

A reflection of Guam undergraduate students in recruiting research participants

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Introduction

Recruitment of ethnic minorities, including Asian Americans and Pacific Islanders (AAPIs), in mental health research is challenging (Waheed et al., 2015). AAPIs have lower levels of participation in health research and are less likely to receive mental health services, which may be linked to barriers such as social stigma (Liu et al., 2019; Office of Minority Health Resources Center, 2021; Subica et al., 2020). One way to address these challenges is to increase the representation of these groups in research using reliable and effective recruitment strategies. Recruitment strategies are essential not only for optimizing researchers' time, effort, and resources but also for ensuring the successful enrollment of participants in qualitative research studies (Negrin et al., 2022).

While studies have examined the mental health of AAPI students in the Western Pacific, there is currently no published material that provides an in-depth discussion on recruitment strategies pertaining to these populations. Ran et al. (2016) investigated the mental health of college students in Guam, briefly discussing areas for methodological improvement, such as a larger and more diverse sample. To achieve this desired sample and increase the representation of Guam AAPIs in research, researchers can benefit from publicly available knowledge on recruitment strategies and challenges relevant to this population. By giving a detailed account of the researcher's experience in recruiting

college students in the Pacific for mental health studies, valuable insights can be gained regarding successful participant recruitment for future research endeavors.

This paper serves as a reflection of two undergraduate students' research experiences conducting a mental health study in Guam during the COVID-19 pandemic. The strategies discussed can help guide future undergraduate researchers in recruiting participants from two colleges in Guam, the University of Guam (UOG) and Guam Community College (GCC). The purpose of the study was to assess the mental health status of Guam college students during the COVID-19 pandemic by measuring prevalence rates of depression, anxiety, and stress through an online survey.

We used social media, campus recruitment, and incentives to recruit participants to our study. These recruitment methods resulted in the successful recruitment of 519 participants and 360 completed surveys. This paper offers a practical and introspective analysis of the successes and challenges we encountered in our recruitment process.

Utilizing social media

The study flyer was initially shared on social media platforms, such as WhatsApp, Facebook, and Instagram to reach the population of interest. It included a brief description of the study, eligibility criteria, a link and QR code to access the survey, details about incentives, and contact information. We used this strategy due to prior experience in another research study where we observed that sharing flyers on social media could effectively reach a wide audience. Social media recruitment was also a practical choice during the COVID-19 pandemic because it provided a convenient and accessible means of reaching a large, diverse student population while being cost-effective and time-efficient (Purewal et al., 2021). Leveraging social media platforms for recruitment was convenient, straightforward, familiar, accessible, and did not incur any additional costs.

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WhatsApp was an easy and effective tool to disseminate research information as it was a widely used messaging platform within our student network. This platform allowed for convenient and immediate communication with mobile users (Jailobaev et al., 2021). As undergraduate students, we had access to ten chat groups of the UOG student organizations of which we were already members. The members of these organizations were primarily students in the science, technology, engineering, and mathematics (STEM) majors. We, however, encouraged other students to share the study information with other groups and college students of all majors.

In addition to WhatsApp, we shared the study flyer to Facebook groups and our Instagram profiles to maximize our reach in social media. We searched for Facebook groups that were widely followed and accessible to Guam residents, such as buy and sell groups. Permission to post an electronic flyer was gained through the group administrators (Tully et al., 2021). Though social media platforms like Facebook and Instagram allowed us to reach many people within our community and social circle, we found it challenging to track where the flyers had been shared to.

Overall, social media was an excellent tool for advertising our study since it was easily accessed by college students. These platforms could serve as recruitment tools given an understanding of how to access the study population, whether through being an insider or knowing individuals willing to share study information within their social circle (Marks et al., 2017). Using a combination of the different social media platforms enabled us to reach a wider audience of potential participants. As undergraduate researchers, this allowed us to have flexibility with our time and to work on our tasks remotely.

Campus Recruitment

Advertising through college websites and email

Student centers and media teams of the two colleges in Guam were contacted through email to gain permission to post flyers on the schools' websites. These centers and teams served as gatekeepers within the colleges who were able to facilitate the recruitment process as they were well-trusted within their networks (Tully et al., 2021). All students enrolled at UOG and GCC received a school email where they get important information from the colleges. This process allowed the study flyer to reach all students from a legitimate and verified source. The team observed an increase in inquiry and interest during the week of mass email communication.

