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The Investigator and the IRB: A survey of depression and schizophrenia researchers

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Abstract

Despite the integral part Institutional Review Boards (IRBs) play in U.S. research, research on IRBs is lacking. This is especially true in the area of mental health investigator-IRB interactions. It was hypothesized that schizophrenia researchers would have a different experience with IRBs as compared to depression researchers. This would include longer turn-around time and fewer protocols approved on first submission. It was also thought that schizophrenia researchers would be more hesitant to submit ethically complex protocols for IRB review. 396 NIH-funded schizophrenia and depression investigators were invited to participate in a survey study on IRBs. 108 usable responses were returned, 45 of which were from schizophrenia researchers. Schizophrenia researchers were significantly less likely to submit ethically complex protocols for IRB review than depression researchers even when controlling for academic rank, years of research experience, type of research done, and the need to submit to multiple IRBs. However, there was no significant difference between researcher groups in IRB review turn-around time or initial approval rates. As a group, respondents found IRB submission paperwork burdensome but necessary and were almost evenly split as to whether IRB comments were helpful (54.8%) or not (45.2%). Time to initial review was 3 weeks or longer for most respondents. 94.4% agreed IRBs should enforce subject privacy and 68.2% agreed they should monitor conflict-of-interest, but only 37.% agreed IRBs should review study design. Conclusions are that 1. the population studied may have profound impacts on the type of protocols submitted to IRBs even within the field of mental health, 2. IRBs may not draw as large a distinction between depression and schizophrenia protocols as researchers believe, and 3. facilitating IRB review by eliminating evaluation of design may be possible if the protocol has already been vetted by a credible funding agency (such as the U.S. National Institutes of Health).

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Author Disclosure

Contributions: Dr. Fischer designed the study and wrote the protocol. Dr. Fischer and Mr. George managed the literature searches and Dr. Fischer managed the analyses. Dr. Fischer and Mr. George co-wrote the first draft of the manuscript and have approved the final manuscript.

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Keywords

IRB; depression; schizophrenia

1. Introduction

All human research either supported by or subject to regulation by the United States Government is required to go through safety review via an Institutional Review Board (IRB). IRBs were established by the Code of Federal Regulations, Title 45, Public Welfare Department of Health and Human Services, Part 46, known as the “Common Rule” (because the regulation is a rule used in common by 16 Federal Agencies including NASA and the CIA). The Common Rule sets very specific guidelines for the composition and meeting requirements for IRBs. The mandate of the IRB is to ensure investigators minimize risks to subjects by using sound research design and not repeating clinical procedures when unnecessary, balance risks to subjects by anticipated benefits to subjects or increases in general knowledge, recruit subjects equitably, obtain and document informed consent, monitor data for subject safety, and protect subject privacy.

The Common Rule also establishes special procedures for research with certain vulnerable populations, specifically pregnant women and fetuses, prisoners, and children. In 1998 the National Bioethics Advisory Commission (NBAC) issued a report suggesting that the Common Rule be modified to include special protections for people with mental illness. Ultimately, NBAC recommendations were seen as problematic (Oldham et al., 1999; Fischer, 2006) and never formally adopted. Individual IRB reviews vary in their methods and requirements (Chen et al., 2008; Greene et al., 2006; Larson et al., 2004; McWilliams et al., 2003; Hirshon et al., 2002) and, without central guidance, individual IRBs vary in how they view mental illness research. Although IRBs have been a vital part of research for several decades, there has been little research on IRBs themselves and the experience of mental illness investigators with IRBs is unknown.

This report is based on a survey of schizophrenia and depression researchers regarding their experiences with and opinions of IRB review. The purpose of the survey was two-fold. The first goal was to examine whether there were differences in IRB-related experiences and attitudes between schizophrenia and depression researchers. Schizophrenia and depression were selected because of important similarities and differences in the disorders. Both are mental illnesses commonly treated with medication and with the potential for impaired capacity to consent to research. However schizophrenia is subject to more public stigma and misconceptions than depression and is more commonly of greater severity. Secondly, the survey gathered general knowledge about IRB-investigator interactions from the perspective of mental health researchers.

