Supplemental Information

CONCEPT-MAPPING METHODOLOGY

Concept mapping is a mixed-methods approach to gather a comprehensive set of ideas on any topic of interest and represent these ideas visually as a map.[23,38] The process has been used extensively in medicine and public health[39–42] and is designed to integrate input from multiple sources with differing content expertise. It integrates group processes, such as brainstorming and unsorted structuring, with the statistical methods of MDS and hierarchical cluster analysis to construct maps and other graphic and tabular products. A pooled study analysis of 69 concept-mapping studies yielded strong internal validity and strong sorting and rating reliability estimates.[24] The concept-mapping method can be implemented in person at meetings or can be divided into phases that occur using the World Wide Web. In this project, we used a contemporary Web-based implementation in which all analyses are conducted and maps are produced using the Concept Systems Global Max computer software that was designed for this process.

Participants and Their Roles

Steering Committee

Concept mapping uses a steering committee (usually a team of 3–5 researchers) for general project oversight. The research team in this project was led by a pediatrician (C.G.) with expertise in implementing and teaching MH in primary care and a professor of policy analysis and management (W.T.) with a degree in methodology and evaluation research, who created the concept-mapping methodology. The research team also included a professor of child and adolescent psychiatry (J.T.W.) to provide content expertise and a professor of pediatrics (S.B.) who has expertise in medical education.

Study Sample

The research team identified potential participants for the study to represent, as well as possible, the variety of stakeholders relevant to MH training using nonrandom purposive sampling. This recruiting approach maximizes participation and helps ensure heterogeneity of perspectives.[28] There were 2 groups of participants: an invited group and a core group (explained in detail below). C.G. identified stakeholders involved in MH integration initiatives and parents of children with chronic physical and/or MH problems in the ABP's Family Leadership Advisory Group. J.T.W. and S.B. identified chairpersons and PDs in both disciplines who could recruit faculty and trainees at their institute. Together, the team identified academic and community clinicians of both disciplines working in a variety of geographic locations (CO, NY, SC, AL, OH, MD, WA, CA, PA, and IL).

The final list included 117 potential participants who were e-mailed and invited to participate as part of the invited group. Potential participants were encouraged to share the invitation with colleagues and Listservs if deemed appropriate, using a snowball sampling approach.

The core group consisted of 76 potential participants chosen from the initial list but mainly represented key stakeholders in national efforts around pediatric MH care, medical educators, and trainees. See Supplemental Information for the initial email invitation.

1. A core group consisted of participants who are involved in all aspects of the study:
    - contributing their ideas and opinions about issues through Web-based brainstorming;
    - conducting Web-based, unstructured sorting of the synthesized set of factors; and
    - conducting a Web-based rating of the factors for relative importance and feasibility.

In this study, participants in the core group were key stakeholders in national efforts around pediatric MH care, medical educators, and trainees. Incentives were provided for participants who completed the unstructured sorting and ratings for relative importance and feasibility. In a study pooling results of all known concept-mapping projects, results using Web-based data gathering demonstrated an average of 27.9 participants who completed the sorting.

1. An invited group of anonymous participants were involved in the following:
    - contributing their ideas and opinions through Web-based brainstorming; and

- rating the factors for relative importance and feasibility.

Participants who completed both ratings were also given an incentive. The invited group in this study included the key stakeholders mentioned above, who were encouraged to share the invitation with colleagues and Listservs when appropriate. PDs from various geographic locations were asked to forward the invitation to their pediatric trainees. It is unknown how many stakeholders received the invitation because of the process, so a response rate cannot be calculated for brainstorming or rating.

Concept-Mapping Process

Generation of Ideas: Brainstorming

The objective of brainstorming is to have a set of ideas that address the topic that is as complete as possible. Web-based brainstorming was anonymous to ensure that participants felt free to enter any issues they consider relevant. Brainstorming was guided by a focus prompt that was created to ensure that the brainstormed statements were concise, addressed the topic, and were grammatically and syntactically similar. Many focus prompts were created and pilot tested with members from the research team and core group in this project. The final focus statement was, "To prepare future pediatricians for their role in caring for children and adolescents with mental and behavioral health conditions, residency training needs to..."

