A Qualitative Study to Assess How Primary Care Versus Psychiatric Providers Evaluate and Treat Pediatric Patients With Irritability

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ABSTRACT

Objective: To determine how primary care versus specialist practitioners assess and treat school-aged children with irritability.

Methods: Seventeen providers from family medicine, pediatrics, and psychiatry participated in in-depth interviews from June to August 2016 about the process they use to evaluate irritability. Data on demographic traits and measures of confidence were also collected.

Results: Primary care (family medicine and pediatrics) participants expressed frustration over the lack of time and specialized knowledge they had to accurately assess children with irritability, even though they were often the first clinician consulted when problems arose. There were clear and sometimes contradictory differences between how practitioners with a general versus specialized practice assessed mental health status in the clinic setting. Input on treatment approaches revealed that medication prescription was more common by primary care participants, and therapy was preferred by the psychiatry participants.

Conclusions: Overall, family medicine and pediatric practitioners were significantly less confident in their ability to evaluate mental health status, while child and adolescent psychiatry participants were supportive of having more initial triage and possible treatment occur at the primary care level, suggesting a need for more training about childhood irritability in the primary care setting.

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In the family medicine clinic, practitioners are often on the front line in the assessment of mental health needs. Both research and anecdotal information suggest that there is a pressing need for resources to address psychiatric comorbidities that present during patient encounters and cannot be treated within the 10-minute visit.[1] This need has led to calls for onsite clinicians or resources that can help address psychosocial needs in the family medicine clinic.[1]

Irritability, one of the common chief complaints received with young patients, can be broadly classified as normal and developmental or abnormal, which may be episodic or nonepisodic.[2] The *DSM-5* includes irritability as a symptom for various diagnoses, for example, chronic irritability in disruptive mood dysregulation disorder.[3] Although these guidelines are in place, it is unknown whether practitioners who assess irritability in children utilize them in clinical practice.

Due to the increased incidence of diagnosis of bipolar disorder in children and concerns about inappropriate treatment, there is a need to determine and review how practitioners assess irritability.[4] It has been suggested that the rise in bipolar diagnosis and prescription of mood-stabilizing and antipsychotic medications may be due to the lack of availability and understanding of an appropriate diagnosis.[3,5] However, concerns over potential violent outbursts and ongoing behavior problems have added new urgency to correctly diagnosing pediatric patients.

Since diagnosis guides treatment options, misdiagnoses can be detrimental to the patient since treatments for bipolar disorder and severe irritability may be entirely different based on the underlying cause.[6,7] Childhood bipolar disorder may present differently than adult bipolar disorder, and the development from childhood bipolar disorder to an adult phenotype differs from the development of chronic irritability in a child.[7] Chronic irritability in adolescence can also lead to comorbidities other than bipolar disorder in adulthood.[8]

It is important to understand how primary care providers assess irritability in the clinic and identify resources that can help them differentiate normal from abnormal irritability, given the complexity of pediatric mental health and the potential for school and community violence.[9,10]

METHODS

The purpose of this qualitative research study was to determine how primary care (family medicine and pediatrics) versus specialist (psychiatry) practitioners assess and treat mental health status in children and adolescents and, in particular, how they differentiate normal from abnormal irritability. We were especially interested in the family medicine setting, since it is a generalist practice in which complex health issues may present and often the first source of mental health care for children.[11]

Clinical Points

- Childhood irritability is a misunderstood behavior that frequently presents in the primary care setting.
- Training in the assessment of childhood irritability associated with mental health issues is limited for primary care providers.
- Primary care and psychiatric providers have a somewhat different approach in terms of their diagnosis and treatment of childhood irritability.

Table 1. Interview Questions

1.	First, can you tell me how you define irritability in school-aged children?
2.	In your clinic, is it more likely that a child will come in with a chief complaint of irritability or that you would observe irritable behaviors during the exam?
3.	How do you evaluate a child's irritability?
4.	Could you describe a memorable patient of yours who had irritability?
5.	How would you differentiate between normal vs abnormal comorbid irritability?
6.	If you were unsure of whether a child's irritability was normal vs abnormal, what would you do next?
7.	Is there anything else you feel is important for us to know about assessing irritability in school-aged children?