At the start of the project, advertising remotely was convenient due to the ongoing COVID-19 pandemic, which placed restrictions on campus and when most classes were still online. Email was an easy and effective way to ask instructors to share information and encourage students to participate in the study. This method was less time-consuming than a face-to-face meeting, but allowed us to still directly communicate with instructors. Through this method, we were able to distribute flyers to students.

Face-to-face recruitment

Recruitment drives at UOG and GCC campuses were an active and effective way to meet college students. Flyers were strategically posted around UOG and GCC campuses and passed out at recruitment events. The QR code on the flyers allowed students to easily access the survey.

We approached students waiting for class, conversing with friends, or who were simply walking through campus. Students who did not appear to be busy, such as those in the library, were easier to approach and could complete the survey readily. The library was also a good place to recruit, because students had access to computers and wifi. When speaking with students, we emphasized the study survey's importance, aims, and deadline. However, students were informed they could complete the survey on their own

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time. Reichel et al. (2021) had a similar face-to-face approach, encouraging students on campus to complete surveys on their devices.

We found this recruitment method was successful as it allowed us to build connections and rapport with students through conversations and offering of promotional goods. Being approachable, respectful, and having familiarity with the target population was helpful in increasing recruitment (Patel, Doku, & Tennakoon, 2003). Students who saw the team several times stated they would share the survey with friends and classmates.

Some challenges of campus recruitment were a misinterpretation of other people on the project team as vendors selling snacks, schedule conflicts, and fewer students around the campus when the study team was available. A clear sign depicting the study could help with this challenge and attract more attention (Reichel et al., 2021). Unfamiliarity with class times and limited window time for recruitment decreased the opportunity to meet study participants.

In the classroom

While recruiting during class times, we sought to communicate information about the study concisely and in a way that would earn support and mutual trust (Negrin et al., 2022). We introduced ourselves as undergraduate researchers and briefly described our study and its significance. Presenting to students was nerve-wracking, but it was good practice in explaining our research project. Instructors were eager to help and explain to students the importance of participating in research and how they might also do research in the future. The challenges, however, were coordinating with professors, delays in professors' response to email requests, and scheduling around classes to present.

School events

During school events where students would gather in one area, we asked student organizations to have our flyers at their booths. Through these face-to-face interactions, students from different areas of the campus could be reached more effectively (Reichel et al., 2021). As students and as members of several participating organizations ourselves, asking other student leaders to advertise our study at their booths was easy. They offered to share our study flyer within their network and WhatsApp group chats. For this method, approaching students directly when they were at the booth or in line was effective. The hectic environment of these often crowded and noisy events did prove challenging. Despite these difficulties, it was still an effective way to advertise to many people.

Use of incentives

We are grateful our research was supported by the National Institutes of Health (NIH) Building University Infrastructure Leading to Diversity Enhancing Cross-disciplinary Infrastructure and Training at Oregon (BUILD EXITO) and the Pacific Island Partnership for Cancer Health Equity (PIPCHE) grants. The grants allowed us to offer incentives to study participants, which could significantly increase the response rate in survey studies (Abdelazeem et al., 2023). During marketing and recruitment, students were informed that those who participated in the study could win prizes. Prizes included UOG promotional items, gas cards, and grocery gift certificates. Reichel et al. (2021) found that college students liked monetary and non-monetary incentives. We found gas certificates were the most popular. Raffle draws were conducted monthly during the entire time of data collection. Using incentives allowed us to advertise more confidently and students were motivated due to the opportunity to receive incentives. However, one issue we experienced was that several prize winners did not respond to our emails or did not show up to the meeting time to collect their prizes due to schedule conflicts. As students, we had to work around our class schedule and the winners' schedules which sometimes conflicted.

Conclusion

Using a multi-modal approach to recruitment including social media, face-to-face recruitment, and incentives allowed us to successfully recruit 360 students to our study. Social media allowed us to reach a broad audience, while face-to-face recruitment ensured personalized interactions with the students.

We also faced barriers to recruitment, such as time and resources. The hardest part of recruitment was approaching students and waiting for their survey completion. This experience taught us that multiple strategies were needed to complete our study sample. First, set goals and timelines. We set a specific number of recruits each time we had a recruitment drive. We also planned events and maximized our time for research and school by managing our time well and balancing school and research work. Second, approach the students confidently and professionally to establish a connection. Students were more receptive to participating in the study after meaningful conversation. Third, use eye-catching and culturally relevant visual aids and flyers to promote the study. Signage is important in catching the attention of potential recruits as it shows them what we are doing and encourages them to approach.