Ideas from other data sources are sometimes used in addition to brainstormed ideas to ensure comprehensive coverage of the focus. Because this is a national priority,[1] there were many initiatives around improving pediatric training regarding MH that were in progress while this project was ongoing. For instance, a workshop entitled, "The Behavioral/Mental Health Crisis: Preparing Future Pediatricians To Meet the Challenge," was held at the Association of Pediatric Program Directors' Spring Meeting in Anaheim, California in April 2017.[13] This was a joint effort between the ABP and the Association of Pediatric Program Directors. In preparation for that meeting, representatives from national organizations (the Academic Pediatric Association, the American Academy of Child and Adolescent Psychiatry, the Society for Adolescent Health and Medicine, and the Society for Developmental and Behavioral Pediatrics) were invited to poll their membership through a request on their Web site asking suggestions for the "10 best ways" to enhance pediatric residency training in behavioral health and MH. Responses were transformed into documents for the meeting and were used to augment the brainstormed data for this study's generation of ideas. Curriculum documents (EPA 9 and the AAP's MH competency statement) referred to at the conference were also reviewed, and ideas not initially represented were added to ensure brainstormed ideas were comprehensive.[14,26]

After the brainstorming period, we reviewed the statements, split compound statements, edited statements for clarity and grammar (but not for content), and ensured that the statements were syntactically "of a kind." Content-analysis procedures were used to synthesize the brainstormed issues to a final set of 99 statements that represented, as well as is possible, the details in the original brainstormed set. For instance, in this study, there were 12 statements regarding the role a pediatrician should play in providing MH care. Statements included the following concepts:

- develop a realistic approach to what behavioral health and MH primary care physicians in community practices can deliver (16);
- support clinicians in recognizing that a brief well-child check is not the right place to diagnose something complex, such as ADHD or autism (99);
- distinguish between common MH and behavioral issues that they can handle themselves and those for which they should refer (140);
- agree on what a general pediatrician should be able to manage and take care of (153.2);
- make sure the future role of pediatricians is well defined (176); and
- define and then teach residents the role of a pediatrician in a team of MH professionals (270).

These and an additional 6 statements were synthesized to represent all statements addressing the future role a pediatrician should play in providing MH care: "provide clear expectations of the role of the future pediatrician in MH care (ie, what they are expected to manage versus when they should refer the patient)." On average, in typical concept-mapping projects, the final set includes 96.32 statements, with a minimum of 45 and a maximum of 132.[24] We had a final list of 99 statements. The final set of statements was shown to the steering committee as well as experts in medical education and child psychiatry to ensure they constituted a complete list of ideas. These stakeholders recommended additional ideas, meaning an additional content analysis to further synthesize statements was performed.

Structuring Ideas: Sorting and Rating

In the structuring step, the participants provided information about how the statements can be grouped and rated. This involved 3 tasks that are accomplished via the Web.

Demographics

All participants were asked to answer several nonidentifying descriptive questions for the subgroup analysis. We included questions regarding profession, practice location and type, years in practice, and whether participants were a parent.

Sorting

For the sorting (core group only),[43–45] each participant was asked to categorize the statements according to their view of their meaning or theme. The Web software allows the participant to create, delete, and name new groups and to move statements from 1 group to another. Unstructured sorting is used because it can accommodate a large number of items.

Rating

All participants were asked to rate the factors for relative importance and feasibility. For the rating task, each participant rated each statement on a 5-point Likert-type response scale. Participants rated the statements for relative importance (1 = relatively unimportant [compared with the rest of the statements], 2 = somewhat important, 3 = moderately important, 4 = very important, and 5 = extremely important [compared with the rest of the statements]).

Because participants were unlikely to brainstorm statements that are totally unimportant with respect to the focus, it is stressed that the rating should be considered a relative judgment of the importance of each item compared with all the other items brainstormed. In addition, participants rated the relative feasibility of addressing each issue (1 = not at all feasible, 2 = not very feasible, 3 = somewhat feasible, 4 = moderately feasible, and 5 = very feasible).

Representation of Ideas

The creation of the map used a sequence of multivariate statistical methods (primarily MDS and hierarchical cluster analysis) and was handled automatically by the Concept System program. The core data from the map came from the unstructured sorting, and the general process is as follows. For the quantitative multivariate analyses, each sort was first converted to a 0, 1 co-occurrence matrix that has as many rows and columns as there are statements. One is entered into a cell if the row-column statement pair were placed by the participant in the same pile, and a 0 is entered if the statements were not sorted together, as shown below. Please note that the figures referred to below are meant to illustrate the process. In actuality, because there are 99 statements in this study, there would be 99 rows, columns, and points on the map (Supplemental Fig 5).

