

IASR/AFSP Suicide Research Training Series – October 2020

● Session 3 Q&A

1. Hi Jane, this might be a bit out of scope for this workshop that is focused on methodology; however, could you talk a little bit more about funding mechanisms and nuances of the NIMH as the primary NIH IC that funds research related to mental health, depression and suicide? I believe this will be especially relevant to this audience because the NIMH is the other main funding agency besides the AFSP in terms of funding opportunities for ESI and more established investigators

Please see <https://www.nimh.nih.gov/funding/training/funding-opportunities-for-early-career-investigators.shtml>

and

<https://www.nimh.nih.gov/funding/clinical-research/conducting-research-with-participants-at-elevated-risk-for-suicide-considerations-for-researchers.shtml>

2. What are your thoughts about collecting physical addresses to ensure safety for individuals with suicide risk who are participating in online interventions?

It depends on the study design.

This is something that you would definitely have to run by your IRB. You would need to give strong rationale since physical address is Personal Identifying Information.

3. I was wondering if you could speak further about ethical considerations of safety interventions for EMA of suicide risk. My VA IRB wanted additional safeguards in the form of wellness checks by the police if a participant is

unresponsive to outreach. Do you have any recommendations for navigating the impact of safety interventions on managing suicide risk when using EMA (which runs the risk of it becoming more like EMI)?

You need to brain storm with your likely participants and IRB re: possible harms of police visits.

4. Is there a name for this Healthcare Implementation Research framework? Any reference I can read?

This an ongoing research project and framework. There are several and here are some links:

Learning healthcare systems-- <https://nam.edu/programs/value-science-driven-health-care/learning-health-system-series/>

pragmatic trials (see also reference in ppt - Scott Kim) and this NIH-wide initiative. there are several presentations on suicide studies and ethical issues in those pragmatic trials (presentations by Galia Siegel; Doug Zatzick; Greg Simon)-- <https://rethinkingclinicaltrials.org/>

5. Can you clarify considering suicidality as an adverse event? For example, in my study having suicidal thoughts is expected but would I not mark a suicide attempt as an adverse event?

Is suicide attempt your outcome of interest? If so, it would not be indicated as an adverse event. However, you would need to document these events and some IRBs request being informed of such events.

6. Hello, can you speak about ethical considerations when your survey is anonymous and includes a focus on past and present suicidal ideation and behaviors? I plan to link to local resources and the help line. Anything else to consider? Thank you!

The best approach to this is empirical-- pilot test and ask your participants if they, for example, expected more help; found the local resources helpful; etc. It will be important to inform the participants what you are able to

help with to provide accurate information that informs their expectations about therapeutic benefit of your study.

7. Would justice, beneficence, or non-maleficence approaches be any different for studying NSSI versus suicide attempt outcomes?

No, since individuals with NSSI are at risk for suicide attempts and suicide as well.

8. As practitioners, how do you broach the topic of suicide in a real-world clinical setting that is not necessarily an ED? Asking suicide questions could be considered jarring when you're discussing with patients who are not necessarily suicidal, but have chronic conditions that are high risk for suicide, such as cancer (my primary area of research). It is one of the reasons oncologists don't want to discuss the issue with their patients even when it is clear that the diagnosis and the treatment is anxiety-laden.

Some researchers use the PHQ 9 as an entry way to ask about suicide risk. However, it can also be the case that framing suicide risk as only a part of depression can also miss patients. (e.g. those who may be agitated; suicidal only when intoxicated, etc). If the patients are facing terminal conditions, questions about feeling depleted, thoughts of death/ their perceived risk for death might be the opportunity to ask about suicide and/or more passive ways of dying. Pilot work here (interviews with patients on these topics) would be helpful.

I typically tell clinicians to explain that some people who have the conditions have suicidal thoughts or have attempted or died by suicide. In order to keep the individual safe, you need to ask some questions about suicidal thoughts and behaviors.

9. This is not a question but in response to previous question about EMA and ethics - there is a paper coming out in Psychiatric Research and Clinical Practice (new sister journal of AM J Psychiatry) titled "Consensus Statement on Ethical & Safety Practices for Conducting Digital Monitoring Studies with People at Risk of Suicide and Related Behaviors".

Thank you! This paper does tackle a number of challenges and possible considerations in addressing the challenges

- 10. Many thanks for the presentation. I have two questions: 1) You mentioned two-part models, are these like (Heckman) selection models? Since only the ones who attempted suicide have severity scores and thus are the sub-samples in the second part of the model. 2) What statistics programme used for two-part models? As far as I know, there's no simple command for most two-part models with more flexible model specifications and link functions. Some use sem or gsem to construct multiple equations and some researchers have packages particular specifications (e.g. ZIP you've mentioned).**

Great question. The “two part model redux”- can be fit by any statistical package, as I demonstrated, by simply separating your dependent variable into incidence and severity, running a logistic regression with the incidence outcome, and subsetting the Least Squares or POLR analysis for the severity part. This solution works for the types of examples I discussed. The more general zero-inflated data situation is a little more complex to analyze, as you have discovered, as most algorithm only considers count outcome. I have included resources at the end of my slides for you to take a look, for 2 statistical packages.

- 11. Hi Hanga, how do you deal with correlation and association versus more predictive or even causal inference in suicide using non-randomized data? RCTs are extremely tricky (if at all ethically and logistically possible) for an outcome such as suicide; yet, it is important for the best evidence to be available for the best interventions**

Hi, the general principles for observational studies of correlations and associations are that it is best to start from a theoretical model, of how these factors interrelate, and test it on your data. Very large datasets can be used to try to derive networks of associations in observational data - Bayesian Networks are one method for that. Otherwise, you are best to have a firm theoretical model to test!

- 12. We know that increased social media use is correlated with increased suicide attempts especially among younger populations, so how do you examine social media as possibly both a mediator AND moderator for suicide attempts or SI?**

What is your hypothesis? 'youth' is a pretty big group. Social media is very broad. After you narrow that, consider talking with your participants to better understand the stresses and benefits of their social media use - and learn about what they actually use; when; how much; their ability to manage their social media use, etc. Try to write out a logic model of what you are hypothesizing, and then start gathering pilot data to see what may be happening re: mediation and moderation...could be both.

- 13. When using NLP to extract and analyze data from social media, do you need to control for user characteristic of the platform? (ex. distribution of age, gender etc).**

Certainly depends on the tasks. The constraints would really be similar to any type of non-probability based sample--recognition of potential limited generalizability.

- 14. Thank you for the amazing talks. What are suggestions for early career researchers without prior experiences in machine learning to start build the machine-learning based computational skills? Any info on useful resources would be appreciated.**

Many of the software packages use a tutorial-based format that will help walk you through the mechanics of a particular tool while teaching underlying ML fundamentals. Coursera, MIT, etc. also have excellent introductory courses. And a solid foundations in statistics will make progressing into advanced computation much easier :)