Future improvements include having more members in a team, such as other undergraduate researchers, research associates, volunteers, and collaborations with student organizations. Having more team members would allow for more frequent recruitment drives. As students, it was hard to work around our class schedules and exams. We recommend canvassing the campus at which you plan to recruit and finding which days and times students are more likely to congregate in hallways or during break times.

Despite the challenges, we successfully recruited 360 students to complete our study. Our experience allowed us to gain confidence as researchers and reflect on the successes and challenges of our recruitment strategies, which can guide future

undergraduate researchers in recruiting understudied populations. Research as an undergraduate student can be challenging, but the experience taught us valuable lessons not learned in books.

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References

- Abdelazeem, B., Hamdallah, A., Rizk, M. A., Abbas, K. S., El-Shahat, N. A., Manasrah, N., Mostafa, M. R., & Eltobgy, M. (2023). Does usage of monetary incentive impact the involvement in surveys? A systematic review and meta-analysis of 46 randomized controlled trials. *PloS one*, 18(1), e0279128.
<https://doi.org/10.1371/journal.pone.0279128>
- Ellard-Gray, A., Jeffrey, N. K., Choubak, M., & Crann, S. E. (2015). Finding the Hidden Participant: Solutions for Recruiting Hidden, Hard-to-Reach, and Vulnerable Populations. *International Journal of Qualitative Methods*, 14(5), 1–10.
<https://doi.org/10.1177/1609406915621420>
- Jailobaev, T., Jailobaeva, K., Baialieva, M., Baialieva, G., & Asilbekova, G. (2021). WhatsApp Groups in Social Research: New Opportunities for Fieldwork Communication and Management. *Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique*, 149(1), 60–82.
<https://doi.org/10.1177/0759106320978337>
- Marks, A., Wilkes, L., Blythe, S., & Griffiths, R. (2017). A novice researcher's reflection on recruiting participants for qualitative research. *Nurse Researcher*, 25(2), 34–38. <https://doi.org/10.7748/nr.2017.e1510>
- Negrin, K. A., Slaughter, S. E., Dahlke, S., & Olson, J. (2022). Successful Recruitment to Qualitative Research: A Critical Reflection. *International Journal of Qualitative Methods*, 21, 1–12. <https://doi.org/10.1177/16094069221119576>
- Office of Minority Health Resources Center. Mental and behavioral health—Asian Americans (2021). <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=54>

- Patel, M. X., Doku, V., & Tennakoon, L. (2003). Challenges in recruitment of research participants. *Advances in Psychiatric Treatment*, 9(3), 229–238.
<https://doi.org/10.1192/apt.9.3.229>
- Purewal, S., Ardiles, P., Di Ruggiero, E., Flores, J. V. L., Mahmood, S., & Elhagehassan, H. (2021). Using Social Media as a Survey Recruitment Strategy for Post-Secondary Students During the COVID-19 Pandemic. *Inquiry : a journal of medical care organization, provision and financing*, 58, 469580211059305.
<https://doi.org/10.1177/00469580211059305>
- Reichel, J. L., Rigotti, T., Tibubos, A. N., Werner, A. M., Schäfer, M., Edelmann, D., Pfirrmann, D., Deci, N., Beutel, M. E., Stark, B., Simon, P., Letzel, S., & Dietz, P. (2021). Challenge Accepted! a Critical Reflection on How to Perform a Health Survey Among University Students-An Example of the Healthy Campus Mainz Project. *Frontiers in public health*, 9, 616437.
<https://doi.org/10.3389/fpubh.2021.616437>
- Subica, A. M., Aitaoto, N., Link, B. G., Yamada, A. M., Henwood, B. F., & Sullivan, G. (2019). Mental Health Status, Need, and Unmet Need for Mental Health Services Among U.S. Pacific Islanders. *Psychiatric services (Washington, D.C.)*, 70(7), 578–585. <https://doi.org/10.1176/appi.ps.201800455>
- Tully, L., Spyreli, E., Allen-Walker, V., Matvienko-Sikar, K., McHugh, S., Woodside, J., McKinley, M. C., Kearney, P. M., Dean, M., Hayes, C., Heary, C., & Kelly, C. (2021). Recruiting ‘hard to reach’ parents for health promotion research: experiences from a qualitative study. *BMC Research Notes*, 14(1), 1–7.
<https://doi.org/10.1186/s13104-021-05653-1>
- Waheed, W., Hughes-Morley, A., Woodham, A., Allen, G., & Bower, P. (2015).

Overcoming barriers to recruiting ethnic minorities to mental health research: A typology of recruitment strategies. *BMC Psychiatry*, 15(1), 1–11.
<https://doi.org/10.1186/s12888-015-0484>