RETURNING RESULTS TO RESEARCH PARTICIPANTS IN RANDOMIZED CONTROL TRIALS: A DATA-DRIVEN ANALYSIS IN DEVELOPMENT ECONOMICS

by

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Randomized control trials (RCTs) are a core research method in the field of development economics. This field is focused on the improvement of people's lives in developing countries through economic improvements. In these studies, research participants are assigned a control or treatment group, and baseline and post-treatment data is collected. The conclusions are aggregate as they are working on improving life situations for entire regions or communities, rather than variables for individuals. Additionally, these results often take years to produce. These factors, in addition to logistical factors, are two assumed reasons why the return of research results is not occurring in the field despite the ethical concerns about power imbalances that are present in the field and with RCTs Research participants are being used for data collection often with minimal knowledge about the study, its implications or data collection methods. This paper examines literature across many social sciences, government regulations across the world, and academic associations broadly to see what is being said about returning results to research participants. It goes on to examine data from a RCT in Egypt to see if research participants want research results, what factors in their lives impact the demand for results, and if timing of when the research participant is asked if they want results impacts their demand for them. Results should be returned to research participants as an ethical imperative even though returning of results is not mandated or the norm at this point in development economics and there are not clear predictor variables for what respondents would want research results.

Table of Contents

List of Figures and Tables:

Chapter 1: Introduction

Background

Prior to 1999 development economics was a field of study specifically focused on reducing poverty in developing nations.[1] Amartya Sen, a development economist, then challenged this idea and proposed that the field should focus on increasing freedom of individuals through expansion of human capabilities rather than simply economic growth.[2] Through this research, the goal is to obtain generalizable knowledge about increasing well-being of developing nations from an economics lens. Research in this field often includes studies of sample populations which involve human research participants in studies called randomized control trials (RCTs). Research participants participate in RCTs through being assigned a treatment group and participating in baseline and follow-up data collection (usually through surveys) but may or may not ever receive the findings of these studies. This research aims to examine the demand for research participants receiving results of studies they participate in specifically in the field of development economics using data from a baseline survey about financial inclusion tools in Egypt.

Sharing results means that research participants receive aggregate findings from the research study and an analysis with implications of the results in a way that a layperson can understand. Individual results can be returned as well, but this study focuses specifically on aggregate data. There are a variety of methods of returning results such as having research assistants return to the communities they interviewed respondents in and holding sessions with

[1] "Development Economics," NBER, accessed May 20, 2024, https://www.nber.org/programs-projects/programs-working-groups/development-economics.
[2] "Amartya Sen & OPHI | OPHI," accessed April 25, 2025, https://ophi.org.uk/research/amartya-sen-and-ophi.

community leaders and/or participants to explain results, providing reading materials that explain the results, providing electronic documents explaining results (when available), and more. Returning individualized results is a common practice in certain fields of science, such as medical studies and anthropology when results are more commonly individual in nature (such as a medical diagnosis), but not a common practice in the field of economics when results are intentionally general in nature, as shown in the literature review.[3] Some studies exist that have looked at participants desire to receive results and have concluded that participants want research results, however, none of these are specific to the field of development economics.[4] In genomics and cancer studies, participants desire their individual genetic results. However, in development economics, there aren't always clear individual results because of the mission of generalizable knowledge that doesn't often require individual conclusions.

The specific focus on randomized control trials (RCTs) is due to its significance in development economics. RCTs became popular in the field starting in the late 1990s, however to date, there is limited discussion on returning research results despite the wide acceptance of the research method in the field now.[5] Whereas discussing the return of results and actually returning results may be occurring in development economics, widespread talk of the topic in published research studies and through academic associations is not occurring.

In randomized control trials, participants are randomly assigned a control or treatment group, and then overall conclusions are analyzed for how each different group responds to the

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[3] Maya Sabatello et al., "In Different Voices: The Views of People with Disabilities about Return of Results from Precision Medicine Research," *Public Health Genomics* 23, no. 1–2 (2020): 42–53, https://doi.org/10.1159/000506599.

[4] J. O'Daniel and S.B. Haga, "Public Perspectives on Returning Genetics and Genomics Research Results," *Public Health Genomics* 14, no. 6 (2011): 345–55.

[5] Graboyes, M., Burlando, A., & Miguel, E. (n.d.). *The Ethics of Sharing Results with Research Participants: Establishing Best Practices for Development Economics—Grant Materials*.

altered variable. This method is beneficial for seeing how different levels of an intervention affect participants in different ways. However, there are many ethical concerns with this research method, one being that some participants may have better participation experiences and outcomes than others. Additionally, results may not be available for many years after research participants take place in the research process. There is also commonly an inherent power dynamic between researchers and research participants as most researchers are from the global north and going to the global south to collect data.

Development economics has more ethical considerations to consider due to its implications for people's well-being and dependence on human participation to conduct research studies. Some participants may be assigned a treatment that is significantly beneficial in the short term, such as receiving a large weekly food subsidy, where the control group receives nothing. Even though the research could be looking at which level of subsidy (including zero) is the best for improving people's health, during the study, participants are randomly assigned to have a better or worse off condition for research. In some studies, the control in one iteration of the study is then assigned the condition at a later phase which is one way in which a study can be designed to reduce the impact of receiving a worse off group initially. Additionally, development economics is focused on the global south (developing countries) and usually research comes from the global north. There is potential for power dynamics between researchers and research participants due to the differing life situation between the two populations. This emphasizes the need for the return of research results and specific inclusion of discussion between researchers and research participants to create a working dynamic rather than just the usage of research participants for data collection.

