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Who's Your Expert? Use of an Expert Opinion Survey to Inform Development of American Psychiatric Association Practice Guidelines

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Abstract

Objective

For many clinical questions in psychiatry, high-quality evidence is lacking. Credible practice guidelines for such questions depend on transparent, reproducible, and valid methods for assessing expert opinion. The objective of this study was to develop and demonstrate the feasibility of a method for assessing expert opinion to aid in the development of practice guidelines by the American Psychiatric Association (APA).

Methods

A “snowball” process initially soliciting nominees from three sets of professional leaders was used to identify experts on a guideline topic (psychiatric evaluation). In a Web-based survey, the experts were asked to rate their level of agreement that specific assessments improve specific outcomes when they are included in an initial psychiatric evaluation. The experts were also asked about their own practice patterns with respect to the doing of the assessments. The main outcome measures are the following: number of nominated experts, number of experts who participated in the survey, and number and nature of quantitative and qualitative responses.

Results

The snowball process identified 1,738 experts, 784 (45 %) of whom participated in the opinion survey. Participants generally, but not always, agreed or strongly agreed that the assessments asked about would improve specified outcomes. Participants wrote 716 comments explaining why they might not typically include some assessments in an initial evaluation and 1,590 comments concerning other aspects of the topics under consideration.

Conclusions

The snowball process based on initial solicitation of Psychiatry’s leaders produced a large expert panel. The Web-based survey systematically assessed the opinions of these experts on the utility of specific psychiatric assessments, providing useful information to substantiate opinion-based practice guidelines on how to conduct a psychiatric evaluation. The considerable engagement of respondents shows promise for using this methodology in developing future APA practice guidelines.

Practice guidelines are central to professional training and practice. The Institute of Medicine recommends that guideline developers formulate specific clinical questions, systematically review available evidence, and provide recommendations that are separately rated according to the strength of evidence (i.e., confidence in an estimate of effect) and strength of recommendation (i.e., confidence that benefits outweigh harms) [1]. When high-quality research on a clinical question is available, recommendations may be said to be “evidence-based.” When research is insufficient or low quality, recommendations can still be appropriate if they are supported by expert opinion.

Such recommendations often have clear face validity, e.g., “We recommend that individuals jumping out of airplanes wear parachutes” [2]. These statements contrast with those that can be made with less confidence about the balance of benefits and harms, stated for example as “We suggest....” When evidence for an intervention is judged to be too imprecise, limited, or controversial to offer either recommendations or suggestions, and when opinions about intervention conflict, no specific clinical guidance may be offered. Instead, a statement may be made that further research is needed.

In rating “strength of evidence,” guideline developers consider characteristics of a body of evidence including risk of bias, consistency, directness, precision, magnitude of effect, confounding factors, and applicability [3, 4]. The quality of evidence is rated as “low” when, for example, few randomized controlled trials exist, available trials have used small samples, or results are inconsistent across studies. An “insufficient” rating is used when evidence is either not available or not applicable to the clinical question.

In psychiatry, as in many fields of medicine, the scientific literature is riddled with gaps in our knowledge on important clinical questions. Even where evidence is available, the strength of evidence weakens as the questions being become circumscribed and specific. For example, studies addressing the question, “How does lithium compare to divalproex for the treatment of acute episodes of mania?”, will be much easier to find than studies addressing the more precise question, “How does lithium compare to divalproex for the treatment of bipolar depression in patients who have co-morbid alcohol dependence?”.

Because of these gaps, framing recommendations around what is known without overgeneralizing requires judgment, experience, and subjectivity, sometimes leading different expert panels to make different conclusions and recommendations when assessing the same clinical problem [5, 6]. Furthermore, small group opinions may be susceptible to bias from financial and intellectual conflicts of interest and from group process distortions such as the influence of status or strong personalities [7, 8].

Bias may also result from the processes used to initially appoint individuals to sit on expert groups. Most commonly, US medical specialty societies appoint individuals to expert groups who are familiar leaders in the field, generally thought of as experts, by small appointing groups [9], a so-called rounding-up-the-usual-suspects method. Experts often include persons holding high-status positions, including professional

society officers and members of journal editorial boards and NIH study sections [10]. These individuals may speak with authority for specific fields, but they may also harbor biases about research approaches and/or practices.