These matrices were then summed across all participants, yielding a similarity matrix that indicates the number of participants that sorted each pair of statements together. This summed square similarity matrix is the input for MDS analysis, which takes similarity data and represents them as distances in Euclidean space (Supplemental Fig 6).

The MDS configuration of the statement points was restricted to 2 dimensions to allow for integration of additional information from cluster and rating analyses. This point map displayed the location of all the brainstormed statements, with statements closer to each other generally being expected to be more similar in meaning. The analysis yielded a two-dimensional (x, y) configuration of the set of statements on the basis of the criterion that statements piled together most often are located more proximately in two-dimensional space, whereas those piled together less frequently are farther apart (Supplemental Fig 7).

A cluster map was generated that displayed the original statement points enclosed by polygon-shaped boundaries for the clusters. The x, y configuration was the input for the hierarchical cluster analysis using Ward's algorithm[46,47] as the basis for defining a cluster. Using the MDS configuration as input to the cluster analysis in effect forces the cluster analysis to partition the MDS configuration into nonoverlapping clusters in two-dimensional space. There is no simple mathematical criterion by which a final number of clusters are selected. The procedure that is typically followed is to examine an initial cluster solution that was the maximum desirable for interpretation in this context, which was 20 in this study. Then, successively lower cluster solutions were examined with a judgment made at each level about whether merging statements in separate clusters makes logistic sense, that is, that the sentences go together to represent a single concept.

The 1-to-5 importance and feasibility rating data were averaged across persons for each statement and each cluster. Statement ratings were plotted on a bivariate graph of ratings at the statement level. The bivariate space is divided into quadrants on the basis of the average importance and feasibility values of all statements. The go zone is the quadrant showing the statements simultaneously rated above average in both importance and feasibility.

Pattern matching[48,49] was used to explore the relationship between importance and feasibility of each cluster. Pattern matching is both a statistical and graphic analysis. Graphically, a pattern match was portrayed by using a ladder graph (called "parallel coordinates" in the statistical literature[50]) that consisted of 2 vertical axes (1 for each pattern). The vertical axes were joined by lines that indicated the average values for each cluster on the concept map for importance and feasibility. Overall, the 2 patterns were compared with

a Pearson product moment correlation displayed at the bottom of the ladder graph. The figure is called a ladder graph because strong agreement between the patterns will result in a set of near-horizontal lines that look a bit like a ladder. In addition, the pattern match enabled immediate identification of which cluster areas show the greatest consensus or disconnection.

Interpretation of the Concept Maps

A preliminary interpretation of results was conducted by the steering committee and used as the foundation for a subsequent meeting for participants to review and interpret the results directly. This interpretation session followed a structured process described in detail.[38] We held a videoconferencing session with 9 participants. Participants included key stakeholders who were members of the core group.

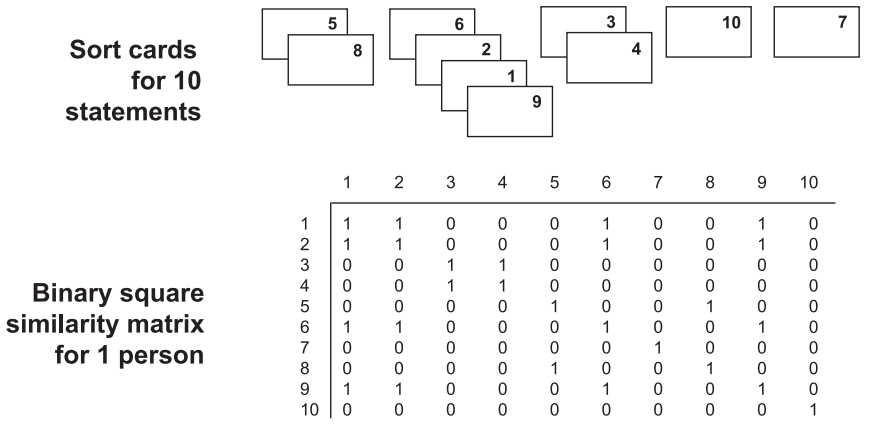
The facilitator (C.G.) began the session by reminding participants of the brainstorming, sorting, and rating tasks they performed earlier that led to the generation of the concept map. The group was shown the point map and told that the analysis placed the statements on the map so that statements frequently sorted together are generally closer to each other on the map than statements less frequently sorted together. To reinforce the notion that the analysis placed the statements sensibly, participants were taken on a "tour" of the map by the facilitator, who identified statements in various places on the map and examined the contents of those statements.