Participants and Setting

Participants were recruited from the family medicine, pediatrics, and psychiatry departments of a large academic medical center using focused strategies such as announcements at faculty meetings, circulation of explanatory e-mails to department listservs, and circulation of fliers describing the study. Participants comprised residents, fellows, nurse practitioners, and attending physicians in the fields of family medicine, pediatrics, and psychiatry.

Recruitment and Enrollment

A total of 18 providers volunteered to participate, with 17 completing viable interviews, as 1 person who had initially volunteered did not participate in an interview because of lack of time. One interview was eliminated because the team agreed that the interviewee was not focused on the questions and provided answers that did not advance our understanding of irritability. A final sample of 5 family medicine, 6 pediatric, and 6 psychiatry providers were interviewed.

Data Collection

After receiving institutional review board approval to conduct the study, the research assistant (A.L.S.), a first-year medical student at the time, received 8 hours of training on qualitative research and interviewing techniques. Two pilot interviews were conducted with mental health experts, and feedback was provided on technique. The investigators (a psychiatrist [U.H.] and nurse practitioner [C.A.D.]) accompanied the research assistant on the initial interviews until the required level of proficiency was achieved. All interviews were conducted by the same research assistant from June to August 2016.

Interview questions were developed on the basis of important considerations identified in the clinical and research literature[2] about irritability in school-aged children as well as review by experts in child and adolescent psychiatry and pediatrics. (Table 1 provides the interview questions.)

In addition to the open-ended questions, each interview was preceded by an informed consent form and a collection of demographic data including age, sex, years of training, specialty, percentage of current caseload with irritability/behavior problems, previous experience working with youth with mental illness, attendance at conferences or workshops on mental health issues in general or irritability, general confidence in ability to perform mental health screening, and knowledge of *DSM* and awareness of changes specific to the addition of disruptive mood dysregulation disorder in the fifth edition of the manual.[3]

Interviews lasted approximately 1 hour and were recorded in a private location. To protect confidentiality, the research assistant assigned a code number to the interview, removed the name of the participant from the file as soon as the interview was completed, and transcribed the recording. A modest gift certificate was given to those who participated.

Weekly contact between the 3 team members (research assistant, psychiatrist, and nurse practitioner) to discuss the progress of interviews and the degree to which saturation had been reached was conducted. This point was reached after approximately 2 months of interviewing (~2 interviews per week).

Data Analysis

Demographic data from the preliminary survey were entered into an SPSS version 24 file and analyzed using frequency distributions and descriptive statistics. Although the sample size was small, results between the 3 groups were compared for significant differences using nonparametric techniques.

Immediately after completion, the recorded interviews were transcribed verbatim by the research assistant. Once transcription of all interviews was complete, each team member conducted an analysis using an iterative process. First, an independent line-by-line review was conducted by each team member to identify themes within specialties. Next, axial coding was used to group themes into core concepts that were repeated across interviews. Once all transcripts had been coded, the researchers met to compare results and reach consensus on key themes relevant to each interview. Categories that captured the identified themes were developed in an initial discussion. These categories were then applied to each interview. Exemplars that validated the categories were identified and recorded. Finally, specialties were compared to identify similarities and differences in findings. Table 2 presents the results of this analysis.

Table 2. Definition, Evaluation, and Treatment of Irritability Categories Based on Family Medicine and Psychiatric Provider Interviews

	Family Medicine	Psychiatry
Definition of Irritability	Look at the… • Behavior • Mood: anxious • Functional: school problems, inappropriate communication, and developmental difficulties	Look at the… • Behavior • Mood: negative • Functional: frustration intolerance ("short fuse")

Evaluation of Patient	What are the…
	• Comparisons to peer group and siblings: normal vs abnormal
	• Opinions from parents and teachers ("objective data")
		What are the…
		• Specific signs of the irritability and their possible causes
		  • Disrupted sleep
		  • Medication side effects
		  • Disturbing imagery in mood diary
		  • Poor coping skills
		  • Slower developmental stage compared with peers

Treatment Plan	• Collaborate with parents and teachers on treatment • Refer complex cases for further evaluation • Limit medication prescriptions • Develop a crisis plan	• Offer support to make environmental modifications • Treat comorbidities • Apply behavioral interventions and therapy • Minimize medication use • Educate the community and parent about the patient's needs

RESULTS

Sample Demographics

There was a nearly equal divide between multiethnic men (47%) and women (53%), and a subsequent statistical analysis revealed no significant differences in sex between family medicine, pediatrics, and psychiatry ($R = 0.5$, $P = .05$). There was a trend toward participants being in the midcareer stage (age 27–58 years), but in each specialty there were younger practitioners.