The survey included background questions on area of research, amount of research funding, and academic rank. Experience questions assessed turn-around time from submission to review, initial approval rate, and the number of IRBs required to approve a given protocol. Opinion items focused on necessary paperwork, investigator perceptions of IRB comments, and the appropriate scope of IRB review. The survey presented 3 ethically complex research scenarios for possible submission to an IRB. Respondents were asked whether they would submit such a protocol and, if not, the reasoning behind their decision. It was hypothesized that schizophrenia researchers would have longer turn-around time from submission to IRB review and have fewer protocols approved unconditionally on first submission. It was also thought that schizophrenia researchers would be more hesitant to submit ethically complex

protocols to the IRB compared to depression researchers, but that the two groups would have similar opinions on submission requirements and the scope of IRB review.

2. Methods

The 23-question survey was developed in consultation with NIH-funded investigators and the compliance officer (ensures protocols adhere to IRB requirements) at the Maryland Psychiatric Research Center (MPRC) of the University of Maryland School of Medicine.

The NIH Computer Retrieval of Information on Scientific Projects (CRISP) Database was queried in September 2007 using the search terms “depression” and “schizophrenia”. Names of PIs, business addresses, and email addresses were collected for the first 200 results for each search. Researchers from the University of Maryland system were not removed from the potential participant pool unless their primary appointment was at the MPRC. This resulted in the removal of a total of 4 researchers from the schizophrenia results and none from the depression results. All researchers were from the United States.

A letter of introduction, survey, and self-addressed stamped envelope were mailed to potential participants. Individuals were encouraged to return a blank survey for tracking purposes if they did not wish to participate. Responses were tracked by labeling surveys with codes corresponding to individual investigators. Non-responders were sent an electronic version of the survey four weeks after the initial mailing. An attempt was made to send surveys electronically when mailed surveys were returned as undeliverable.

This study was approved by the University of Maryland IRB and was granted a waiver of documentation of informed consent.

Fisher's exact test was used for post hoc comparisons between schizophrenia and depression researchers and to analyze opinion questions based on prior service on an IRB. Answers to research scenario questions were examined in detail using chi-square and Cochran-Mantel-Haenszel chi-square tests.

3. Results

3.1 Demographics of Responders

Useable surveys were returned from 108 individuals (two surveys were returned blank; three were returned with notes explaining that the individual did basic science and did not use an IRB). Of the 108, 41.7% were schizophrenia researchers and 58.3% were depression researchers. All respondents confirmed group assignment (schizophrenia versus depression) by self-report.

Overall, the sample was weighted towards senior researchers with 54.3% having the rank of professor and 14.3% serving as chair of their department. Those with the rank of assistant professor and below made up only a quarter of respondents. More than 60% reported 15 or more years spent as researchers. Almost half (44.9%) of the respondents had over \$1 million in current grant funding and 76.7% reported submitting 3 or more new protocols to IRBs per year. Respondents were given four choices as to their primary research focus: 31% did clinical trials, 22.3% did neuroimaging, 26.2% did studies of pathophysiology, and 20.4% did health services research. There was a significant difference in research focus between schizophrenia and depression researchers (see Table 1.) with more schizophrenia researchers doing neuroimaging and pathophysiology and more depression researchers reporting a focus on clinical trials and health services. Only 4.6% reported having chaired an IRB, but a third had previously served on an IRB.