After becoming familiar with the numbered point map, the participants were told that the analysis also organized the points (ie, statements) into groups, as shown on the list of clustered statements. At this point, the facilitator showed the participants the listing of clustered statements. Each participant was asked to read through the set of statements in each cluster and generate a short phrase or word to describe or label the set of statements as a cluster. The facilitator led the group in a discussion, working cluster by cluster to achieve group consensus on an acceptable label for each cluster. In most cases, when persons suggested labels for a specific cluster, the group readily came to a consensus.

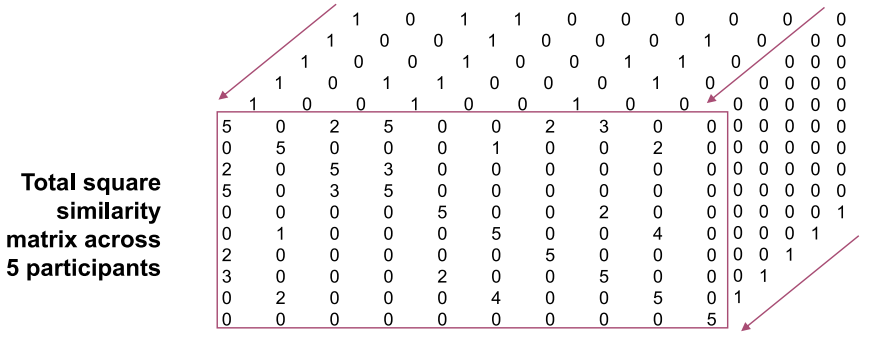
Participants examined this labeled cluster map to see if it made sense to them. The facilitator reminded them that in general, clusters closer together on the map should be conceptually more similar than clusters farther apart and asked them to assess whether this seems to be true or not. The facilitator noted that all of the material presented to this point used only the sorting data and proceeded to show the bivariate graph of statement ratings and the ladder graph for cluster ratings to begin the conversation about how to use the results.

Use of Results

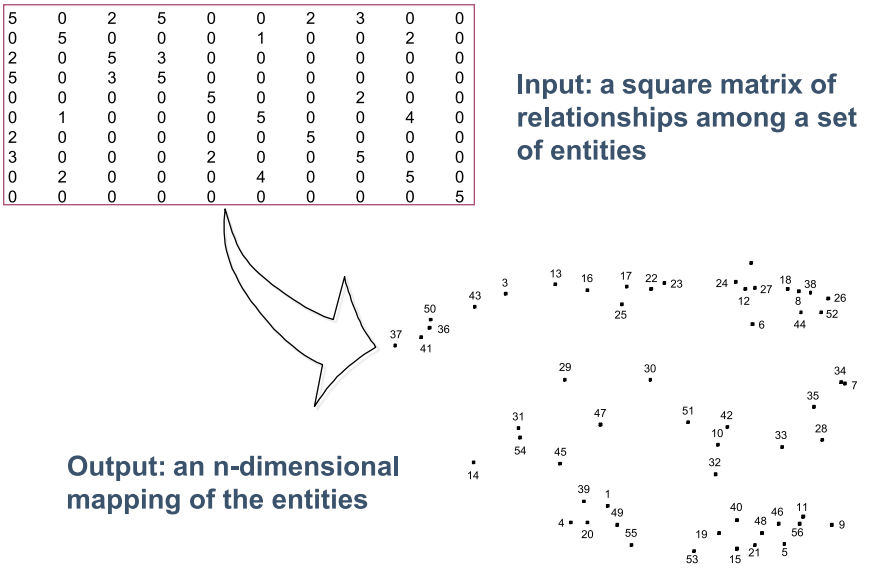
For detailed planning, the go-zone plot was referred to because it displays the relative importance and feasibility of each statement in the map. Statements were shown with their identifying number. The go zone is considered to consist of ideas that should be implemented first because they are considered relatively high in importance and feasibility. The participants reviewed these plots and use them as the basis for an initial discussion about action planning.



