Descriptive Evaluation of SBIRT Adoption, Implementation, and Delivery across a Health System

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Short report

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Abstract

Background: Screening, Brief Intervention, and Referral to Treatment (SBIRT) is an evidence-based intervention used to enhance reductions in alcohol and illicit drug use. SBIRT use has resulted in positive health and social outcomes. However, SBIRT implementation remains low. Research on implementation of evidence-based interventions, such as SBIRT, lacks information about challenges and successes related to implementation. The Expert Recommendations for Implementing Change (ERIC) provides a framework that improves the comprehension, clarity, and relevance of strategies available for implementation research. This framework was applied to structure findings from analyses of qualitative interview data gathered from local champions leading SBIRT implementation. The purpose of this study was to understand site coordinators' (SCs) perceptions of SBIRT implementation and employed strategies. Study aims included (1) describe SCs' perceptions of barriers, facilitators, and outcomes related to SBIRT implementation, and (2) describe strategies perceived as most effective to implement SBIRT.

Methods: This was a descriptive study conducted with 14 SCs, representing 14 medical surgical units within a large healthcare system. A semi-structured interview guide was developed by the study team to capture barriers, facilitators, and outcomes related to SBIRT implementation. A follow-up survey, based on 14 commonly identified ERIC strategies during SC interviews, was administered to determine the SC's perceptions of the most helpful (i.e. effective) implementation strategies on a scale of 1 (least helpful) to 5 (most helpful).

Results: All site coordinators participated in the SBIRT implementation interview, and 11 of 14 (79%) responded to the follow-up survey. Within the categories of barriers, facilitators, and outcomes, 25 subthemes emerged. The most highly rated effective ERIC implementation strategies were purposely reexamining the implementation ($M=4.38$; $n=8$), providing ongoing consultation ($M=4.13$; $n=8$), auditing and providing feedback ($M=4.1$; $n=10$), developing education materials ($M=4.1$; $n=10$), identifying and preparing champions ($M=4$; $n=7$), and tailoring strategies ($M=4$; $n=7$).

Conclusion: This study applied a common framework (ERIC) to implementation lessons within a large health system that can be replicated in other implementation studies and quality improvement efforts. Adapting and sustaining change are challenging in healthcare settings. However, understanding and using the most helpful implementations strategies may support healthcare teams to adopt and sustain interventions such as SBIRT.

Contributions To The Literature

- This study describes a unique approach evaluating the implementation of an evidence-based intervention by applying the Expert Recommendations for Implementing Change (ERIC) framework to identify commonly used implementation strategies.

- Considering there are 73 strategies in the ERIC framework, identifying and rating implementation strategies used by site coordinators may help researchers prioritize strategies for future research.
- Study findings highlight the strengths and weaknesses of SBIRT implementation, which can be used by other researchers to facilitate planning activities and study evaluation.

Background

The addiction epidemic has plagued the United States, with 20.3 million Americans affected and an annual economic burden of \$740 billion.(1, 2) Health-related consequences of addiction range from appetite, sleep, and mood changes to heart attack, stroke, overdose, and death.(3) Approximately 70,237 overdose deaths resulted from addiction in the United States in 2017.(4) Of the 21.2 million Americans needing treatment in 2018, only 11.1% received specialty addiction treatment.(1)

Screening, Brief Intervention, and Referral to Treatment (SBIRT) is an evidence-based intervention, endorsed by the American Substance Abuse and Mental Health Administration,(5) used to enhance reductions in alcohol and illicit drug use.(6) SBIRT has been implemented in multiple healthcare settings, (7) including acute care, where patients are typically seeking care for health issues unrelated to addiction. Although SBIRT has resulted in positive health and social outcomes,(8–10) SBIRT implementation remains low.(11, 12)

Advances in implementation science have resulted in a robust understanding of how and why interventions are adopted and sustained. Despite these advances, the concepts and descriptions of implementation strategies have historically been inconsistent in the literature. The Expert Recommendations for Implementing Change (ERIC) provide a framework that improves the comprehension, clarity, and relevance of strategies available for implementation research.(13) A panel of implementation and clinical practice experts agreed on a standardized list of 73 strategies and definitions to guide implementation projects.(13) Commonly referenced strategies are the use of tailored implementation strategies, educational outreach, printed education materials, local champion leaders, educational meetings, audit and feedback, and computerized reminders.(14) Our research team applied ERIC's list of implementation strategies to structure findings from analyses of qualitative interview data gathered from local champions leading SBIRT implementation (i.e., parent study) in a large health care system in a Midwestern state in the United States of America.(15)