3.2 Experiences with IRBs

There was a significant difference in the number of protocols submitted to IRBs for review by schizophrenia researchers compared to depression researchers (see Table 1.). In general, most schizophrenia researchers submitted 1-2 protocols annually while depression researchers most frequently reported submitting 3-4. No respondent had all protocols approved unconditionally on first submission. About 20% reported ‘most’ protocols were approved on first submission, a third reported ‘few’ were, and almost half of the respondents reported that no protocols were approved unconditionally on first submission. More than 90% of respondents had an average turn-around time from protocol submission to IRB review of 3 weeks or longer. More than half reported it took longer than one month. Almost 70% reported their protocols only had to be submitted to 1 IRB. There were no differences between schizophrenia and depression researchers on approvals, turn-around time, or number of IRBs required to review protocols.

3.3 Opinions of IRB Review

Regarding submission paperwork (or the electronic equivalent), no respondent thought it was inadequate to allow proper IRB review (Table 2.). Most (52.8%) reported it was burdensome, but necessary for adequate protocol review. A significant minority (31.7%) thought the paperwork surrounding an IRB submission was too much and delayed or discouraged scientific advancement.

IRB comments were thought ‘always’ or ‘mostly’ helpful by 54.8% of respondents while 45.2% reported IRB comments were ‘seldom’ or ‘never’ helpful. Respondents were asked about the perceived nature of IRB comments and could select multiple answers. Comments were perceived as related to clarification 62.7% of the time, process (format, using correct forms, etc.) 47.1% of the time, and about participant safety 39.2% of the time.

Respondents were asked whether they believed 3 review activities fell appropriately within the scope of an IRB's mission. These activities were: 1. Enforcing participant privacy, 2. Policing conflict of interest, and 3. Evaluation of research design and methods. Almost all (94.4%) respondents agreed an IRB should enforce participant privacy and the majority felt that an IRB should police conflict of interest (68.2%), but most felt that evaluation of research design and methods was beyond the scope of an IRB's mandate (63.0%).

There were no significant differences in answers to these opinion questions based on prior IRB service (data not shown) or between schizophrenia and depression researchers (Table 2.).

3.4 Reactions to Research Scenarios

Respondents were presented 3 ethically complex research scenarios and asked their opinions regarding IRB submission. In the first, the investigator was asked to imagine they had an idea about a protocol involving individuals in the justice system (forensic participants). The second involved an idea to evaluate a primary treatment (an antidepressant or antipsychotic) against placebo. The third scenario involved an idea to test a low-cost treatment compared to standard-of-care in a developing country where standard-of-care was inferior to that in the United States. For each scenario, participants were asked to decide whether they would submit the protocol. If they would not submit, they were asked to choose whether it was because the protocol was too difficult to implement, because it was unethical, or because it would be too difficult to get IRB approval.

As illustrated in Table 3, a majority of respondents from the total sample reported that they would submit the hypothetical protocols to the IRB (57.4-63.1%). However, responses were significantly different between schizophrenia and depression researchers. A large majority of depression researchers would submit in all 3 scenarios, whereas the majority of schizophrenia

researchers would not submit any of the proposed protocols. Belief that an IRB would not approve the protocol was cited as the reason for not submitting more often by schizophrenia researchers in all 3 scenarios. A greater percentage of schizophrenia researchers also thought that the protocol with individuals from the justice system and the protocol using placebo would be too difficult to implement and that the protocol in a developing country would be unethical compared to depression researchers.

The impact on scenario responses of academic rank, years of experience, self-identified research focus, and the need to submit to multiple IRBs was examined using chi-square tests. Academic rank was collapsed into junior (assistant professor and below) and senior investigators (associate and professor level), experience into <10 or ≥ 10 years, and multiple IRBs into 1 or ≥ 2 . Very few respondents thought the scenario proposing a study with participants in the justice system was unethical (1 each in the schizophrenia and depression groups) and so this response was not included in further analysis. Whether the respondent did schizophrenia or depression research was highly associated with responses to all 3 scenarios (see Table 4.). The need to submit to multiple IRBs was significantly associated with responses only in the scenario including participants from the justice system. No other association was significant. The association of schizophrenia versus depression research with scenario responses remained significant when Cochran-Mantel-Haenszel tests were used to separately control for academic rank, experience, research focus, and submission to multiple IRBs.