SUPPLEMENTAL FIGURE 5
This figure provides a visual representation on how analyses work when 1 participant sorts 10 statements.



SUPPLEMENTAL FIGURE 6
This figure provides a visual representation on how analyses work when 10 participants sort 10 statements.



SUPPLEMENTAL FIGURE 7
This figure demonstrates the process of converting a square matrix created by sorting to a point cluster map.

SUPPLEMENTAL TABLE 3 Statements by Cluster and Zone

Cluster No. and Name	Statement No.	Statement Organized by Zone	Importance	Feasibility
1. Modalities for MH training				
	5	Provide opportunities for longitudinal experiences in caring for common MH problems with clinical supervision throughout the 3 y of training.[a]	4.3 (0.9)	3.5 (1.0)
	79	Teach and allow time for residents to develop and practice the communication skills needed to effectively discuss mental and behavioral health with both children and families.[a]	4.1 (1.0)	3.5 (0.9)
	86	Train general pediatric faculty in diagnosing and treating MH conditions.[a]	4.1 (1.0)	3.5 (0.9)
	60	Teach how to comanage patients with the appropriate MH specialist when indicated.[a]	4.1 (0.9)	3.7 (0.9)
	4	Provide training opportunities for residents to shadow MH professionals.[a]	4.1 (0.9)	3.7 (0.9)
	6	Develop or adapt existing standardized curricula.[b]	3.9 (1.0)	3.9 (0.9)
	1	Increase the number of child psychiatry didactics.[b]	3.9 (1.0)	3.8 (0.9)
	66	Expand the developmental and behavioral pediatrics rotation to explain the science (epigenetics and developmental neuroscience) of how the first years of life shape developmental and medical outcomes (adolescent brain).[c]	3.6 (1.2)	3.4 (1.0)
2. Prioritization of MH				
	34	Provide clear expectations of the role of the future pediatrician in MH care (ie, what they are expected to manage versus when they should refer the patient).[d]	4.4 (0.9)	3.9 (1.0)
	36	Encourage a culture shift in pediatrics in which MH is valued, de-stigmatized, and an integral part of all aspects of care.[a]	4.4 (0.8)	3.4 (1.0)
	48	Integrate MH care into continuity clinics.[a]	4.4 (0.9)	3.9 (0.9)
	2	Ensure that residents have true continuity with their clinic patients for longitudinal experiences.[a]	4.3 (0.8)	3.5 (1.0)
	14	Integrate MH specialists into all pediatric clinical teams, including inpatient and critical care units.[a]	4.3 (0.8)	3.1 (1.1)
	23	Provide on-site MH specialists in primary care clinics to work collaboratively with attending physicians and trainees.[a]	4.3 (0.9)	3.3 (1.1)
	50	Include mental and behavioral health to the same degree that other common childhood illness categories, such as asthma, are included.[a]	4.2 (0.9)	3.3 (1.1)
	19	Provide role models who see MH and behavioral aspects of their patient care and expect them to do the same.[a]	4.1 (0.9)	3.6 (1.0)
	92	Integrate MH trainees (psychologists, psychiatrists, and social workers) into general pediatrics training for parallel learning.[a]	4.1 (1.0)	3.3 (1.0)
	53	Have MH specialists provide direct supervision to trainees while seeing children with MH issues.[a]	4.1 (0.9)	3.3 (1.1)
	99	Pair residents with MH professionals (trainees or faculty) who could be available to consult, and advise them on a regularly recurring basis (in person or via telephone).[a]	4.1 (0.9)	3.3 (1.1)
	91	Agree on which MH skills trainees need to be competent (an EPA).[a]	4.0 (1.0)	3.6 (0.9)
	88	Empower all MH specialists as faculty.[c]	3.9 (1.0)	3.3 (1.1)
	90	Implement collaborative office rounds in which case presentations are discussed and led by both pediatric and psychiatry residents and faculty.[c]	3.9 (1.0)	3.4 (0.9)
	55	Support a faculty champion who is a general pediatrician with a passion for MH with support from the chairperson.[c]	3.9 (1.1)	3.5 (1.0)
	59	Increase the number and duration of MH rotations (child psychiatry and psychology) via mandates from accreditation organizations.[c]	3.8 (1.1)	3.1 (1.2)
	7	Reorder priorities of training, moving from an emphasis on acute, complex medical care to emphasizing behavioral health and MH.[c]	3.7 (1.1)	3.1 (1.2)
	28	Train residents more frequently in the community by including visits to homes, schools, MH centers, and private practices.[c]	3.6 (1.1)	3.2 (1.1)
3. Systems-based practice				
	95	Provide readily accessible MH resources that can be used in care (ie, clinical guidelines, the AAP's MH toolkit, and Web sites).[b]	4.1 (0.9)	4.1 (0.8)
	8	Teach how to identify and maintain an adequate list of MH referral sources.[b]	4.0 (1.0)	3.7 (0.9)
	11	Provide trainees with information about online resources for families.[b]	4.0 (0.9)	4.0 (0.9)
	62	Teach trainees about community-based support for children with MH problems to provide to their families (ie, support groups and social skills programs).[b]	4.0 (0.9)	3.7 (0.9)