The parent study was completed using a phased cluster randomized design to evaluate nurse-led SBIRT implementation on medical surgical units across 14 acute care hospitals.(15) Upon review, the Indiana University Institutional Review Board determined that the parent study was not human subjects research. The Conceptual Model for Considering the Determinants of Diffusion, Dissemination, and Implementation of Innovations in Health Services Delivery and Organization(16) guided the parent study. According to this model, champions support implementation by finding solutions to problems, obtaining support from others within the organization, monitoring the use of resources within the organization, and developing coalitions to support change.(16) Participating hospitals selected a nurse site coordinator

(SC) at each facility to serve as a champion for SBIRT implementation and to complete required study training. This training included competencies related to the clinical intervention (SBIRT) and implementation strategies.(17) SCs at each hospital localized the SBIRT intervention by addressing barriers and adapting strategies based on the unit context.(18)

During monthly study team calls, various challenges and successes emerged from observation and feedback from the SCs. This paper focuses on the evaluation of SBIRT implementation through the lens of SCs, the champions on the front line navigating implementation. Therefore, the purpose of this study was to understand SCs' perceptions of SBIRT implementation and employed strategies. Study aims included (1) describe SCs' perceptions of barriers, facilitators, and outcomes related to SBIRT implementation, and (2) describe strategies perceived as most effective to implement SBIRT.

Methods

This was a descriptive study evaluating SBIRT implementation. The SQUIRE 2.0 Revised Standards for Quality Improvement Reporting Excellence were used for reporting.(19)

Setting and Participants

The study took place at a large healthcare system in the Midwest, with one medical surgical unit per parent study hospital (n=14). Hospital settings varied from academic health centers to community hospitals and critical access hospitals. Study participants were 14 study SCs leading implementation on each of the participating units. SCs were nurses in various positions, including direct care clinical nurses (n=8), clinical educators (n=2), clinical nurse specialists (n=2), nurse case managers (n=1), and house supervisors (n=1). SCs completed an eight-hour training session focused on SBIRT delivery and implementation strategies.(17)

Data Collection

First, the study team developed a semi-structured interview guide to capture components of SBIRT implementation. The interview guide was sent to all SCs for reflection prior to the interview, and then data were collected via one-on-one telephone interviews with a research assistant or via e-mail. Participants responded to the following interview questions: (1) What factors were the most helpful in the implementation of SBIRT? (2) What barriers to implementation did you encounter? (3) In what ways did study activities improve, help, or hinder care in your facilities? Although interviews were not audio-recorded, notes were recorded in a Word file. A follow-up survey was created based on 14 commonly identified ERIC strategies that SCs described in the qualitative interviews. The survey was administered using Qualtrics. SCs responded by indicating the ERIC strategies that they used during the study and ranking the most helpful (i.e., most effective) strategies on a scale from 1 (least helpful) to 5 (most

helpful). The interview and follow-up survey were conducted during the two months (June and July 2019) following completion of the 12 month parent study.

Data Analysis

Interview responses were compiled into an Excel spreadsheet. Responses were categorized into themes and sub-themes by grouping similar responses.(20) The number of participant statements reflecting each theme/sub-theme was quantified. A second research assistant then verified the theme and sub-theme content for accuracy. Further validation was completed with the SC group. SCs were provided the final list of themes and subthemes to evaluate content accuracy and potential missing content of the de-identified data. The response size and average rating for each ERIC implementation strategy were calculated. ERIC strategies were ordered from highest to lowest average rating to identify which strategies were considered most helpful to the SCs.

Results

Interviews

All fourteen SCs provided qualitative data regarding SBIRT implementation, with 12/14 (86%) completing one-on-one phone interviews and 2/14(14%) completing the questionnaire electronically and sending it via email. Phone interviews ranged from 15–45 minutes. Three major themes were pre-determined based on the aims of the study (implementation barriers, facilitators, and outcomes), and within these themes, 25 subthemes emerged. A detailed list of subthemes with examples are provided in Table 1.