Purpose

It is not common practice for development economics studies to return results to participants, but participants may desire knowing the outcome of research they participate in.[6] Reasons research participants may want research results could be for a variety of reasons including but not limited to, understanding of a research participant's personal role in the study, giving feedback on how the study was conducted to the research team, for general knowledge of the study, for knowledge the region being studied, or for ways to improve the research participant's life situation based on the research findings. On the research team's end there are also reasons for returning research results. These include strengthening relationships between research participants and researchers, improving public trust about research, providing communities information about how they have been or could be impacted by the research studies findings, and reducing the power inequalities between researchers and research participants by creating a space for discussion of the research.[7] One primary reason that researchers should consider returning results is that the results act as a sort of payment for their participation and as basic respect for the research participant's time. One analysis states that the "act of offering a summary of research results avoids treating persons solely as a means to an end."[8] This point is furthered by the idea of respecting research participants, which is a key factor in the Belmont Report- a widely accepted and followed set of requirements for protecting people participating in research both physically.[9] Having respect for persons is considered to respect people's autonomy

[6] O'Daniel and Haga, "Public Perspectives on Returning Genetics and Genomics Research Results."
[7] Graboyes et al., *The Ethics of Sharing Results with Research Participants: Establishing Best Practices for Development Economics—Grant Materials*.
[8] Samantha Friedlander et al., "Sharing Research Results with Participants: An Ethical Discussion," Center For Global Development, accessed May 21, 2024, https://www.cgdev.org/blog/sharing-research-results-participants-ethical-discussion.
[9] Department of Health, Education, and Welfare, "Belmont-Report-Plain-Language-Summary (1).Pdf" (Harvard Law School Project on Disability, 1979).

and in the case of RCTs, should include respecting if the participants want to receive the results of the study as part of their study process.[10] Participants may want to know if their research contributions helped the project, how the treatment arm they received compared to the others, and how their community could be impacted by the results. Furthermore, beneficence and justice are key aspects of the Belmont Report.[11] Beneficence specifically regards to creating the most amount of benefit and the least amount of risk for research participants; arguably not returning results is a direct violation of beneficence as participants are not gaining a significant sum of information about their participation.[12] As for justice, not sharing research results keeps participants from being able to take actions that could benefit their life situation. As for the researcher, there are benefits to returning results as well. Returning results could open the door for conversations about feedback from the study which can improve further research. Sule Alan, an economists doing research in Turkey, noted that returning results and having discussions with community leaders in the area they were doing researcher made implementation of the project more feasible due to conversations about study implementation.[13]

Not returning results may occur for various reasons. Research participants may or may not be able to act regarding the study findings which may affect the demand for these results. For example, if there is a way in which people can decrease their risk of developing a disease due to altering their lifestyle in a way that requires a financial contribution, people may not have the disposable income to make the change, regardless of the negative consequences of the status quo.

[10] National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, "The Belmont Report," April 18, 1979.

[11] National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, "The Belmont Report."

[12] Rebecca Littman et al., "Evidence Required for Ethical Social Science | Science," accessed May 19, 2024, https://www-science-org.uoregon.idm.oclc.org/doi/10.1126/science.adf8329.

[13] Friedlander et al., "Sharing Research Results with Participants."

It may be that not knowing results could save someone from the stress of not being able to act in a way that could decrease disease potential.[14] Additionally, the lack of clear individual implications from development economics studies may mean that participants' demand for returning results is not consistent with the demand in studies with more individualized results such as in medical studies. As for the logistical hurdles to returning results, it boils down to a few key areas of inconvenience, expense, and efficiency. When collecting data in a low- or middle-income country, translating results to be both in the native language of where research was conducted and into a way that a lay person with varying education could understand takes time and money to do.[15] Translations could also lead to errors in understanding which could create misconceptions or confusion about the study if the research team is not native to the area where research is being done. As for efficiency, returning results adds a barrier in the research process, adding time, coordination, and money as factors in the research process due to having to translate the information, make it digestible, coordinate delivery of the information, field questions about the fundings, and track down research participants (sometimes years after data was collected.)[16]

This study will use a mixed methods approach of an extensive literature review and data analysis of baseline data from a RCT in Egypt to figure out the demand for individuals participating in research to receive the research results. The literature review examines economics, medical, and a variety of social science studies for the inclusion of any material discussing returning results to research participants after research studies are concluded or

[14] Jeffrey G. Bell, Mark Brady, and Larry J. Copeland, "The Ethics of Reporting and Disseminating Results of Clinical Research Trials," *Cancer* 100, no. 6 (2004): 1107–9, https://doi.org/10.1002/cncr.20067.
[15] Edward Asiedu et al., "A Call for Structured Ethics Appendices in Social Science Papers," *Proceedings of the National Academy of Sciences* 118, no. 29 (July 20, 2021): e2024570118, https://doi.org/10.1073/pnas.2024570118.
[16] Bell, Brady, and Copeland, "The Ethics of Reporting and Disseminating Results of Clinical Research Trials."

research participants' rights. Additionally, professional organizations' codes of conduct and government regulations for research are analyzed for inclusion of discussion of returning results to research participants. This review is looking to see if results are being returned, if these results are individual or aggregate results, and how participants feel about results being returned or not returned. The second portion of this study looks at how different factors of research participants impact the desires for participants to receive the results. The baseline survey of a RCT in Egypt is the data being used to determine what factors impact demand for results. Participants are randomly assigned a question asking if they want the research results either at the beginning or end of the survey. In addition to considering the placement of the question, demographic, financial, lifestyle, and autonomy factors are considered to see if they impact demand for results. A regression analysis is used to determine the numeric demand then analyzed for implications.

Project Scope

This project is working under a collaboration between researchers at the University of Oregon and the University of California Berkeley titled *Sharing Results with Research Participants: Establishing Ethical Practices with Development Economics.*[17] The larger study is longitudinal with multiple different research objectives.

Methods

This study is a mixed methods project. The first method is a literature review to see what is said about returning results in a variety of social science fields as well as in professional and government organizations, and the second review is a regression analysis of baseline data from

[17] "ER2: Establishing Best Practices for Development Economics," accessed March 25, 2025, https://cega.berkeley.edu/collection/the-ethics-of-sharing-results-with-research-participants-establishing-best-practices-for-development-economics/.

the beginning of a RCT in Egypt. These two areas will inform each other to determine whether research results are being returned across different disciplines and to identify the requirements set by various agencies. Additionally, this analysis will explore whether the demand for returning results is consistent among all research participants or if it varies based on factors such as timing or the implications of the research. The methods for each part of the study are included at the beginning of the respective chapter.

Chapter 2: Literature Review

Literature Review Methods

To see if returning results to research participants is currently the norm in research, as well as what is required from various agencies, an in-depth literature review analyzed sources from a variety of disciplines, organizations, and governing agencies. Furthermore, studies across social science fields including economics, anthropology, sociology, and medical studies are analyzed to see if results are returned to their participants and what the norms are regarding this topic in the fields of interest. Each source is examined to see what is being said about returning results to research participants, what regulations exist about returning results, and if results are being returned, how they information is being disseminated.