When guidelines are developed by government agencies, expert panels have tended toward more diverse membership. Consensus development conferences sponsored by the National Institutes of Health and National Institute for Clinical Excellence (NICE) panels in the UK have included multidisciplinary groups of researchers, clinicians, methodologists, and public representatives [11, 12]. The Institute of Medicine recommends empanelling multidisciplinary groups [1].

While multidisciplinary groups may be less susceptible to professional biases than groups of experts from a single profession, multidisciplinary groups may still represent a “usual suspects” point of view because of limitations inherent in small group processes. For example, multidisciplinary groups of 10 or fewer individuals who are well known to each other through similar research and academic interests within a specific field (e.g., mental health) may share many opinions and experiences in common, despite their various disciplines (e.g., neurology, psychiatry, psychology). Furthermore, bias of any kind may be difficult to eliminate in a small group. Individuals may have biases, for example, reflecting personal opinions and experiences beyond the usual opinions or training of the disciplines they are expected to represent.

No standards have described how individuals should be identified and appointed to expert groups. However, some novel approaches have been tried. For example, some guideline developers have selected from individuals who have authored a certain number of relevant scientific publications [13]. Although this method may offer transparent reproducibility, it may still produce samples of accomplished research experts who lack clinical expertise in an area. Nomination methods for larger panels have also included variations of the so-called snowball method, in which first-round nominees are asked, in turn, to nominate others they believe to be expertly qualified [14].

While the opinions of large, inclusive groups may be more credible than those of small groups, practical concerns challenge collecting the opinions of large groups and determining their “consensus.” Structured approaches must be used, e.g., ordered discussion followed by voting on specific questions. The Delphi method [15] is one such approach, employing iterative, anonymous voting. Some guideline developers have used formal surveys to assess the opinion of large groups [10, 13, 16]. These surveys have sometimes employed the RAND appropriateness methodology, a Delphi-like survey method specifically designed to assess expert opinions about healthcare procedures (http://www.rand.org/health/surveys_tools/appropriateness.html).

In light of the standards and approaches discussed above, we aimed to improve the credibility and authority of APA guidelines by piloting a method for assessing expert opinion. We employed two steps previously used elsewhere but which were novel for APA. First, through a “snowball” nomination process, we identified large numbers of

clinical and research experts on specific topics concerning psychiatric evaluation [17]; the snowball methodology is a well-established sampling approach in social science research [18, 19, 20]. Second, we used a formal survey process to assess the experts' opinions about the value of specific practices to be addressed in new guidelines. Here we describe the methods and results of this demonstration project.

Methods

Based on recommendations from the 2006 edition of APA's Practice Guideline for the Psychiatric Evaluation of Adults [17] clinical questions were formulated about the value of specific assessments or practices when typically included in an initial psychiatric evaluation. These assessments and practices related to eight general topic areas: suicide risk; risk of aggressive behaviors; substance use; general medical health; culture; involvement of the patient and family in treatment-decision making; documentation; use of rating scales; and psychiatric systems and treatment history.

A systematic search of available literature did not identify sufficient high-quality research-based evidence to inform guidelines on any of our questions. Thus, expert opinion was needed.

Using snowballing, we invited 136 chairs of academic departments of psychiatry, 192 residency training directors, and 163 members of the APA Assembly to nominate experts in our eight topics; those experts were then invited to nominate other experts, and so on for three total nomination rounds. We chose these three groups because we assumed they would all be highly connected professionally with psychiatrists in their communities. Department chairs were presumed to be familiar with academic leaders, scholars, researchers, and clinicians from their own institution as well as colleagues regionally and nationally. Residency training directors and APA Assembly members are also likely to be familiar with large numbers of psychiatrists in their area.