Table 1
Site Coordinator Perception of SBIRT Implementation

Theme	Sub-theme	Examples
Barriers identified related to SBIRT implementation were. . .	sustainment	process complacency; difficult to coordinate with multiple clinicians
	data collection	difficult to navigate health record; data absent from record
	staff adoption	nurse adherence to SBIRT; negative attitudes
	unit operational challenges	leader turnover; new nurses on the unit
	SC execution	SC felt alone in implementation efforts; SC role unclear
	study rollout	trial originally set up on different unit; site coordinator changed
	training coordination	finding a training schedule that worked for staff
	brief Intervention (BI)	lack of understanding of intent; discomfort with BI process
	patient-specific	patients did not see relevance or did not want help
	patient referral	insurance challenges; lack of available referral sites
Facilitators identified related to SBIRT implementation were. . .	effort duplication	SBIRT activities/documentation duplicated (nursing and social work)
	leveraging support	involvement of interprofessional stakeholders; use of early adopters
	adapting intervention	ability to tailor/create resources; dedicated location for resources
	SC development	learning and peer support from other SC; research team mentorship
	feedback loop	auditing/follow-up; reminders; rounding with staff for questions
	leader impact	leader engagement/support; SBIRT considered mandatory
	sustainment	problems anticipated ahead of time; new hire assimilation
	implementation efficiency	implementation planning phase; designated role (SC)
	awareness	clinician and patient awareness of risky substance use
Outcomes identified		

Theme	Sub-theme	Examples
related to SBIRT	action-oriented process	ability to act on positive screen; more referral options accessible
implementation were. . .	enhanced care transitions	streamline continuum of care; support collaborative communication
	therapeutic relationships	show clinician care; determine patient readiness in the process
	connection to disease process	applicability of BI to other conditions; prevention of alcohol withdrawal
	SC development	implementation skills; organizational resource navigation
	comfort	clinician and patient comfort discussing substance use

Theme 1: Implementation barriers

Participants described several factors that hindered the timely and seamless implementation of SBIRT. The most common barriers were challenges sustaining the use of SBIRT, collecting study data, and staff nurse resistance to adopting SBIRT. While reflecting on barriers to implementation, one participant stated, “Sustainment was difficult because the process was on paper and not yet integrated into the electronic medical record. Our providers and nurses are still asking about substance use but not with a validated assessment tool.” Another participant stated:

Some nurses on the floor were kind of freaked out by a new process. Staff felt like they were getting thrown a curve (ball) adding onto the admission process and were feeling anxious. I had to keep reassuring staff that they were making it harder than it was.

Theme 2: Implementation facilitators

Participants also described several factors or resources that enhanced the timely and seamless implementation of SBIRT by staff. The most common facilitators were leveraging support from staff nurses and interprofessional team members on the unit, adapting the intervention to fit the organizational context, and training and available support for SCs. One participant, reflecting on facilitators to implementation, stated, “Site coordinator training, supporting training resources, including power points, were super helpful. We also were able to modify (training materials) to meet our facility needs.” Another participant stated:

Education and guidelines that were provided by the study team were helpful. The collaborative work that we did through the monthly calls helped me to make sure that I was on the right track by (making me) aware of things I needed to work on.

Theme 3: Implementation outcomes

Participants described the outcomes of SBIRT implementation to not only the patients but also the staff. All outcomes described by SCs were perceptions of how SBIRT benefited patients and staff. Benefits to staff on the unit included increased awareness of substance use risks amongst their patients, inclusion of an action-oriented approach for patients with risky substance use, and enhanced care transitions across clinicians and care settings. The staff gained the confidence to actively engage with patients, leading to more trusting and therapeutic relationships. Ultimately, increased staff awareness and confidence helped nurses feel more prepared to intervene with patients with addiction. As one participant stated, “SBIRT raised education and awareness of the staff. We were able to provide better resources and identify patients needing support. Patients were falling through the cracks before.” Another participant said:

I think it gave us more of an awareness of patients’ backgrounds. Many times, we do not get the whole history, and it was helpful to collect additional information about factors that could be contributing to poor health. The process gave us an opportunity to provide more resources based on data collected.