Specifically, a list of 19 key words was used across all searching platforms to ensure a complete review was being completed. These key words included Randomized Control Trials, RCT, reporting findings, best practices, ethical considerations, demography, disseminate, ethics, returning results, participants, economics, Africa, political science, anthropology, psychology, deception studies, America, East Africa, and economists. Any source that included anything about returning results or research participants' rights was added to a master document and then further analyzed for what specifically was being stated. Research studies across disciplines, academic journal articles, and papers on returning results were found on sites including Jstor, Google Scholar, and the UO Library Database. These sources were analyzed to see if returning results was mentioned, and if so, what was being done for the results dissemination. Another aspect of the literature review was looking at government sites to see what governments say about returning results. For this category, the same list of keywords was searched across any government research page that could be found. A primary source for this category is the is the International Compilation of Human Research Standards, which is a collection of research standards across the globe. Each collection focuses on one continent or region and includes any government documentation about research guidelines that exists at the country level. Additionally, one collection is entirely focused on international organizations and their standards for research. In total, there are eight documents encompassing 134 countries and territories. Such as for the academic documents and research studies, each was searched for the keywords listed above then added to a master document of sources if there was any mention of research participants' rights or returning results to research participants. The final section of this literature review analyzes academic and professional organizations. To begin, a list of nearly 50 academic and professional organizations were compiled into a list. Then, each places website was searched for a tab or section on research guidelines. The above keywords were used to search through any research guidelines found. If there was not material on research guidelines directly, the key words were used to search the entire webpage. If there was any mention of returning results to research participants, or research participants' rights, then they were added to the master document of all returning results sources.

In total, over 80 sources were included into the master document from the variety of areas being searched through. These sources ranged from having a single mention of research participants' rights to having entire papers focused on the topic of returning results to research participants. After the collection of these sources, each was analyzed for specifically what was being said about returning results to research participants. Once each source was directly read through, general themes and categories within the three primary areas of focus were identified.

For example, within the topic of academic papers, there are clear topics of economics, sociology, genomics, medical trials more generally, and anthropology studies.

The literature review is limited in capacity as information is likely to not all exist openly on the internet for all countries, agencies, research bodies, and studies. There is likely information that is missing form this literature review and the limitation exists that the results discussed are only from the studies analyzed. Furthermore, when looking at specific fields of study, there are likely norms and protocols that exist within the field that are taught within the academic setting, that someone unfamiliar with the field may not know about. If they are norms in the field, it is possible that the information is not widely published online as researchers know the norms of their area of expertise or the norms are learned through schooling about the field, but the information is not published on the internet in an available setting. For example, one development economist states that the discussion of returning results is common practice in developing countries, but economics associations and journal articles could not be found to back up this assertion.[18] Additionally, this study is comprised of primarily sources that are written and published in English, meaning that studies from non-English speaking places are not considered. In some cases, information was translated using online translation software, however translations can create discrepancies and that must be considered.

Literature Review Findings

This study focuses specifically on economics randomized control trials, but to understand the context of returning results, we must investigate other fields of study as well. This literature review includes three primary areas: research studies, academic associations, and government

[18] Ellen Fitzpatrick, Conversation with Development Economist, April 24, 2025.

policies. The goal of looking into these areas is to see where the topic of returning results is present across a variety of literature and if the topic is present in policies that govern research principles.

Research Studies

When studies look specifically at if research participants want to receive results on studies they participate in, there is overwhelming consensus that people want results. However, what results are wanted, whether individual or aggregate, and how results should be delivered (online, in-person, individually, in a forum, etc) vary by study. Additionally, research participants with higher educational attainment are more likely to desire obtaining research results as compared to people of the same background and age with less educational experience as found in genetic studies.[19]

Overwhelmingly, participants want to receive results about their individual contribution to research studies in a timely manner after participating in research.[20] Not having the option to find results can be a deterrent for research participation.[21] People want to primarily know their individual results or scores but are also interested in the aggregate results of studies so long as there are relevant applications to their own lives.[22] The biggest consideration in returning results is that results should be shared in a way that is comprehensive and understandable, without having translational errors. Information should be shared not only in the participants language,

[19] Sabatello et al., "In Different Voices."
[20] Ann H. Partridge et al., "Offering Participants Results of a Clinical Trial: Sharing Results of a Negative Study," *Lancet (London, England)* 365, no. 9463 (March 12, 2005): 963–64, https://doi.org/10.1016/S0140-6736(05)71085-0.
[21] O'Daniel and Haga, "Public Perspectives on Returning Genetics and Genomics Research Results."
[22] Halverson and Ross, "Attitudes of African-American Parents about Biobank Participation and Return of Results for Themselves and Their Children."

but also in a way that wholeheartedly translates the findings and implications of the findings without losing important details in making the content accessible for a non-expert in the field.[23]

Overall, in discussions of returning results and participant desires, studies focus on individualized results such as medical tests and individual scores. Some studies focus on aggregate data, but for the most part, individualized results are the primary topic when the topic of returning results is found in academic texts. In general, people want to receive results if there are actionable ways to respond to the results.[24] In the case of medical studies, people want to know if there is a condition they are predisposed to so that they can take preventative measures to mitigate chances of getting the condition or what treatment is the most successful in treating a condition they have.[25] Furthermore, timely results are most effective if shared at a time that actions are applicable; in the instance of farming, people want results about how to make their crops more successful before the planting season compared to at the end of it.[26] Overarchingly, participants want results if there are ways in which they can use the results to take proactive actions to improve quality of life or life outcomes using them.[27]

However, not all participants want research results. The primary examples of this is for medical situations in which people cannot take action to prevent an inevitable medical situation

[23] Roxani Krystalli et al., "Taking the Research Experience Seriously: A Framework for Reflexive Applied Research in Development," *Global Studies Quarterly* 1, no. 3 (September 22, 2021): ksab022, https://doi.org/10.1093/isagsq/ksab022.
[24] Halverson, Colin M. E., and Lainie Friedman Ross. "Attitudes of African-American Parents about Biobank Participation and Return of Results for Themselves and Their Children." *Journal of Medical Ethics* 38, no. 9 (September 2012): 561. https://doi.org/10.1136/medethics-2012-100600.
[25] Bookman, Ebony, Aleisha Langehorne, John Eckfeldt, Kathleen Glass, Gail Jarvik, Michael Klag, Arno Motulsky, et al. "Reporting Genetic Results in Research Studies: Summary and Recommendations of an NHLBI Working Group - Bookman - 2006 - American Journal of Medical Genetics Part A - Wiley Online Library." Accessed April 5, 2025. https://onlinelibrary.wiley.com/doi/abs/10.1002/ajmg.a.31195.
[26] Friedlander et al., "Sharing Research Results with Participants."
[27] Bookman et al., "Reporting Genetic Results in Research Studies: Summary and Recommendations of an NHLBI Working Group - Bookman - 2006 - American Journal of Medical Genetics Part A - Wiley Online Library."