4. Discussion

4.1 Differences between Schizophrenia and Depression Researchers

Consistent with our hypothesis, schizophrenia researchers were more hesitant to submit ethically complex scenarios to IRBs. Compared to depression researchers, they were more likely to respond that it would be too difficult to get IRB approval for all 3 scenarios, more than twice as likely to see research in the justice system or a placebo-controlled study as too difficult to implement, and more than 6 times more likely to consider the scenario of research in the developing world as unethical.

Despite empiric investigations that have found most people with schizophrenia can consent to research protocols (Dunn, 2006; Jeste et al., 2006; Stroup et al., 2005; Carpenter et al., 2000), schizophrenia cohorts generally have greater impairment in capacity to consent than depression cohorts (Cohen et al., 2004; Appelbaum et al., 1995; Grisso et al., 1995a; Grisso et al., 1995b). Therefore, even straightforward protocols in this population may become difficult. Additional elements of ethical complexity may increase perceived difficulty in obtaining approval and discourage IRB submission. Our survey was based on investigator perceptions and the accuracy of the belief that an IRB would not approve the protocol scenarios cannot be determined. However, while schizophrenia researchers as a group submit fewer protocols for IRB review annually than depression researchers, they report similar turn-around time and initial approval rates. This is contrary to our hypothesis and indicates that IRBs may not view schizophrenia protocols as inherently different from depression protocols.

Protocols including individuals in the justice system were seen as “too difficult to implement” more often by schizophrenia researchers compared to their counterparts in depression. Research with prisoners is subject to special regulation as per the Common Rule. Care must be taken that protocols are not coercive- and aspects of a study that may not be coercive in another setting may become so for an incarcerated population. Protocols must also have some unique relevance to prisoners (i.e. they cannot merely be a sample of convenience). The intricacies of designing a protocol for prisoners seem to discourage more investigators when coupled with the vulnerabilities of a schizophrenia versus a depressed population. Of note, a prisoner advocate must be present during IRB reviews of these protocols, which often requires

special scheduling and delays, and may explain why the requirement for multiple IRB review was also significantly associated with responses to this scenario.

Both the fields of schizophrenia and depression research have debated the ethicality of placebo-controlled trials (Dunlop & Banja, 2009; Fischer, 2006; Charney et al., 2002; Laughren, 2001; Weijer, 1999; Carpenter et al., 1997) and a similar percentage of respondents from these groups believed a placebo-controlled trial would be unethical (30% in the schizophrenia group, 26% in the depression group). The largest differences between groups, as with the prisoner scenario, was in the greater percentages of schizophrenia researchers who thought a placebo-controlled study would be too difficult to implement or would not be approved by the IRB. Survey and interview studies have found that people with schizophrenia consider placebo-controlled studies to be “moderately harmful” and, although not opposed to them in principle, reluctant to enroll in them (Roberts et al., 2006; Hummer et al., 2003). Considering schizophrenia is less prevalent than depression, and people with schizophrenia less willing to participate in research than people with depression (Cohen et al., 2004), a placebo-controlled study may indeed be more difficult to implement in schizophrenia versus depression.

The issue of conducting clinical trials in the developing world where a low-cost treatment is compared to a standard of care that is inferior to that of the sponsoring country is an extremely complicated issue (Wendler et al., 2004; Roth, 2001). Although a complete discussion of the issue is beyond the scope of this report, proponents say the process aids in development of new therapeutic options otherwise unavailable while critics feel these studies exploit a vulnerable population to conduct studies otherwise impossible in the sponsoring country. There was a large difference between schizophrenia and depression researchers in that a much larger percentage of the former felt the scenario was unethical. Despite the lore of more favorable outcomes for schizophrenia, people with severe mental illness in the developing world are often subject to extreme poverty, no access to pharmacotherapy, and social upheaval (Burns, 2009). In contrast to depression, where access to medications may be standard of care but psychotherapy a potentially effective alternative, the foundation for treatment of schizophrenia is medication. Therefore, while cost-effective alternatives to depression treatments may seem plausible, the scenario presented in the survey might have seemed more exploitative to schizophrenia researchers.