Survey

Eleven (79%) of the participants responded to the follow-up survey. Figure 1 shows the most highly rated implementation strategies. According to participants, the most helpful (i.e., effective) ERIC implementation strategies were purposely reexamine the implementation ($M = 4.38$; $n = 8$), provide ongoing consultation ($M = 4.13$; $n = 8$), audit and provide feedback ($M = 4.1$; $n = 10$), develop education materials ($M = 4.1$; $n = 10$), identify and prepare champions ($M = 4$; $n = 7$), and tailor strategies ($M = 4$; $n = 7$).

Discussion

Given the increase in substance abuse, acute care clinicians need to be prepared to use evidence-based interventions like SBIRT. While SBIRT is an effective intervention, use in acute care units is limited. Using ERIC’s framework, this study examined SCs’ perceptions of commonly used and helpful strategies for implementing SBIRT into acute care units. In the parent study, SCs were highly engaged in the SBIRT implementation and thus were able to provide insight into perceived challenges and successes of implementation. Based on the interviews, SCs identified barriers (e.g., sustainability), facilitators (e.g., leveraging support from interprofessional team members), and outcomes (e.g., increased awareness of substance use risk) of SBIRT implementation. Among the implementation strategies, participants perceived that purposely reexamine the implementation, provide ongoing consultation, and audit and provide feedback as the most helpful. Our study suggested that SCs greatly valued the SBIRT implementation process, allowing for a comprehensive, action-oriented approach that enabled patients to connect with needed resources prior to hospital discharge.

Several SCs were new to implementation. However, they expressed that many of the ERIC strategies helped enhance the implementation process. Our findings are consistent with other SBIRT

implementation research studies that used ERIC strategies, including audit and provide feedback,(21–23) develop education materials,(21, 24) and tailor strategies.(25) Two strategies, audit and provide feedback, and tailor strategies, were rated among the most helpful and commonly used, similar to findings in a review of utilized ERIC strategies.(14) All SCs voiced the value of available training resources, study team mentorship, and peer support as they moved through the implementation process. Given their experience, many SCs stated that they felt more confident leading change in the future due to the knowledge and skills they developed during SBIRT implementation.

SCs reported that it was important to leverage support from other interprofessional team members, such as social workers and clinical educators. However, they also noted that there was an opportunity to identify additional stakeholders (e.g., unit secretary, peer coaches) and better align existing resources in preparation for SBIRT implementation. In the parent study, SCs completed a baseline capacity assessment prior to implementation.(15) However, this assessment may not have been adequate to identify all potential stakeholders. In the future, training should include exercises that encourage SCs to think about stakeholders as a group. These exercises may facilitate a deeper understanding of the stakeholders involved in SBIRT implementation and more comprehensive stakeholder engagement. The challenges with identifying stakeholders and aligning resources might have been due to the limited leadership experiences among some of the SCs. SCs may not have been aware of all of the resources available at their facilities or had experience leading interdisciplinary work.

SCs reported that the sustainability of the SBIRT intervention was one of the primary barriers. Sustainability has been described as the ongoing use and evolution of evidence-based practice within an environment over time.(26) According to SCs, integrating a new change into practice was challenging. SCs sensed process complacency as the study started to wind down, which some described as common with newly implemented change. As the study ended, the next steps for SBIRT integration and spread throughout the system were unclear. With the absence of structure previously provided by the study team, SBIRT practice was difficult to sustain. For example, monthly meetings with the study team and routine study-related data collection activities motivated SCs to continue monitoring SBIRT implementation. Planning and measurement of sustainability are complex, with many not understanding the difference and the overlap between implementation and sustainability.(26) The lessons learned from implementing and evaluating SBIRT included the importance of adapting evidence-based interventions to the environment and identifying expert stakeholders to partner with during the implementation process. However, an opportunity exists for strategic sustainability planning in early study phases to ensure that the evidence-based practice continues.

Limitations

Limitations of this study include the small sample size, participant bias, and the interview approach. This study involved interviews from a small sample of SCs; albeit, this is typical of quality improvement feedback when implementing changes within health systems. The respondents were all SCs and received similar training, which potentially biased responses to similar implementation processes. Interviewing

additional staff members responsible for intervention delivery may have led to the identification of other themes or provided a more comprehensive evaluation of the SBIRT implementation. Interviews were conducted over the telephone or e-mail. Consequently, we were not able to capture some nonverbal data that may have contributed to the analysis. Additionally, the semi-structured approach used in the interviews may have limited generation of additional data relevant to SBIRT implementation.