such as in cases where there is not yet a treatment available.[28] Similarly, when research participants can choose what types of results are given, that is preferred as potential mental and distressing harms can be reduced.[29] One study also found that the desire for results can vary by certain demographic factors such as having disabilities, race, and socio-economic factors; but even in cases with lower demand for results as compared to others, the demand is still high as more than 60 percent of research participants consistently want results for the studies they participate in.[30]

There are also reasons for returning results on the research end of things. One outcome of returning results is to strengthen future research studies.[31] There are reciprocal benefits to researchers and research participants when results are shared.[32] When participants are given the time to hear results and give feedback on the research process, not only can participants provide anecdotes about what the research process is from the participant's end, but it also builds trust between participants and research teams that emphasizes the mutual work that must go into research. This trust supports future research studies as well, as there is then communal trust in future research endeavors. In one example of not returning results, a farmer got upset with a researcher due to the number of times he had been asked similar questions and never heard back about the research findings.[33] By building this connection, not only are individuals able to learn

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[28] Isabelle Budin-Ljøsne, "A Review of Ethical Frameworks for the Disclosure of Individual Research Results in Population-Based Genetic and Genomic Research," *Research Ethics* 8, no. 1 (March 1, 2012): 25–42, https://doi.org/10.1177/1747016111435576.
[29] O'Daniel and Haga, "Public Perspectives on Returning Genetics and Genomics Research Results."
[30] Sabatello et al., "In Different Voices."
[31] O'Daniel and Haga, "Public Perspectives on Returning Genetics and Genomics Research Results."
[32] Lynn G. Dressler, "Disclosure of Research Results from Cancer Genomic Studies: State of the Science," *Clinical Cancer Research: An Official Journal of the American Association for Cancer Research* 15, no. 13 (July 1, 2009): 4270–76, https://doi.org/10.1158/1078-0432.CCR-08-3067.
[33] Halverson and Ross, "Attitudes of African-American Parents about Biobank Participation and Return of Results for Themselves and Their Children."

about ways in which they are impacted by implications of research, but future research relationships are strengthened.

When specific fields are analyzed, discussions on returning results varies. In the medical field, there are two primary topics that discuss returning results to research participants: genetic research and cancer. In both, returning results is seen as something that should occur most of the time but should be done with precautions taken. Participants and researchers feel predominantly that participants should receive results quickly after the study concludes; however, results should be returned either via an in-person consultation or in a way that is trusted to be secure, such as an individualized results online portal (when available).[34] If results have negative or sensitive conclusions, there is consensus that results should be provided in-person.[35] Furthermore, results that imply a future medical situation should be paired with resources, next steps, or guidance on how to proceed with health mitigation.[36] For example, if someone is given genetic results that state they are predisposed to a disease, the research team should provide recommendations for specialists to visit with or lifestyle changes to make to mitigate these situations.

However, this also brings up the ethical question on if returning results of genetic predisposition to a disease or medical condition such as cancer does more harm than good. Knowledge of predisposition to a disease can not only create fear, but also stress about health potentials.[37] Additionally, obtaining treatment or preventative care for a condition that may or may not present itself can be costly to obtain care and emotionally costly due to stress and fear of

[34] J. Scott Roberts et al., "Returning Individual Research Results: Development of a Cancer Genetics Education and Risk Communication Protocol," 2010, https://journals.sagepub.com/doi/10.1525/jer.2010.5.3.17.
[35] Conrad V. Fernandez, Eric Kodish, and Charles Weijer, "Informing Study Participants of Research Results: An Ethical Imperative," *IRB: Ethics & Human Research* 25, no. 3 (2003): 12–19, https://doi.org/10.2307/3564300.
[36] Fernandez, Kodish, and Weijer, "Informing Study Participants of Research Results."
[37] Olivia Matshabane et al., "Preferences and Expectations of Feedback of Individual Genetic Research Results in African Genomics: Views of South African Parents of Children with Neurodevelopmental Disorders" (Open Research Africa, n.d.), https://openresearchafrica.org/articles/5-41/v1.

potential situation. Both reasons are common in sources that argue that returning results should be done more on a case-by-case basis, rather than in all research situations.

Regardless of if the research results are positive or negative, results are overwhelmingly more desired when there are actionable steps to take about the result. An additional consideration to be taken, regardless of positive or negative results, is that research results should be translated in a way that is not only comprehensible in the language that is primary for participants but composed to be understandable for someone who may not be an expert in the field. With these translations, it is crucial that the significance, purpose, and results are still communicated without missing any essential details due to translation mishaps.[38]

In social sciences such as anthropology and sociology, there is a general theme that returning results should occur in research with human participants. It is considered an ethical norm to make sure that participants know what their data contributed to as well as the implications of the research.[39] In a survey about results dissemination, anthropologists responded that not only did they return research results to research populations, but that it was a positive experience; furthermore, the survey analysis states that the benefit was for both the research participants as well as the research team.[40] Benefits include increasing community empowerment, giving the researchers more authority in the eyes of the research participants, and that it helps researchers to improve quality of data interpretations.[41] However, potential negative impacts are also mentioned. These include research participants being embarrassed or unhappy

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[38] Ellen Wright Clayton and Amy L. McGuire, "The Legal Risks of Returning Results of Genomics Research," *Genetics in Medicine* 14, no. 4 (April 2012): 473–77, https://doi.org/10.1038/gim.2012.10.
[39] T. M. Banks, "Misusing Informed Consent: A Critique of Limitations on Research Subjects' Access to Genetic Research Results," *Saskatchewan Law Review* 63, no. 2 (2000): 539–80.
[40] Matthew Cooper, "Sharing Data and Results with Study Participants: Report on a Survey of Cultural Anthropologists," *Journal of Empirical Research on Human Research Ethics* 3, no. 4 (December 1, 2008): 19–34, https://doi.org/10.1525/jer.2008.3.4.19.
[41] Cooper, "Sharing Data and Results with Study Participants."

with the anthropologist's interpretations of the data.[42] As far as sociology studies, there is an emphasis on returning results in ethically responsible ways and respecting research participants.[43]

Despite the overwhelming conclusion that participants want to know the results of research studies they participate in; randomized control trials in economics that are published on academic databases do not include information about returning results to their participants. No RCTs were to be found that included human subjects and included any discussion of returning results to research participants. This could be explained in two ways. One possibility is that researchers are returning results to participants but not documenting it in the publication of studies. This could mean that dissemination is discussed between researchers and local leaders or in other un-written contexts such as grant materials, but regardless, the topic is not able to be found on academic databases or in economics association documentation, as discussed later. The other possibility is that returning of results is not a standard practice in the field of economics, therefore economics' research participants rarely receive results. The primary reasons that economists may not be returning results include the increased level of planning, logistical struggles such as deploying research assistants after results are ready to be disseminated (potentially years after the data is collected), tracking down research participants or community leaders, and the costs associated with these considerations. In general, returning results to research participants is seen as logistically challenging and costly and adding extra steps to an already complicated research process.