4.2 Mental Health Researchers in General

In general, respondents found IRB review to be a time-consuming process. With a turn-around time from submission to review of at least three weeks followed by time spent addressing IRB comments and re-submission; most investigators are looking at six-weeks to two months before receiving IRB approval in a best-case scenario. Facilitating this process seems a practical target for improving the investigator-IRB interface.

This survey found that the primary reasons most protocols are rejected are the need for clarification and process concerns. This indicates that investigators and IRBs are not communicating effectively as to proposals and requirements, respectively. Investigators report the required submission paperwork for IRB review is burdensome with some even finding it an impediment to conducting research. IRBs should consider this burden and be explicit in their requirements. For their part, investigators should make an effort to ensure a proposal is clear. A colleague should review it, as is common practice before submitting a manuscript for publication.

Another way of streamlining IRB review is to eliminate redundancy in the process. Protecting subject privacy is an appropriate duty for the IRB because it both impacts subject safety and is not adequately monitored via alternate means. Almost all of the investigators participating in this survey agreed that protecting privacy was appropriately within the scope of the IRB

mission. However, evaluation of conflict of interest and research design may be better relegated to other entities.

Conflicts of interest are broader than financial and an IRB focus on the economic aspect of bias may give reviewers a false sense of security. Studies may be designed to produce bias, but unsafe or poorly designed studies are unacceptable regardless of the motivations behind them. Every study should be evaluated for scientific merit. Since many biased studies are biased in post-hoc analyses and reporting, manuscript review may be a more logical time for evaluation of financial conflict of interest rather than at the level of the IRB. Nevertheless, two-thirds of respondents felt the IRB should continue to evaluate conflict of interest. It is possible responses were influenced by several high-profile instances of apparent financial conflict of interest occurring during the period of this survey (see Angell, 2009, for a summary).

In contrast to attitudes towards privacy and conflict of interest, only about a third of respondents agreed that the IRB should evaluate research design. Scrutiny of analytic methods or sample-size calculations may not be necessary for studies evaluating the feasibility of a method or collecting pilot data. Similarly, a review of research design may not be necessary for studies already vetted via a credible independent funding agency. This is especially true for studies funded by the National Institutes of Health- where proposed research design and analysis are thoroughly examined. Studies funded by private resources may still need IRB evaluation of design, but elimination of redundant review for NIH-funded protocols could streamline the process as a whole.

Self-report inherently biases survey studies and it is possible that only respondents frustrated with or who had had good experiences with IRBs would return our questionnaire. An argument against either of these situations dominating results is that respondents were almost evenly split as to whether IRB comments were perceived as helpful or not. Although our sample was weighted towards senior investigators, there were no differences between senior and junior respondents on answers to scenario questions.

5. Conclusion

This national survey of NIH-funded investigators finds that schizophrenia researchers are more hesitant to submit ethically complex protocols to the IRB than their colleagues working in depression. This is likely do to the greater vulnerability of people with schizophrenia as compared to people with depression, but it also appears that a larger percentage of schizophrenia researchers feel that an IRB may not approve ethically complex studies in their population of interest. Similar IRB review turn-around time and initial approval rates between schizophrenia and depression protocols argue against this belief.

Respondents as a whole felt that the submission process to an IRB involved burdensome paperwork, but was largely necessary for proper review of protocols. A majority of investigators felt IRBs should continue to evaluate safeguards to participant privacy and conflict of interest, but not research design and methods. One proposed alternative is to have the IRB defer re-evaluation of protocols already reviewed by NIH.