There was a significant difference across specialties in the percent of the clinician's caseload with irritability as a complaint, most likely due to the focus of psychiatry participants on children referred for this purpose ($t = 4.4.2$, $P < .001$). When asked about previous experience working with youth with mental illness, 59% of the total sample responded affirmatively (they did have previous experience), while 41% answered negatively (they did not have previous experience). This difference was not significant between specialties on this variable ($R = 0.20$, $P = .48$).

Participants were asked to rate their confidence in assessing irritability. There was a significant difference ($R = 0.63$, $P = .007$) between groups, with all psychiatry ratings "above average." Similarly, knowledge of the *DSM* differed among groups, with more psychiatry participants having above-average knowledge ($R = 0.72$, $P = .001$). When asked about resources used in their practice to obtain information on irritability, primary care participants listed UptoDate[12] most often. Psychiatry participants identified the *DSM* as their most frequent resource.

Themes Identified

Diagnosis and treatment. There was a general consensus that there is no "gold standard" for evaluating irritability in school-aged children, although several participants expressed a wish for more concrete guidelines. When asked if there is a gold standard for defining irritability in school-aged children, a family medicine participant answered, "No, I think it's kind of a fluid definition. I would say it's quite subjective in whether it's from the patient perspective, the caregiver perspective, or the clinician—in my case, a physician perspective."

Family medicine participants felt that their understanding of and ability to differentiate between normal and abnormal irritability developed over time as they gained experience working with children and adolescents. One family medicine participant commented, "I'm saying that behaviors I might have previously interpreted as being irritability are probably not irritability, but probably just normal developmental things that I didn't have experience with before."

Participants in all 3 groups stressed the importance of the lack of time spent in patient encounters as a detriment to being able to truly assess irritability in a school-aged child. A family medicine participant said, "I do value my observations, but I recognize that they are woefully limited, because they are entirely too brief."

Both primary care provider groups (family medicine and pediatrics) considered irritability from the perspective of developmental appropriateness, specifically in relation to peers and siblings. They also focused on functional disruption and parental distress caused by the irritability.

In terms of treatment, it was interesting to note that family medicine participants were comfortable with prescribing antidepressants and anxiolytics but would refer the patient to psychiatry if other treatment options were indicated. The categories most often assessed in relation to irritability for all participants were behavior, mood, and functionality. Family medicine providers primarily screened for depressive disorders using the 9-item Patient Health Questionnaire.[13]

As the first line of care for children, family medicine participants tended to focus on internalizing behaviors and problems in school, which often prompted the clinic visit wherein irritability was evaluated. Clinicians received input from schools directly and via parent report. One clinician said, emphasizing input from parent report per school concerns, "I think a lot of it comes via the school, so not a lot of it comes directly to us, but from the school to the parents to us. Whether it be a teacher or guidance counselor, that's the

main avenue." Since family medicine participants often saw patients with irritability after parents were informed via the school of a behavioral concern, by the time a child reached a psychiatry participant, there was less of a concern about the specific school problem that prompted intervention and more focus on determining a diagnosis.

When asked to describe a memorable patient who had irritability, the family medicine participants had a much more diverse age range (6 to 17 years). The pediatric and psychiatry practitioners mostly discussed memorable patients who were in the younger school-age range between 6 and 12 years. In all 3 specialties, there was no mention of substance abuse, romantic relationships, or bullying as causes of irritability. For all 3 groups, memorable patients were more likely to be male than female.

DISCUSSION

As is common in qualitative research, these interviews and analyses were conducted in only 1 institution in 1 geographic area of the country. Additional research may identify similar differences nationally or internationally.

Both the qualitative and quantitative data supported the conclusion that it is challenging to address mental health issues in the family medicine setting, particularly when the presenting symptoms are ambiguous, as is the case with irritability. In this study, family medicine providers were less confident in their mental health assessment skills and had less continuing medical education on assessment of irritability than their pediatric or psychiatric counterparts. They referred patients to psychiatry when uncertainty or complexity presented. This finding could be explained, in part, by the nature of family medicine practice: unlike pediatric or psychiatric practitioners, a diverse group of patients with a broad range of physical and mental issues can be seen over a lifetime. Thus, it is important to provide continuing medical education and support to family medicine practitioners who confront diagnostic challenges every day in their clinics.

