psychiatrist consultation, they are less satisfied with how mental health services helped address their child's concerns and/or symptoms. Our findings should be used to inform ED mental health care delivery models which need to focus on enhancing the provision of timely access to pediatric mental health specialists. Funding and resources are needed to improve connections to outpatient and community-based mental health supports to enable the early identification, management, and prevention of mental health concerns.

Table 3 Satisfaction theme frequency and intensity effect sizes, *n* (%)

Theme	Frequency effect size (frequency of each theme/total # of responses) $N=371$	Intensity effect size (# of codes for particular theme/total # of codes) $N=371$
Positive experiences[a]		
ED provider attitude and interpersonal skills	37.2%	41.0%
Expectations regarding standards of care	29.1%	31.5%
Communication	9.7%	9.7%
Timeliness of care	9.4%	9.7%
Follow-up care	8.9%	8.9%
Mental health specialization/psych consult	7.3%	7.3%
Overall satisfaction	5.4%	5.7%
ED environment	4.0%	4.3%
Patient- and family-centered care	3.8%	4.0%
Wait time	1.9%	1.9%
Access to mental health and addictions care	0.3%	0.3%
Negative experiences[a]		
Expectations regarding standards of care	34.5%	43.7%
Access to mental health and addictions care	17.8%	21.8%
Wait time	16.4%	16.7%
ED provider attitude and interpersonal skills	15.4%	18.3%
Mental health specialization/psych consult	13.5%	17.3%
Follow-up care	11.6%	12.4%
Timeliness of care	10.2%	11.3%
Communication	9.4%	10.2%
ED environment	6.7%	7.8%
Overall satisfaction	6.5%	7.3%
Patient- and family-centered care	4.6%	4.6%
COVID-19	1.1%	1.1%

[a]Qualitative analysis included all participants who completed the baseline survey ($n=371/651$; 57.0%) (see Fig. 2)

Research implications

Future research initiatives targeting the implementation of novel models of care, the monitoring and setting quality benchmarks, and an evaluation of the impact of implementing standardized mental health tools in the ED, are needed. Prospective studies should compare satisfaction between parent–child dyads. Moreover, an evaluation of approaches to connect all youth, without an existing mental health care provider relationship, to a post-ED visit mental health care visit would likely have an impact on satisfaction.

Conclusion

While parents/caregivers and children and adolescents were satisfied with ED providers, satisfaction with ED care was associated with receiving a mental health team member or psychiatrist consultation. In addition, they were less satisfied with how mental health services in helped reduce their child's mental health concerns and/or symptoms. This may reflect the challenge of providing adequate mental health care due to limited resources in the ED and the community settings. This knowledge should inform ED mental health care delivery models with a focus on providing improved and timely access to ED pediatric mental health specialists and connections to outpatient resources to ultimately improve outcomes for children with mental health concerns.

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Author contributions All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by CL, SBF, and ASN. The first draft of the manuscript was written by CL and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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Availability of data and material The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request. All supplementary information files are included in this published article.

Code availability Not applicable.

Declarations

Conflict of interest Conné Lategan received financial support from ACHRI for a master's program. Conné Lategan, Michael Stubbs, Antonia Stang, Jennifer Thull-Freedman, Eddy Lang, Paul Arnold, Amanda S. Newton, and Stephen Freedman declare that they have no conflict of interest.

Ethics approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was approved by the University of Calgary (REB19-0357) and the University of Alberta (Pro00092862).

Consent to participate Informed consent/assent was obtained and documented from all children, adolescents, and parents/guardians participating in the study.

Consent for publication Not applicable.

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