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Table 1

Demographics and IRB Experiences by Researcher Type*

	N (%) Schizophrenia Researchers (Total N=45)	N (%) Depression Researchers (Total N=63)	N (%) Total Respondents (N=108)
Academic Rank			
≤ Assistant Professor	12 (26.7)	15 (25.0)	27 (25.7)
Associate Professor	8 (17.8)	13 (21.7)	21 (20.0)
Professor	25 (55.6)	32 (53.3)	57 (54.3)
Years as Researcher			
< 5	0	4 (6.5)	4 (3.7)
5-9	8 (17.8)	12 (19.4)	20 (18.7)
10-14	7 (15.6)	11 (17.7)	18 (16.8)
≥ 15	30 (66.7)	35 (56.5)	65 (60.8)
Grant Funding Previous Year			
< \$100,000	1 (2.3)	3 (4.8)	4 (3.7)
\$100,000- \$499,999	17 (38.6)	14 (22.2)	31 (29.0)
\$500,000-\$1 million	8 (18.2)	16 (25.4)	24 (22.4)
> \$1 million	18 (40.9)	30 (47.6)	48 (44.9)
Type of Research**			
Clinical Trials	8 (19.1)	24 (39.3)	32 (31.1)
Neuroimaging	14 (33.3)	9 (14.8)	23 (22.3)
Pathophysiology	17 (40.5)	10 (16.4)	27 (26.2)
Health Services	3 (7.1)	18 (29.5)	21 (20.4)
Served on IRB?			
Yes	16 (35.6)	20 (31.8)	36 (33.3)
No	29 (64.4)	43 (68.3)	72 (66.7)
Submitted Protocols per Year[†]			
1-2	21 (52.5)	13 (21.0)	34 (33.3)
3-4	8 (20.0)	27 (43.6)	35 (34.3)
5-6	5 (12.5)	8 (12.9)	13 (12.8)
>6	6 (15.0)	14 (22.6)	20 (19.6)
Protocols Approved on Initial Submission			
All	0	0	0
Most	9 (22.5)	9 (14.5)	18 (17.7)
Few	11 (27.5)	23 (37.1)	34 (33.3)

	N (%) Schizophrenia Researchers (Total N=45)	N (%) Depression Researchers (Total N=63)	N (%) Total Respondents (N=108)
None	20 (50.0)	30 (48.4)	50 (49.0)
Average IRB Turn- Around Time			
<1 week	2 (5.0)	0	2 (2.0)
1-2 weeks	1 (2.5)	7 (11.3)	8 (7.8)
3-4 weeks	13 (32.5)	26 (41.9)	39 (38.2)
>1 month	24 (60.0)	29 (46.8)	53 (52.0)
Number IRBs Need to Submit to			
1	23 (57.5)	45 (76.3)	68 (68.7)
2	12 (30.0)	10 (17.0)	22 (22.2)
3	4 (10.0)	2 (3.4)	6 (6.1)
4+	1 (2.5)	2 (3.4)	3 (3.0)

* Percents calculated by number of responses to individual items.

** Significant Differences between Schizophrenia and Depression Researchers, Fisher's exact $p < 0.001$.

† Significant Differences between Schizophrenia and Depression Researchers, Fisher's exact $p = 0.008$.