When family medicine participants were asked about resources they used to obtain more information on irritability, many responded that they used UpToDate, which is a widely utilized online resource and mobile app that offers current evidence-based medical information and clinical decision support.[12] However, when typing *irritability in children* into the search field of UpToDate, the first return was infantile colic, the next was pediatric bipolar disorder, and the following 8 were on a variety of physiologic entities. When the search criterion was changed to *irritability in adolescents*, the first entry was on pharmacotherapy for anxiety disorders in children and adolescents, followed by autism therapies, adolescent eating disorder, and information on various medications mostly for psychiatric use. Thus, there is a need for more specific information on childhood irritability.

Also, the area of childhood irritability is a complex and rapidly changing field with no true gold standard even in psychiatry, which results in limited resources for primary care physicians. Regardless, in our interviews, the psychiatry respondents expressed a wish for primary care providers to be more involved in assessing and treating irritability, while family medicine and pediatric providers expressed a wish to learn more about assessment and treatment. One family medicine participant said, "I don't think I'm very well equipped at this point to be able to differentiate between (normal and abnormal irritability). I would love to learn more about it." This particular participant also mentioned that she had heard through conversations with coworkers that childhood irritability and adulthood bipolar disorder were related. Although unaware of any research support for this conclusion, she said it seemed to be a consensus among her family medicine coworkers.

There are many unique considerations specific to the assessment and treatment of irritability in family medicine practice. Family medicine practitioners are more likely to be providing care over a longer period— from birth to adulthood, and they have limited clinic time to devote specifically to mental health issues.[1] In this study, family medicine providers expressed a need for more resources specific to irritability.

Consider a child who presents to a family medicine provider with a chief complaint of difficulty breathing. The practitioner has an idea of how to evaluate and treat this patient, what resources might be helpful, and when to refer to a pediatric pulmonologist. Most likely, a family medicine provider will have been well educated on the nuances of difficult breathing and will feel confident in his or her ability to treat it.

A child who presents with irritability has a different trajectory, with less specific information available but a heightened concern over the potential for explosive outbursts and escalation to violent behaviors.[9,10] In this situation, the family medicine provider may have less certainty on how to treat the child compared with the child who presents with difficulty breathing.

The input from our family medicine participants suggests that more training on irritability and tools for diagnosis and treatment are needed in primary care, especially in underserved areas. As we move toward integrated care models such as the patient-centered medical home, more resources will become available to more providers, but that does not address the pressing problems of today.[14,15] At a minimum, family medicine providers need an efficient screening tool to address any safety issues that may be associated with irritability and potential violence.[9,10]

Expansion of telehealth options is another educational intervention that can be helpful. In our region, a telephone psychiatric consult service or TiPS (telephonic psychiatric consultation service program)[16] has recently been developed. TiPS offers primary care providers virtual access to child mental health services including virtual consults with pediatric psychiatrists and care coordinators. These telecommunications allow patients to remain safely in primary care settings and receive continuing treatment there.

Future steps for this study are to explore this same research question in a larger more diverse population. The main limitation of this study is that it was only conducted at 1 institution and had a study number of 16 total participants, but as a preliminary exploration, qualitative methods were appropriate. The data we obtained can now be used to structure a larger study in primary care settings. We especially hope to disseminate these findings to rural settings where resources may be scarce. A larger sample size and inclusion of multiple clinics would allow for more information on the management of irritability in youth, an important insight that will offer primary care providers much-needed education and support.

CONCLUSION

Our study suggests that increased education and resources for primary care providers would enable them to be more active and confident during the initial stages of evaluating and treating irritability. According to the National Institutes of Health,[17] approximately half of primary care physicians provide 50% of mental health care in the United States, and the majority of children receive mental health care in the primary care setting. As we move toward an integrated care model of medicine, it is even more important for primary care providers to be better aware of common psychiatric diseases and, specifically, what signs and symptoms should prompt a referral to a psychiatrist.[17]

This information will be useful for future understanding and development of diagnostic tools for practitioners, especially those without access to specialty training on irritability. Through better understanding of how to accurately diagnose children and adolescents on the irritability spectrum, misdiagnosis will be reduced and treatment will be enhanced, leading to overall improved mental health.

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