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42 Cooper, "Sharing Data and Results with Study Participants."

43 Bookman et al., "Reporting Genetic Results in Research Studies: Summary and Recommendations of an NHLBI Working Group - Bookman - 2006 - American Journal of Medical Genetics Part A - Wiley Online Library."

Despite the lack of information about the return of results, all economics studies analyzed include discussion of following ethical procedures for the respect of human subjects. These considerations are the typical principles of the Belmont Report and the Declaration of Helsinki, which include gaining informed consent before participation in a study, ability for research participants to remove themselves at any point of a study, keeping participant data confidential, and general respect for persons, to name a few tenants.[44] However, there is a general lack of information about participant rights after the completion of data collection.

When looking specifically for randomized control trials in Africa, there are similar patterns as in the economics field more broadly. People want to know the results of studies that they take place in either for general knowledge of the study they participated in or for individual results.[45] Results are desired quickly after results are known. Results are desired in conjunction with the implications and purpose in plain language regardless of if there are actionable steps to take or personal implications for research participants.[46] Research studies across all countries in Africa predominantly do not mention returning results to research participants despite the high demand for participants to find out the results of studies.[47] More transparency is needed between researchers and research participants. One paper gave an anecdote of a research participant who thought they were just being seen for a routine medical visit; they did not receive their results

[44] "WMA - The World Medical Association-WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Participants," accessed October 26, 2024, https://www.wma.net/policies-post/wma-declaration-of-helsinki/.
[45] Isaac Kisiangani et al., "Perspectives on Returning Individual and Aggregate Genomic Research Results to Study Participants and Communities in Kenya: A Qualitative Study," *BMC Medical Ethics* 23, no. 1 (March 18, 2022): 27, https://doi.org/10.1186/s12910-022-00767-y.
[46] Barry Shingwenyana et al., "Research Participants' Perspectives Regarding the Feedback of Secondary Findings–A Cohort from the DDD-Africa Study, South Africa - Shingwenyana - 2024 - Journal of Genetic Counseling - Wiley Online Library," accessed April 5, 2025, https://onlinelibrary.wiley.com/doi/10.1002/jgc4.1830.
[47] Kathleen M. West et al., "Stakeholder Perspectives on Returning Nonactionable Apolipoprotein L1 (APOL1) Genetic Results to African American Research Participants," *Journal of Empirical Research on Human Research Ethics* 17, no. 1–2 (February 1, 2022): 4–14, https://doi.org/10.1177/15562646211063267.

and thought that the medical provider messed up their results, but in actually they were unknowingly in a research study.[48] Another paper noted that this was a shared consensus among research participants in a genomics study in Uganda.[49] In general, communication between researchers and participants needs to be more clear and more clearly translated both in language and purpose of studies.

For research studies and academic papers, the topic of dissemination of results to research participants is not uncommon as a topic of discussion, however, the topic as a focused point within published research papers is not common.

Academic Associations

Out of 41 organizations searched for codes of conduct in research in the fields of social sciences, medical research, and broad-based research organizations, only six mention returning results and only one source requires it. One speaks about results but not specific to returning results to participants, and three sources that explicitly mention returning research results to participants. Among those that do not include anything about returning research results include the American Association for Public Opinion Research, the American Sociology Association, the Association of Social Anthropologists of the UK and Commonwealth, The Global Partnership for Sustainable Development, and the International Sociological Association. These five focus broadly on research ethics and the closest contents to returning research results to participants is are from the American Association for Public Opinion Research and the American Sociology Association which mandate that methods, funding, and where participants were chosen from

[48] Bell, Brady, and Copeland, "The Ethics of Reporting and Disseminating Results of Clinical Research Trials."
[49] Rwamahe Rutakumwa et al., "What Constitutes Good Ethical Practice in Genomic Research in Africa? Perspectives of Participants in a Genomic Research Study in Uganda," *Global Bioethics* 31, no. 1 (January 1, 2020): 169–83, https://doi.org/10.1080/11287462.2019.1592867.

after research is conducted, but nothing specific about results.[50] [51] The Association of Social Anthropologist of the UK and Commonwealth states that researchers are not separate from the areas in which they research, indicating that they are impacting areas by doing research, therefore must consider the population at hand, however, doesn't include anything about returning results in any capacity.[52]

Most associations have guidelines posted to conduct ethical research, yet very few mention or require returning results to research participants. The American Psychological Association, The Abdul Latif Jameel Poverty Action Lab (J-PAL), the Department for Health and Human Services (HHS), and the World Health Organization all mention returning results to participants after research is concluded.[53] [54] [55] [56] Similar principles as mentioned before are included such as making sure that information is digestible for the participants and that sensitive information is communicated in ethical ways. Within these professional codes of conduct, JPAL speaks about returning results to participants as a suggestion, stating that it should be considered but does not mandate the practice.[57] The APA states that researchers must provide an