We recognized that clinical experts and research/scholarly experts both matter, yet may hold different opinions and values, especially on questions for which high-quality evidence is lacking. Research experts, for example, might favor interventions within their specific areas of study, whereas clinical experts might favor interventions reflecting their current practice patterns. To identify research experts, department chairs were asked to suggest individuals they viewed as having significant research expertise in areas of psychiatric evaluation associated with the topics being considered. To identify clinical experts, all three nominating groups were asked to suggest outstanding psychiatrists with substantial experience in the psychiatric evaluation and management of adults, someone to whom they would personally refer patients with complex psychiatric problems.

Via a Web-based program (Survey Gizmo), all nominated experts were surveyed for their opinions about 120 specific assessments or practices related to the eight specified topics. They were asked (1) the extent to which they agreed that including the assessment or practice in an initial psychiatric evaluation would improve outcomes; (2)

the extent to which they typically included the assessment or practice in initial psychiatric evaluations in their own clinical practice; and (3) in the event of non-inclusion, their reasons. Table 1 lists illustrative questions from each topic area.

Table 1

Illustrative questions for expert opinion survey

Risk assessment (suicide)	To what extent do you agree that identification of patients at risk for suicide is improved when the initial psychiatric evaluation of any patient typically (i.e., almost always) includes assessment of the following?
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Presence or absence of reasons for living (e.g., sense of responsibility to children or others, religious beliefs)

Risk assessment (aggressive behavior)	To what extent do you agree that identification of patients at risk for aggressive behaviors is improved when the initial psychiatric evaluation of any patient typically (i.e., almost always) includes assessment of the following?
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Family history of abuse or violence

Substance use assessment	To what extent do you agree that the identification and diagnosis of substance use disorders is improved when the initial psychiatric evaluation of any patient typically (i.e., almost always) includes assessment of the following?
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Past misuse of prescribed or OTC medications or supplements

Cultural assessment	To what extent do you agree that the following are improved when the initial psychiatric evaluation of any patient typically (i.e., almost always) includes assessment of his or her personal/cultural beliefs? Personal/cultural beliefs are defined as beliefs related to the patient's personal/cultural characteristics and identity, including but
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not limited to beliefs about age, ethnicity, gender, race, religion, and sexuality.

Formulation of an appropriate treatment plan

General medical
assessment

To what extent do you agree that diagnostic accuracy and treatment safety are improved when the initial psychiatric evaluation of any patient typically (i.e., almost always) includes assessment of the following aspects of his or her general medical history? Assessment may occur directly or by review of the results of a recent assessment by another clinician.

Past or current infectious disease, including but not limited to sexually transmitted diseases, HIV, tuberculosis, and hepatitis C

Review of psychiatric
systems

To what extent do you agree that accuracy of diagnosis and appropriateness of treatment selection are improved when the initial psychiatric evaluation of any patient typically (i.e., almost always) includes review of the following?

Adherence to past psychiatric treatments, including both pharmacological and non-pharmacological treatments

Documentation

To what extent do you agree that an individual clinician's decision making about a patient's psychiatric diagnosis and treatment plan is improved when the clinician typically (i.e., almost always) documents the following in the patient's medical record?

Rationale for treatment selection, including discussion of the specific factors that influenced the treatment choice

Quantitative assessment To what extent do you agree that clinical decision making is improved when quantitative measures of the following are typically (i.e., almost always) obtained within the scope of the initial psychiatric evaluation of any patient, as compared to non-quantitative clinician assessment? “Quantitative measures” are defined as clinician- or patient-administered tests or scales that provide a numerical rating of features such as symptom severity, level of functioning, or quality of life and have been shown to be valid and reliable.

Quality of life

Involvement of patient and family in treatment decision making To what extent do you agree that the therapeutic alliance and treatment adherence are improved by explaining the following to patients who have the capacity for decision-making?

The diagnosis

Respondents used a 1-5 Likert scale to rate the extent to which they agreed that including certain items in the initial assessment of each patient would be likely to improve outcomes

Results

Fifty-four (40 %) department chairs nominated 329 experts, 54 (28 %) training directors nominated 208 experts, and 29 (18 %) members of the APA Assembly nominated 136 experts. After snowballing for three rounds, a total of 1,738 experts were identified. Of these, 76.4 % were nominated once, 14.8 % twice, and 8.8 % more than three and up to nine times; 66.8 % were nominated as clinical experts, 23.1 % as research/scholarly experts, and 10.1 % in both categories.