SUPPLEMENTAL TABLE 3 Continued

Cluster No. and Name	Statement No.	Statement Organized by Zone	Importance	Feasibility
	9	Teach about differences in training and roles of different MH specialists (psychology, psychiatry, LCSW, and LPC).[b]	3.9 (1.0)	3.7 (1.0)
	12	Create assessment tools for trainees' MH skills.[c]	3.9 (1.0)	3.7 (1.0)
	10	Teach how to coordinate and monitor MH care provided outside one's practice.[c]	4.0 (0.9)	3.7 (0.9)
	51	Teach trainees to be knowledgeable about and recommend resources in the school (Individuals With Disability in Education Act, individual educational plans, and 504s).[c]	4.0 (1.0)	3.7 (0.9)
	22	Have participants learn, experience, and be competent in collecting data from their patients with MH issues to track their progress (measurement-based care).[c]	3.8 (1.0)	3.4 (1.0)
	85	Teach residents about the MH system and its limitations (privacy laws, billing, and accessibility) and how to advocate for future funding for MH and strategies to address inequities.[c]	3.8 (1.1)	3.6 (1.0)
4. Self-awareness and relationship building				
	13	Teach how to communicate effectively between MH specialists and pediatricians.[d]	4.1 (1.0)	3.6 (0.9)
	68	Promote resilience among trainees by teaching coping skills (ie, how to manage their own reactions to patients and work-related stresses in the clinic).[a]	4.1 (0.9)	3.9 (0.8)
	37	Augment trainees' self-awareness (biases, stigma, etc) to enhance care.[a]	4.1 (0.9)	3.5 (1.0)
	78	Help trainees develop competence and confidence in uncertainty and the idea that not everything can be "fixed."[c]	4.0 (1.0)	3.6 (1.0)
	42	Leverage technology and the electronic health record to help residents with screening, prompts in asking the right questions, and clinical decision support.[c]	3.9 (0.9)	3.5 (1.0)
	39	Include patients and children with MH conditions to share their experiences to teach empathy and improve trainees' skills in building and maintaining therapeutic relationships.[c]	3.9 (1.0)	3.5 (1.0)
	52	Use communication training techniques (role playing, videotaping, guided interactions, and providing feedback) to help participants deal with challenging scenarios (ie, a family not seeking treatment because of stigma).[c]	3.82 (1.1)	3.4 (1.1)
5. Training in clinical assessment				
	18	Teach trainees how to perform a diagnostic assessment for common MH symptoms.[d]	4.3 (0.8)	4.0 (0.8)
	33	Teach how and when to appropriately refer to which MH specialist.[d]	4.3 (0.8)	4.1 (0.8)
	69	Teach how to triage for MH problems (eg, first steps in care, recognizing warning signs for a need to escalate treatment, and identifying emergencies).[d]	4.3 (0.8)	3.9 (0.8)
	67	Teach how to identify symptoms and findings associated with common childhood MH issues.[d]	4.2 (0.8)	4.0 (0.8)
	75	Teach residents the first steps of how to respond to a MH screen.[d]	4.2 (0.8)	4.1 (0.7)
	30	Teach how to analyze results from MH screening, history, physical assessment, and response to interventions to determine if there is a need for further assessment and/or intervention.[d]	4.2 (0.9)	3.9 (0.8)
	21	Teach the continuum of normal to abnormal behavior and how to recognize and differentiate normal behavioral variations.[d]	4.2 (0.9)	3.9 (0.8)
	17	Teach how to provide care that is sensitive to the cultural context of the patient and family around issues of MH.[d]	4.2 (0.9)	3.9 (0.8)
	70	Teach evidence-based communication strategies using behavior change principles that can be used across many diagnoses to engage families in treatment and/or behavior change (ie, common factors and motivational interviewing).[d]	4.2 (0.9)	3.7 (0.9)
	25	Teach how to respond to early risk factors for healthy emotional development to be preemptive and prevent future problems.[d]	4.1 (0.9)	3.8 (0.9)
	3	Teach about the associations between psychosocial factors and chronic physical illness to promote healthy adaptations.[d]	4.1 (0.9)	4.0 (0.8)