[50] "Standards and Ethics - AAPOR," November 8, 2022, https://aapor.org/standards-and-ethics/.
[51] Association of Social Anthropologists of the UK and the Commonwealth, "Ethical Guidelines for Good Research Practice," March 1999, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.theasa.org/downloads/ethics/Ethical_guidelines.pdf.
[52] Association of Social Anthropologists of the UK and the Commonwealth, "Ethical Guidelines for Good Research Practice."
[53] Effective date June 1 et al., "Ethical Principles of Psychologists and Code of Conduct," https://www.apa.org, accessed April 28, 2025, https://www.apa.org/ethics/code.
[54] Laura Feeny, Sarah Kopper, and Anja Sautmann, "Ethical Conduct of Randomized Evaluations," The Abdul Latif Jameel Poverty Action Lab (J-PAL), accessed April 5, 2025, https://www.povertyactionlab.org/resource/ethical-conduct-randomized-evaluations.
[55] Office for Human Research Protections (OHRP), "Attachment B: Return of Individual Research Results," Recommendation, July 22, 2016, https://www.hhs.gov/ohrp/sachrp-committee/recommendations/attachment-b-return-individual-research-results/index.html.
[56] Council for International Organizations of Medical Sciences (CIOMS), "International Ethical Guidelines for Health-Related Research Involving Humans" (Council for International Organizations of Medical Sciences (CIOMS), 2016), https://doi.org/10.56759/rgxl7405.
[57] Laura Feeny, Sarah Kopper, and Anja Sautmann, "Ethical Conduct of Randomized Evaluations," The Abdul Latif Jameel Poverty Action Lab (J-PAL), accessed April 5, 2025, https://www.povertyactionlab.org/resource/ethical-conduct-randomized-evaluations.

opportunity for participants to receive results and go onto to emphasize that researchers are responsible for making sure that participants understand the results when the participant desires or has known misconceptions about the study.[58] The HHS is the most specific out of social science organizations and goes into depth about how research results should be returned to study participants. It states that returning research results to participants is a topic of significant attention; it specifies that publishing data is not the same as general dissemination of the research, and that research participant should receive incidental findings for the study, general study results, and individual study results (when possible).[59] This source goes on to talk about timing, methods, and ethical considerations of returning results as well.

The American Anthropological Association mentions that researchers have an "ethical obligation to consider the potential impact" of research "and the communication or dissemination of the results of their research," but there is not a requirement for results to be returned.[60] It is only suggested that researchers discuss ownership and access to results before research begins.[61] Furthermore, research results in social sciences are presented the framework that "researchers have an obligation to disseminate results openly except those likely to endanger research participants or to violate their anonymity or confidentiality.[62]" This highlights that returning results is not a requirement or even a regulation commonly, rather the results should just be published in a context that is available for research participants to access with the general public, rather than being delivered directly to the participants for discussion or in a manner in which

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[58] Effective date June 1 et al., "Ethical Principles of Psychologists and Code of Conduct," https://www.apa.org, accessed April 5, 2025, https://www.apa.org/ethics/code.
[59] Office for Human Research Protections (OHRP), "Attachment B: Return of Individual Research Results," Text, July 21, 2016, https://www.hhs.gov/ohrp/sachrp-committee/recommendations/attachment-b-return-individual-research-results/index.html.
[60] "AAA Statement on Ethics," The American Anthropological Association, accessed April 15, 2024, https://americananthro.org/about/policies/statement-on-ethics/.
[61] "AAA Statement on Ethics."
[62] Cooper, "Sharing Data and Results with Study Participants."

they can ask questions. This is also not applicable to the global south context, as often papers are published on academic sites and journals, rather than readily available for the public to access in their daily lives. For results to be accessible for development economics research participants, they must be delivered to research participants in a way that is conceptualizable, in plain language, and presented with a way to ask questions or clarify the study. Simply publishing the study is not a feasible or ethical way in which to return results specifically for development economics as the findings are not accessible for research participants in development economics contexts.

As far as Economic associations, there is not much about returning results. The American Economic Association does not mention anything about returning research results in its website content on best practices for research.[63] Similarly, most research associations' ethical guidelines do not include anything about returning results to research participants. Some associations such as the Center for Effective Global Action (CEGA) and Busara, a poverty alleviation non-profit organization based in Kenya, include clauses that state that results should be shared once results are found, but do not have a specific call to return results to participants.[64] [65] Busara includes one statement about returning results, but it focuses on stakeholders in research rather than the participants and includes language about the target audience for information, which is not necessarily the research participants.[66] In these cases, stakeholders and the general public are the targeted audience for research results rather than research participants more specifically.[67]

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[63] American Economic Association, "Conducting Research," accessed October 26, 2024, https://www.aeaweb.org/resources/best-practices/conducting-research.
[64] Garret Christensen, "BestPracticesManual," TeX (2014; repr., Berkeley Initiative for Transparency in the Social Sciences, November 5, 2024), https://github.com/garretchristensen/BestPracticesManual.
[65] Busara Center for Behavioral Economics et al., "The Busara Toolkit: Leveraging Behavioral Science for Development" (Busara, 2024), https://doi.org/10.62372/WQSB6195.
[66] Busara Center for Behavioral Economics et al., "The Busara Toolkit."
[67] Busara Center for Behavioral Economics et al., "The Busara Toolkit: Leveraging Behavioral Science for Development" (Busara, 2024), https://doi.org/10.62372/WQSB6195.

Out of 41 professional organizations across a range of disciplines, only six mentioned anything regarding individual returning results, and within that none require returning results. Furthermore, thirteen well known organizations did not have any statement of guidelines for ethical research. Overwhelmingly, associations do not include any content about returning results to research participants in their ethical considerations for research or research codes of conduct.

Governmental Agencies

Some government associations have publicly accessible standards for research; in the regulations that exist and are publicly accessible, they include some content about treating research participants with ethical considerations and valuing participants. In general, if returning results to participants is included in a government regulation, it is a recommendation rather than a requirement and often is only strongly urged for specific types of studies. In general, there is a lack of information in government standards of ethics specifically about economics.

The Belmont Report and Declaration of Helsinki are the primary documents used in the United States to rule over research.[68] In other countries such as Tanzania, it is stated that researchers should give individuals the option to receive results.[69] For places such as the European Union, there are regulations about general public release of research results that ensure that findings are understandable for a layperson, but there are not specific guidelines for returning to research participants.[70] In Kenya, South Africa, and Nigeria, (countries where ethical guidelines for research at the government level were able to be located) there are no mentions of returning results to research participants in governmental research guidelines.

[68] "The Belmont Report," April 18, 1979.
[69] Tanzania, "NATIONAL RESEARCH INTEGRITY FRAMEWORK OF TANZANIA," n.d., https://www.costech.or.tz/Files/Documents/1684598776.pdf.
[70] "REGULATION (EU) No 536/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on Clinical Trials on Medicinal Products for Human Use, and Repealing Directive 2001/20/EC," April 16, 2024, https://health.ec.europa.eu/document/download/f724d198-9ec8-4cad-9ce7-b6d2ac1ec44e_en.