All 1,738 nominated individuals were invited to participate in the expert opinion survey; 784 responded (45.1 %), of whom 638 (81.4 %) provided complete responses. Respondents closely resembled the total pool of nominees regarding the basis on which they were nominated (67.9 % were nominated as clinical experts, 22.7 % as research experts, and 9.4 % as both clinical and research experts). Respondents were located in 43 different states, Canada, and several other countries. Ninety-six percent reported no conflicts of interest around any of the survey’s issues; 4 % reported potential conflict

such as receiving research funding, serving on speaker’s bureaus, or working with a specific sub-population.

Among respondents, 90.5 % self-identified as psychiatrists, 11.7 % as “researcher,” 2.8 % as “other mental health clinician,” 0.4 % as “other physician,” and 4.1 % as “other.” Clinical practice settings were reported as outpatient clinic in private or public hospital (45.5 %), inpatient unit in private or public hospital (24.2 %), solo office practice (14.7 %), group office practice (11.2 %), outpatient clinic in a freestanding facility (8.6 %), and other (27.4 %). Overall, not including residency or fellowships, 53 % had been in practice more than 20 years, 27 % 10-20 years, 14 % 5-10 years, and only 6 % less than 5 years. Participants’ responses to questions associated with each of the eight areas are summarized in Table 2. Responses from all participants were included in our analyses.

Table 2

Respondent response patterns by topic area

Topic	Number of specific assessments or other practices within this topic addressed by survey questions	Questions about value: ≥90 % “strongly agreed” or “agreed” the assessment or other practice improves outcomes when it is typically included in an initial psychiatric evaluation		Questions about use: ≥90 % answered that they routinely include this assessment or other practice in psychiatric evaluations they conduct within their own clinical practices		Number of free-text comments by respondents explaining why they may not routinely include the assessment in their evaluations	Number of additional free text comments regarding other aspects of this topic
		Number	%	Number	%		
Suicide risk	19	19	100	14	74	46	255
Risk of aggressive behaviors	12	12	100	7	58	56	150
Substance use	8	6	75	4	50	39	239

Topic	Number of specific assessments or other practices within this topic addressed by survey questions	Questions about value: $\geq 90\%$ “strongly agreed” or “agreed” the assessment or other practice improves outcomes when it is typically included in an initial psychiatric evaluation		Questions about use: $\geq 90\%$ answered that they routinely include this assessment or other practice in psychiatric evaluations they conduct within their own clinical practices		Number of free-text comments by respondents explaining why they may not routinely include the assessment in their evaluations	Number of additional free text comments regarding other aspects of this topic
		Number	%	Number	%		
Culture	4	4	100	0	0	70	101
General medical health	33	15	45	11	33	156	133
Psychiatric systems and treatment history	5	5	100	5	100	17	257
Documentation	4	4	100	1	25	60	219
Use of rating scales	7	0	0	0	0	232 ^{a, b}	0
Involvement of the patient and	6	6	100	6	100	40	236

Topic	Number of specific assessments or other practices within this topic addressed by survey questions	Questions about value: ≥90 % “strongly agreed” or “agreed” the assessment or other practice improves outcomes when it is typically included in an initial psychiatric evaluation		Questions about use: ≥90 % answered that they routinely include this assessment or other practice in psychiatric evaluations they conduct within their own clinical practices		Number of free-text comments by respondents explaining why they may not routinely include the assessment in their evaluations	Number of additional free text comments regarding other aspects of this topic
		Number	%	Number	%		

family in
treatment
decision
making

^aMajority of respondents answered “it depends...”

^bAmong respondents, mood depression ratings were sometimes used by 24.7 % of patients, the most frequently used category. Twelve percent used broad symptom rating scales and 11.1 % functioning rating scales, but fewer than 10 % note the use of any specific disorder-symptom scales.