SUPPLEMENTAL TABLE 3 Continued

Cluster No. and Name	Statement No.	Statement Organized by Zone	Importance	Feasibility
	44	Educate residents about screening for and identifying risk factors for healthy emotional development (ie, family history of MH problems, trauma, and social determinants of health).[d]	4.1 (0.9)	3.9 (0.8)
	16	Teach how to distinguish between primary MH problems versus limitations in cognitive capacity (ie, when and how to refer for neuropsychological or neurodevelopmental testing).[d]	4.1 (0.9)	3.7 (0.9)
	43	Teach residents how to use screening tools for both general symptoms and disease-specific conditions.[d]	4.1 (0.9)	4.0 (0.8)
	82	Teach how to promote wellness and resilience through reinforcing child and family strengths and providing anticipatory guidance (ie, positive parenting strategies).[d]	4.1 (0.9)	3.8 (0.8)
	15	Teach how to use observations of parent-child interactions during a visit to guide counseling.[a]	4.1 (0.9)	3.7 (0.9)
	35	Teach how to identify and manage emerging or clusters of MH symptoms that may not reach the level of a DSM diagnosis (eg, anxious or avoidant behaviors, impulsivity and inattention, low mood or withdrawn behaviors, and disruptive or aggressive behaviors).[a]	4.1 (1.0)	3.7 (0.9)
	87	Teach about ages of risk for the onset of MH problems and how to identify risk factors during these times.[b]	4.0 (0.9)	4.0 (0.8)
	98	Include evidence-based information and skills related to social-emotional screening, initial assessments, referrals, and family support for children from birth onward.[b]	4.0 (1.0)	3.8 (0.9)
	57	Ensure that residents are able to differentiate among mild, moderate, and severe impairment from any MH condition.[b]	3.9 (1.0)	3.7 (0.8)
	65	Teach how to manage mild-to-moderate common conditions (low mood, inattention, etc).[b]	3.9 (1.0)	3.9 (0.8)
	63	Teach and allow time for trainees to practice a structured MH assessment (ie, history about symptoms and family history).[c]	4.0 (1.0)	3.6 (1.0)
	56	Include training on how to evaluate for and improve health literacy by checking for patients' understanding of management plans.[c]	3.9 (0.9)	3.7 (0.9)
	64	Teach the principles of trauma-informed care through a combination of case teaching, clinical supervision, and research evidence of the pathophysiology of stress.[c]	3.8 (1.0)	3.5 (1.0)
	41	Teach how to identify potential problems reflected in report cards, academic test results, individualized family service plans, or individualized education plans.[c]	3.8 (1.0)	3.6 (0.9)
6. Training in treatment				
	76	Teach trainees how to counsel families for common behavioral problems (ie, sleep problems, discipline, enuresis, and encopresis).[d]	4.2 (0.9)	4.0 (0.8)
	80	Include more training on appropriate prescribing and monitoring of medications for depression and anxiety (ie, SSRI prescribing).[d]	4.2 (1.0)	3.9 (0.9)
	54	Teach how to counsel and provide practical recommendations for MH concerns.[d]	4.1 (0.8)	3.8 (0.9)
	74	Include basic psychopharmacology, therapeutic ranges of doses, close monitoring of adherence, and side effects.[d]	4.1 (1.0)	3.9 (0.9)
	96	Educate residents about evidence-based psychosocial interventions for common MH problems (eg, cognitive behavioral therapy and trauma-informed cognitive behavioral therapy).[b]	4.0 (1.0)	3.9 (0.8)
	46	Teach when and how to use brief behavioral interventions (ie, deep breathing, progressive muscle relaxation, behavioral activation, mindfulness, etc).[b]	4.0 (1.0)	3.7 (1.0)
	24	Teach about preventive parenting programs, such as The Incredible Years and HealthySteps.[b]	4.0 (0.9)	4.0 (0.8)
	94	Teach screening, brief intervention, and referral to treatment (SBIRT).[b]	3.9 (1.0)	3.8 (0.8)
	81	Teach how to use common elements of psychosocial treatment to initiate the care of MH symptoms (eg, exposure for anxious behaviors, psychoeducation for low mood, and reward systems for disruptive behavior).[c]	4.0 (1.0)	3.7 (0.9)
7. Diagnosis-specific skills				
	47		4.4 (0.8)	4.0 (0.8)