Conclusion

This study applied the ERIC framework to SBIRT implementation to determine the perspectives of SCs across 14 acute care units within a large health system. Study findings enhanced the understanding of the facilitators, barriers, and outcomes as well as the most helpful strategies for SBIRT implementation. Adapting and sustaining change are challenging in healthcare settings. However, understanding and using the most helpful implementations strategies my help healthcare teams adopt and sustain interventions such as SBIRT.

Abbreviations

ERIC	Expert Recommendations for Implementing Change
SBIRT	Screening, Brief Intervention, and Referral to Treatment
SC	site coordinator

Declarations

Ethics approval and consent to participate:

The parent study was administratively reviewed by the Indiana University Institutional Review Board and determined not to be human subjects research #1801646970.

Consent for publication:

Not applicable

Availability of data and materials:

The data generated and analyzed during the study are available from the corresponding author upon reasonable request.

Competing interests:

The authors declare that they have no competing interests. We confirm that the work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

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Authors' contributions:

AK performed data collection, analysis, and initial interpretation of the data. KT verified the data analysis. AK, KT, and OU participated in the final interpretation and presentation of the data. RN conceptualized the manuscript scope and aims and provided senior author mentorship to the manuscript team. All authors provided major contributions to the manuscript writing and read and approved the final manuscript.

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References

1. Substance Abuse and Mental Health Services Administration. Key substance use and mental health indicators in the United States: Results from the 2018 National Survey on Drug Use and Health [Internet]. Vol. H-54, HHS Publication No. PEP19-5068, NSDUH Series H-54. Rockville, MD; 2019. Available from: <https://www.samhsa.gov/data>.
2. National Institute on Drug Abuse. Health Consequences of Drug Misuse [Internet]. 2017 [cited 2019 Jun 29]. Available from: <https://www.drugabuse.gov/related-topics/health-consequences-drug-misuse>.
3. National Institute on Drug Abuse. Trends & Statistics [Internet]. 2017 [cited 2018 Oct 10]. Available from: <https://www.drugabuse.gov/related-topics/trends-statistics>.
4. National Institute on Drug Abuse. Overdose Death Rates [Internet]. 2019 [cited 2020 Jan 16]. Available from: <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>.
5. Brereton R, Gerdts M. Alcohol and Other Drug (AOD) Education for Hospital Staff: An Integrative Literature Review. *Issues Ment Health Nurs*. 2017;38(1):42–60.

6. Aldridge A, Linford R, Bray J. Substance use outcomes of patients served by a large US implementation of Screening, Brief Intervention and Referral to Treatment (SBIRT). *Addiction*. 2017;112(459 599):43–53.
7. Substance Abuse and Mental Health Services Administration. SBIRT: Screening, Brief Intervention, and Referral to Treatment [Internet]. [cited 2018 Sep 18]. Available from: <https://www.integration.samhsa.gov/clinical-practice/sbirt>.
8. Bray J, Cowell A, Hinde J. A Systematic Review and Meta-Analysis of Health Care Utilization Outcomes in Alcohol Screening and Brief Intervention Trials. *Med Care*. 2011;47(3):287–94.
9. Madras BK, Compton WM, Avula D, Stegbauer T, Stein JB, Clark HW. Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: Comparison at intake and 6 months later. *Drug Alcohol Depend*. 2009;99(1–3):280–95.
10. 10.1016/j.jen.2009.09.011
Déry PM, Howard PK, Perhats C, Li S. Alcohol screening, brief intervention, and referral to treatment conducted by emergency nurses: An impact evaluation. *J Emerg Nurs* [Internet]. 2010;36(6):538–45. Available from: <http://dx.doi.org/10.1016/j.jen.2009.09.011>.
11. Agley J, Carlson J, McNelis A, Gassman R, Schwindt R, Crabb D, et al. “Asking” but Not “Screening”: Assessing Physicians’ and Nurses’ Substance-Related Clinical Behaviors. *Subst Use Misuse*. 2018;53(11):1834–9.
12. 10.1016/j.annemergmed.2010.03.004
Cunningham RM, Harrison SR, McKay MP, Mello MJ, Sochor M, Shandro JR, et al. National Survey of Emergency Department Alcohol Screening and Intervention Practices. *Ann Emerg Med* [Internet]. 2010;55(6):556–62. Available from: <http://dx.doi.org/10.1016/j.annemergmed.2010.03.004>.
13. Powell BJ, Waltz TJ, Chinman MJ, Damschroder LJ, Smith JL, Matthieu MM, et al. A refined compilation of implementation strategies: Results from the Expert Recommendations for Implementing Change (ERIC) project. *Implement Sci*. 2015;10(1):1–14.
14. Powell BJ, Fernandez ME, Williams NJ, Aarons GA, Beidas RS, Lewis CC, et al. Enhancing the Impact of Implementation Strategies in Healthcare: A Research Agenda. *Front Public Heal*. 2019;7(3):1–9.
15. 10.1186/s13722-018-0130-4
Newhouse R, Janney M, Gilbert A, Agley J, Bakoyannis G, Ferren M, et al. Study protocol testing toolkit versus usual care for implementation of screening, brief intervention, referral to treatment in hospitals : a phased cluster randomized approach. *Addict Sci Clin Pract* [Internet]. 2018;13(28):1–10. Available from: <https://doi.org/10.1186/s13722-018-0130-4>.
16. Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O. Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations. *Milbank Q*. 2004;82(4):581–629.
17. 10.1016/j.apnr.2019.05.014
Schwindt R, Agley J, Newhouse R, Ferren M. Screening, brief intervention and referral to treatment (SBIRT) training for nurses in acute care settings: Lessons learned. *Appl Nurs Res* [Internet]. 2019;48(May):19–21. Available from: <https://doi.org/10.1016/j.apnr.2019.05.014>.