Table 2

Opinions of IRB Review by Researcher Type *

	N (%) Schizophrenia Researchers (N=45)	N (%) Depression Researchers (N=63)	N (%) Total Respondents (N=108)
IRB Paperwork			
Not Enough to Evaluate Projects	0	0	0
Not Burdensome	5 (12.2)	11 (17.5)	16 (15.4)
Burdensome, but Necessary	23 (56.1)	32 (50.8)	55 (52.9)
Too Much/ Discourages Scientific Advancement	13 (31.7)	20 (31.8)	33 (31.7)
IRB Comments			
Always Helpful	3 (7.5)	2 (3.2)	5 (4.9)
Mostly Helpful	18 (45.0)	37 (59.7)	55 (53.9)
Seldom Helpful	17 (42.5)	21 (33.9)	38 (37.3)
Never Helpful	2 (5.0)	2 (3.2)	4 (3.9)
Should IRBs Evaluate Research Design?			
Yes	18 (40.0)	22 (34.9)	40 (37.0)
No	27 (60.0)	41 (65.1)	68 (63.0)
Should IRBs Enforce Participant Privacy?			
Yes	42 (93.3)	60 (95.2)	102 (94.4)
No	3 (6.7)	3 (4.8)	6 (5.6)
Should IRBs Monitor Conflict of Interest?			
Yes	28 (63.6)	45 (71.4)	73 (68.2)
No	16 (36.3)	18 (28.6)	34 (31.8)

* Percents calculated by number of responses to individual items.

Table 3Opinions about Research Scenarios by Researcher Type^{*}

	N (%) Schizophrenia Researchers (N=45)	N (%) Depression Researchers (N=63)	N (%) Total Respondents (N=108)
Would you submit a protocol involving individuals in the justice system (i.e. forensic participants)?^{**}			
No, too difficult to implement	14 (31.8)	8 (13.6)	22 (21.4)
No, unethical	1 (2.3)	1 (1.7)	2 (1.9)
No, would not get IRB approval	10 (22.7)	4 (6.8)	14 (13.6)
Yes, would submit	19 (43.2)	46 (78.0)	65 (63.1)
Would you submit a protocol testing a primary treatment (e.g. an antipsychotic in schizophrenia or an antidepressant in depression) versus placebo?[†]			
No, too difficult to implement	4 (9.3)	2 (3.5)	6 (5.9)
No, unethical	13 (30.2)	15 (25.9)	28 (27.7)
No, would not get IRB approval	8 (18.6)	1 (1.7)	9 (8.9)
Yes, would submit	18 (41.9)	40 (69.0)	58 (57.4)
Would you submit a protocol testing a low-cost treatment versus standard of care in a developing country (where standard of care is inferior to the United States)?[‡]			
No, too difficult to implement	10 (23.8)	11 (18.6)	21 (20.8)
No, unethical	13 (31.0)	3 (5.1)	16 (15.8)
No, would not get IRB approval	4 (9.5)	2 (3.4)	6 (5.9)
Yes, would submit	15 (35.7)	43 (72.9)	58 (57.4)

^{*} Percents calculated by number of responses to individual items.

^{**} Schizophrenia versus Depression, Fisher's Exact p = 0.002.

[†] Schizophrenia versus Depression, Fisher's Exact p = 0.004.

[‡] Schizophrenia versus Depression, Fisher's Exact p < 0.001.

Table 4

Influences on Scenario Opinions

	Justice System Participants Scenario			Placebo Scenario			Trial in Developing World Scenario		
	X ²	df	p	X ²	df	p	X ²	df	p
Schizophrenia vs. Depression Research	13.49	2	0.001	12.65	3	0.004	18.13	3	<0.001
Academic Rank	3.92	2	0.141	2.04	3	0.565	3.55	3	0.315
Years of Experience	1.24	2	0.539	0.48	3	0.922	2.14	3	0.543
Primary Research Focus	5.78	6	0.448	11.85	9	0.222	12.94	9	0.165
Submission to Multiple IRBs	8.22	2	0.015	2.71	3	0.439	0.84	3	0.841
Schizophrenia vs. Depression Research Controlling for:									
Academic Rank	12.15	2	0.002	12.76	3	0.005	18.76	3	<0.001
Years of Experience	12.52	2	0.002	12.51	3	0.006	16.76	3	0.001
Primary Research Focus	11.49	2	0.003	9.01	3	0.029	10.29	3	0.016
Submission to Multiple IRBs	13.73	2	0.001	13.73	3	0.003	14.41	3	0.002