SUPPLEMENTAL TABLE 3 Continued

Cluster No. and Name	Statement No.	Statement Organized by Zone	Importance	Feasibility
		Teach suicide and/or self-harm risk assessment, safety planning, and management.[d]		
	29	Teach how to recognize mild to moderate depression.[d]	4.3 (0.8)	4.1 (0.8)
	27	Teach skills in treating anxiety.[d]	4.2 (0.9)	4.0 (0.8)
	77	Teach how to recognize pediatric anxiety disorders.[d]	4.2 (0.8)	4.0 (0.8)
	26	Teach skills in managing ADHD.[d]	4.2 (0.9)	4.0 (0.9)
	93	Teach how to assess and manage neglect, abuse, and trauma.[d]	4.2 (0.9)	3.8 (0.9)
	72	Improve training in diagnosing depression.[d]	4.2 (0.9)	4.1 (0.8)
	89	Train residents to be comfortable prescribing and monitoring medications for ADHD.[d]	4.2 (1.0)	3.9 (0.9)
	73	Improve training in diagnosing anxiety.[d]	4.1 (0.9)	4.1 (0.8)
	20	Teach how to assess and manage disruptive and aggressive behaviors.[d]	4.1 (0.9)	3.8 (0.9)
	45	Ensure that residents learn to assess for substance abuse and withdrawal and how to appropriately refer for therapy.[d]	4.1 (0.9)	3.8 (0.8)
	61	Teach how to recognize symptoms of ADHD.[d]	4.1 (0.9)	4.1 (0.8)
	31	Provide improved knowledge and skills for caring with children with autism spectrum disorder.[d]	4.1 (0.9)	3.9 (0.8)
	84	Teach skills to treat mild to moderate depression.[d]	4.0 (0.9)	3.9 (0.9)
	58	Improve training in diagnosing ADHD.[b]	4.0 (1.0)	4.0 (0.8)
	32	Teach the ability to screen for and provide recommendations to families related to bullying.[b]	4.0 (1.0)	4.0 (0.8)
	97	Include training on how to perform a comprehensive assessment for ADHD.[b]	3.9 (1.0)	3.9 (0.9)
	40	Teach how to assess and manage symptoms related to learning difficulties.[b]	3.9 (1.0)	3.7 (0.9)
	38	Provide knowledge about the incidence and symptoms and/or signs of MH diagnoses that are in the DSM.[b]	3.8 (1.0)	3.9 (0.9)
	49	Teach how to assess and manage symptoms related to eating problems.[c]	4.0 (0.9)	3.6 (0.9)
	71	Teach to assess for and acutely manage new psychosis.[c]	3.6 (1.2)	3.5 (1.1)
	83	Teach how to manage agitation and delirium.[c]	3.6 (1.2)	3.5 (1.1)

DSM, *Diagnostic and Statistical Manual of Mental Disorders*; LCSW, licensed clinical social worker; LPC, licensed professional counselor; SBIRT, screening, brief intervention, and referral to treatment; SSRI, selective serotonin reuptake inhibitor.

[a] High importance, low feasibility.

[b] Low importance, high feasibility.

[c] Low importance, low feasibility.

[d] High importance, high feasibility.

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