Based on the International Compilation of Human Research Standards, there are limited discussion of returning results to research participants across Africa given available research standards for governments. Tanzania includes a clause in their National Research Integrity Framework that states, "participants should be provided with an opportunity to access an appropriate summary of the research findings.[71]" But surrounding countries in East Africa do not have similar contents in documentation about research.

Aside from governments specifically, international organizations that work directly in Africa, such as the World Health Organization (WHO), UNAIDS, and Council for International Organizations of Medical Sciences, among others include documentation about returning results. The WHO says that withholding results from participants can create "tensions" between researchers and participants[72], and the World Medical Association notes that all participants should be "given the option" to receive research results after participating in a study.[73] The Trust Code, A Global Code of Conduct for Equitable Research Partnerships under the Trust Project, notes that information about research results should be provided in a way that is "meaningful, appropriate and readily comprehended," noting the importance of making information useable for research participants, not just simply providing research results.[74]

Similarly to in other areas analyzed, there is a lack of information requiring the return of research results to research participants even though there is discussion about the topic. There is

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[71] Tanzania, "NATIONAL RESEARCH INTEGRITY FRAMEWORK OF TANZANIA."
[72] "Ethical Issues in Patient Safety Research: Interpreting Existing Guidance," accessed October 26, 2024, https://www.who.int/publications/i/item/9789241505475.
[73] "WMA - The World Medical Association-WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Participants."
[74] "The TRUST Code: A Global Code of Conduct for Equitable Research Partnerships," The TRUST Code, accessed October 26, 2024, https://www.globalcodeofconduct.org/.

widespread consensus that research participants should be treated with dignity and respect, but a lack of specific enforcement on what that entails for post-study regulations.

Gaps in Literature

There is a general lack of content about returning results specifically in research papers. There exists a plethora of papers that are about the desires of research participants and about researcher thoughts about returning results. However, when it comes down to researchers including returning results to participants and the inclusion of it into research papers, there is a lack of content included in the methods of papers. There could be a returning of results, but if so, it is not documented in research papers.

Furthermore, the cases included in this literature review are overwhelmingly focused on the global north context. These findings are not directly applicable for the global south context of development economics, as the social setups, infrastructure, and other factors are greatly variety between the two situations. In development economics, there must be more considerations for how research results are delivered to specific research participants, rather than sending out a digital copy of the findings, as may be appropriate in the global north context.

Chapter 3: Data Analysis

Introduction:

Whereas the literature review is focused on generalizable knowledge and perceptions about returning results and current practices of returning results to research participants in RCTs, this chapter specifically looks at one group of research participants to see if they demand results. The baseline data of research participants in the Tawisha study, focused on savings groups for women in Egypt, is used to answer the following three main questions.

1. Do research participants want the results of research they participate in?
2. Does the timing of the question (whether asked at the beginning or end of the survey) impact the demand for results?
3. What characteristics (if any) can be used to predict if a research participant will want the results of the study they participate in?

The hypothesis being tested is that if research participants have more autonomy and higher power within their communities, they will be more inclined to want research results as they have more power to influence others in their communities and make changes to their lives with the knowledge from the research. The baseline data collected from research participants shares insights from demographic characteristics, financial status, household composition, autonomy of the participants and more. By regressing specific characteristics, such as demographic factors, with the responses to the question of if the respondent wants results, the prior questions can be answered. The specific text shared when the responded is asked about results sharing in the baseline survey is "Are you interested to know the results of the study when the researchers have finished with their analysis? if you answer yes, you will receive a short statement briefly summarizing some of the key results of the study. This could take several years." To answer question 1, all responses to the question of if respondents want results were summarized; 90.4% of respondents answered yes to this question showing that the demand for results is strong even before more analysis.

Each research participant was randomly assigned to be asked this question either at the beginning or end of the survey. The average time was about 44 minutes with the max being over two hours taken on the baseline survey. By randomizing this question, we can answer question 2 of if timing of the question impacts the demand for wanting study results. Of the group asked at the beginning, 376 of 403 respondents (or 93.3%) wants research results and of the group asked at the end, 376 of 423 respondents (or 88.9%) want results.

To answer question 3 about specific characteristics that can be used to predict demand, many variables were analyzed and regressed to see how significant they are in determining if the research participant wants results. The regression uses all the responses to the question about wanting results as the first dependent variable for regression, then regresses the same set of variables on both responses for asking at the beginning and asking at the end to see if there are changes based on timing. Overall, the only variables that have statistical significance are duration and purchasing autonomy, meaning that these two variables can be used to predict demand for results more than the other variables used. This shows that demand is not only high, but consistent among all research participants heightening the argument that sharing research results with research participants in RCTs should be common practice in the field of economics.

Tawisha Study

The Tawisha study, where the baseline information is pulled from, is an RCT taking place in Egypt specifically focused on savings group inclusion for women. Participants are assigned one of two treatment arms; one is being given information about savings accounts, receiving help on opening an account, and being provided an ATM card, and the other is being provided support to join a savings group then provided the same treatment as the other group to setup a savings account and receive an ATM card.[75] The study includes 267 villages across two regions, Beheira and Gharbia, in Egypt.[76] Some outcomes being measured are the usage of savings accounts and how it impacts the women's ability to make decisions in the household, the household level of consumption and assets, and at the group level, the longevity of the savings groups, how loans are given out and repaid.[77] This data is particularly beneficial to use for looking at demand for research results due to the situation of women's autonomy in Egypt.

Egypt has one of the lowest rates of women's inclusion in the labor force in the world and it has the lowest rate of female owned businesses in the world, at 1% of women in Egypt owning a business.[78] Furthermore, the rate of having no education for women in Egypt is 32.1% and it varies significantly between urban and rural women, as 42.6 percent of women living in rural areas and 17.1% of women living in urban areas have no education.[79] These factors of

[75] Alfredo Burlando et al., "Egypt Impact Lab Request for Proposals - Empowering Women through Digital Savings Groups," n.d., accessed April 17, 2025.
[76] Burlando et al., "Egypt Impact Lab Request for Proposals - Empowering Women through Digital Savings Groups."
[77] Burlando et al., "Egypt Impact Lab Request for Proposals - Empowering Women through Digital Savings Groups."
[78] Burlando et al., "Egypt Impact Lab Request for Proposals - Empowering Women through Digital Savings Groups."
[79] "The World Bank In Egypt," Text/HTML, World Bank, accessed April 25, 2025, https://www.worldbank.org/en/country/egypt/overview.

lower participation in education and finances in Egypt are one reason as to why there are significant amounts of projects in Egypt focusing on financial inclusion, specifically for women.[80] Given these programs and other health-targeted programming, Egypt is steadily improving for both health and financial trends.[81]

This study is looking at survey responses from two regions in northern-central Egypt, Beheira and Gharbia. These regions differ in size and population, as Beheria is over five times the size of Gharbia in terms of square land area, however, Beheira's population is 6.7 million people where Gharbia has about 5.4 million people showing that Gharbia has an increased density in population compared to Beheira.[82] [83] Beheira has 15 cities and 77 rural units whereas Gharbia has eight cities and 69 rural units. Both regions have large portions of industry dominated by agriculture.[84] [85] The two regions are similar in demographics and physical characteristics. However, there is one control for location of responses in the data regressions. In the data regressions, the variables are clustered by village to reduce trends due to similarities in life status for people within villages.

