OHSU-PSU School of Public Health Annual Conference

2022 Program Schedule

Apr 6th, 2:57 PM - 3:03 PM

Provider Perspectives on Benefits and Challenges of mHealth Autism Screeners in Underserved Families

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Background: Mobile-health (mHealth; using mobile devices) screening tools for autism are becoming more prevalent, and have potential benefits such as video content, eye tracking, and adaptive design. However, it is unclear whether such tools will ameliorate disparities in access to autism diagnosis and treatment for children from under-privileged backgrounds, instead of improving treatment only for those already advantaged in autism care.

Objective: To understand factors affecting equity in use of mHealth autism screening tools from the perspective of primary care providers (PCPs) and Early Intervention/Early Childhood Special Education providers (EIPs).

Design/Methods: We conducted qualitative interviews about mHealth autism screening tools, with 9 PCPs and 9 EIPs in 6 states. Interviews were conducted by a PCP or Speech Language Pathologist. The interview guide was reviewed by parents and 2 PCPs for content validity. Providers were given 3 hypothetical scenarios, in which a parent presents to care with test results they drew from autism screeners. In each scenarios the provider was presented with one of 10 online or app based screening tool screeners identified through a comprehensive search by the study team. They were to discuss their clinical approach and critically review the tool's ability to meet family needs. Each transcript was audio-recorded, transcribed, and coded by team members using QSR nVivo 12; coding differences were resolved through mutual discussion. A phenomenological approach was used to develop key themes and recommendations.

Results: PCPs and EIPs identified 4 themes and 17 subthemes describing mHealth benefits and challenges (Table). *Clinical and business factors* included integration with the EHR, role in clinical efficiency, and scope of practice. *Validity and trustworthiness* factors included face validity, tool recognition/familiarity, privacy and security concerns, and credibility/authority. *Family interaction* factors included tool starts a conversation about ASD, supports family advocacy, provides information, and resources, and affects family anxiety or provides/emotional support. *Accessibility factors* included time burden, English proficiency/language issues, cultural inclusivity, and literacy/educational level. Providers suggested modifications such as portraying diverse families, reducing the reading level of text and making tools shorter to better fit clinical context.

Conclusion:mHealth ASD screening tools have many benefits and challenges when reaching underrepresented families. Shedding light on these challenges can inform more equitable tool design.

Theme	Sub-Theme	Sample quotation
Clinical or Business factors & roles	Clinical efficiency Scope of practice concerns EHR integration	*Because many of my families go through [children's hospital diagnostic clinic] but the wait is a long time. And, then with COVID it got shut down, they're still waiting. So, I feel like that could be a good tool to get them started. (EI provider)* *I would say.. to parents like I am concerned about this. I think there is a high possibility, but I am not qualified to make a diagnosis. And so, I'm sending you to a specialist. And I think that that same level or openness needs to be communicating in these apps (PCP)*

Validity & Trustworthiness	Privacy and Security Face Validity Provider recognition/ familiarity Credibility/Authority Provider needs to do research	*I think my concern would be what are they doing with this data? And because they're entering their child's name, date of birth. They're paying for it… I'm sure they're paying for this app. So, where is that information going? (EI)* *I'd want to look into the actual questionnaire… research a little bit. First, I'd want to know what questions they send out and see the questions… have some outcomes data that they as a company have to share about the validity of the tool (PCP)*
Family Interactions	Tools starts a conversation about development or ASD Tools supports parental advocacy Tool provides information, resources, or next steps Tool affects family anxiety or emotional support	*It does give extra information on autism. But it doesn't specifically direct them to [resources] if they have more questions. (EI)* *I don't like the red exclamation point at the beginning. Just the score, like it flags as abnormal and it looks stressful. I see that even as a clinician, and I'm like ah, something's wrong. And I don't know if families would get that impression but starting right off the top with that big red exclamation point makes me worried.(PCP)*
Accessibility	Access to technology Time burden to complete for parents or providers English proficiency or language issues (Inc. Translation quality) Cultural inclusiveness Literacy or education level concerns	*I guess I would be concerned about accessibility... Do they have the minutes on their phone to handle multiple services? Because they don't have Wi-Fi. So, access to the technology, I think should be a concern, especially if some of these families probably wouldn't be able to Google search to find out about these screeners. (EI)* *I think as few steps as possible. So, like very clear big buttons. Click here to go to the next page, very simple there. If this is really going to be a tool that's available to the general public, it has to be in multiple languages (PCP).*