18. Keen A, Thoele K, Newhouse R. Variation in SBIRT delivery among acute care facilities. *Nurs Outlook*. 2019;1–7.
19. Ogrinc G, Davies L, Goodman D, Batalden P, Davidoff F, Stevens D. SQUIRE 2.0 (Standards for Quality Improvement Reporting Excellence): Revised publication guidelines from a detailed consensus process. *BMJ Qual Saf*. 2016;25:986–92.
20. Elo S, Kääriäinen M, Kanste O, Pölkki T, Utriainen K, Kyngas H. Qualitative Content Analysis: A Focus on Trustworthiness. *SAGE Open*. 2014;(January-March):1–10.
21. Bacidore V, Letizia M, Mitchel AM. Implementing Interprofessional Alcohol Screening, Brief Intervention, and Referral to Treatment in the Emergency Department. *Adv Emerg Nurs J* [Internet]. 2017;39(3):199–216. Available from: <http://insights.ovid.com/crossref?an=01261775-201707000-00007>.
22. 10.1080/00981389.2017.1299073
Berger L, Hernandez-meier J, Hyatt J, Brondino M. Referral to treatment for hospitalized medical patients with an alcohol use disorder: A proof-of- concept brief intervention study. *Soc Work Health Care* [Internet]. 2017;56(5):321–34. Available from: <http://dx.doi.org/10.1080/00981389.2017.1299073>.
23. Bogenschutz MP, Donovan DM, Adinoff B, Crandall C, Forcehimes AA, Lindblad R, et al. Design of NIDA CTN Protocol 0047: Screening, Motivational Assessment, Referral, and Treatment in Emergency Departments (SMART-ED). *Am J Drug Alcohol Abuse*. 2011;37:417–25.
24. Broyles LM, Kraemer KL, Kengor C, Gordon AJ. A tailored curriculum of alcohol screening, brief intervention, and referral to treatment (SBIRT) for nurses in inpatient settings. *J Addict Nurs*. 2013;24(3):130–41.
25. 10.1016/j.jsat.2015.08.001
Kaiser DJ, Karuntzos G. An Examination of the Workflow Processes of the Screening, Brief Intervention, and Referral to Treatment (SBIRT) Program in Health Care Settings. *J Subst Abuse Treat* [Internet]. 2016;60(2016):21–6. Available from: <http://dx.doi.org/10.1016/j.jsat.2015.08.001>.
26. Penno LN, Davies B, Graham ID, Backman C, Macdonald I, Bain J, et al. Identifying relevant concepts and factors for the sustainability of evidence-based practices within acute care contexts: a systematic review and theory analysis of selected sustainability frameworks. *Implement Sci*. 2019;14(108):1–16.

Figures

Figure 1

Implementation Strategy Ratings

Supplementary Files

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