For the topics of suicide risk, risk of aggressive behaviors, psychiatric systems and treatment history, and involvement of the patient in treatment decision making, 90 % or more of respondents strongly agreed or agreed that outcomes are improved by routinely including all of the 37 assessments and practices asked about in initial evaluations.

As seen in Table 2, 90 % or more of respondents strongly agreed or agreed that outcomes are improved when initial evaluations routinely include six of the eight substance use, seven of the eight documentation-related, and about half of the general medical health and culture assessments or practices mentioned. Only 50-70 % strongly agreed or agreed that outcomes are improved when initial and follow-up psychiatric evaluations include systematic, quantitative measurement of symptoms, functioning, and quality of life.

Ninety percent or more of respondents indicated typically including (i.e., “almost always”) all of the assessments mentioned related to suicide risk, risk of aggressive behaviors, and patient and family involvement in treatment decision making. For other topics, respondents were less consistent regarding routinely including assessments we

asked about in their own clinical practices: at least 90 % said they typically include 4 of the 8 substance use assessments mentioned, none of the assessments related to culture, 11 of the 33 assessments related to general medical health, and 1 of the 4 practices related to documentation. Regarding rating scales, much smaller percentages of respondents (20-56 %) indicated routinely including quantitative measures of symptoms, functioning, or quality of life in their own clinical practices.

Table 2 also enumerates the large numbers of additional free-text comments written by the minority of respondents reporting that they did not typically include certain elements in most initial evaluations. These respondents offered 716 comments to explain and contextualize their responses (often variations of “it depends on the circumstances”). Respondents also offered 1,590 further comments about specific aspects of psychiatric assessments.

Discussion

Guidelines informed by the opinion data we collected are expected to be published in 2014. We do not know whether our snowball nomination process and expert opinion survey will make these guidelines more authoritative, trustworthy, or better than guidelines developed using other methods for assessing expert opinion, such as previous editions of APA’s Practice Guideline for the Psychiatric Evaluation of Adults. We hope, however, that our piloted methods address concerns about transparency and reproducibility that are especially important for opinion-based guideline recommendations.

At minimum, we have demonstrated the feasibility of this method for APA. Our snowball nomination process identified large numbers of geographically diverse clinical and research experts working in diverse practice settings; the response rate of these individuals to our Web-based survey was high. Furthermore, the experts appeared to be engaged by the process, attested to by the large numbers of free-text comments we received.

Limitations bear mention and, where possible, will be improved upon in future work. Depending on the topic, we may experiment with alternative methods for identifying and populating future expert panels, including larger groups of non-psychiatrists, and for providing them with summaries of evidence tables prior to soliciting their opinions. We are well aware that using expert opinion to inform guideline development can go only so far. Needs for substantial amounts of high-quality evidence to address meaningful clinical questions are obvious.

Nevertheless, our pilot demonstration shows that a large number of experts can be engaged to participate in an opinion survey designed to inform recommendations and suggestions in areas where high-quality evidence is lacking. We anticipate that practice guidelines developed using these methods will better serve the educational needs of trainees and practitioners.

Implications for Educators

- Learners should be trained to critically appraise clinical trial designs and data analyses, enabling them to independently assess the strength of research evidence on which claims for treatment effectiveness are based.
- Learners should be educated to understand and evaluate competing interests that might bias treatment recommendations made by authorities, stemming from both financial and non-financial influences.
- Learners should be acquainted with the different processes by which practice guidelines and their treatment recommendations are developed, along with each method's potential strengths and weaknesses.

Implications for Academic Leaders

- Leaders should respect the complementary contributions of both researchers and practitioners toward developing the expert knowledge on which treatment recommendations are based.
- Given diverse patterns of patient preferences, clinical presentations, comorbidities, and psychosociocultural variations, leaders should appreciate that best practices in psychiatry must often modify recommended protocols because very frequently “it depends...”. Quality measures should take these realities into account.

- Leaders should understand how explicit and implicit interpersonal processes strongly influence group decision making, and that even considered opinions of so-called independent experts are often distorted by “group think”. Leaders should evaluate recommendations made by groups accordingly.

Notes

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Disclosures

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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