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[80] "The World Bank In Egypt."

[81] "Democratic Republic of Egypt 2008: Results from the Demographic and Health Survey on JSTOR," accessed April 25, 2025, https://www-jstor-org.uoregon.idm.oclc.org/stable/25681358?searchText=demographics+of+egypt&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3Ddemographics%2Bof%2Begypt%26so%3Drel&ab_segments=0%2Fbasic_search_gsv2%2Fcontrol&refreqid=fastly-default%3Aa56cd204280a31d5adde146a22f7f9f4&seq=1.

[82] "Beheira Governorate," accessed April 25, 2025, https://sis.gov.eg/Story/170578/Beheira-Governorate?lang=en-us.

[83] "Gharbia Governorate," accessed April 25, 2025, https://sis.gov.eg/Story/181712/Gharbia-Governorate?lang=en-us.

[84] "Beheira Governorate."

[85] "Gharbia Governorate."

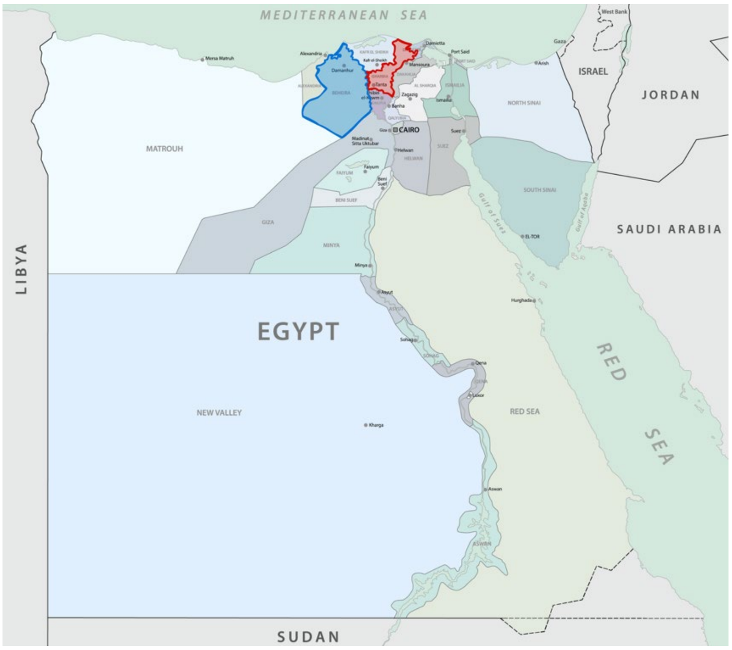

Figure 1 Map of Egypt with Beheira (blue) and Gharbia (red) Regions Highlighted [86]

Figure 2 Northern Central Region of Egypt for Ease of Seeing Regions[87]

[86] Map from "Egypt Maps & Facts," WorldAtlas, December 19, 2023, https://www.worldatlas.com/maps/egypt. Map has been modified.
[87] Original map taken from following citation, but modified to highlight Beheira and Gharbia regions. "Egypt Maps & Facts."

Data Analysis Methods

Data analysis is looking at the demand from participants for returning results in research trials in the context of an ongoing RCT in Egypt. The RCT is looking at the inclusion of women in financial savings groups in two regions of the country. The baseline data from this study is the initial survey that all participants are given to ensure that treatment and control groups are properly randomized. Additionally, this baseline survey is important for understanding each participants' life status and demographic factors prior to any interventions. The baseline survey consists of questions regarding financial status, work, educational attainment, household members, assets, health decisions, transportation decisions, food insecurity, and more. The output of the survey is a data base of 6,466 variables and has 832 respondents who were asked about wanting study results. The data is taken from a larger sample of many thousand responses, however, only 832 were asked about survey results, therefore only those are being used in the analysis.

The data was initially raw; therefore, data cleaning was necessary to make the database useable. This included removing responses where the participant was not asked about wanting the results of the study which was determined if the response was missing for the question about wanting results, creating variables necessary for analysis, and identifying variables to use for analysis. Variables created include duration, which was done by taking the difference between start and end dates and times then dividing the value to get the value to be represented in minutes. Other variables created include work status, created by identifying if the participant had worked in either the past seven days or three months; creating a score for transportation autonomy, which sums the amount of places a woman can go alone and without asking for permission to create a score for autonomy over personal transportation; and a food insecurity score, created by summing six different variables asking if the respondent and their family had experienced food insecurity for a variety of situation in the past three months. Variables for analysis are those identified to potentially impact demand of results such as financial literacy, educational attainment, income levels, household members, and senses of autonomy. A full list of variables is included and explained later.

Once variables were identified for usage for the regression model, variables were checked to make sure they had a complete response rate and to make sure that they were numeric and could be regressed. To fix these categories, data was imputed when observations were missing by taking the mean of responses and assigning the mean values to any missing observations. This allows the variables to still be used when they have missing observations without reducing the overall responses. This is necessary because any observation missing takes that respondent out of the regressions overall; therefore, if multiple variables were missing a handful of responses from different people, there could be a loss of a significant number of variables without imputations. For variables that were non-numeric, they were turned into indicator variables by creating categories of the variables. For example, marital status had the categories never married, married, divorced, widow, separated, and contractually married. This was turned into three numeric variables, currently married, not married, and never married where each respondent was assigned a 0 or 1 for if they fit into that category. This allows the data to be used in the regression to see how each of the indicator variable relates to the regression variables of interest. Other variables that were turned into indicator variables include educational status, purchasing autonomy, and last healthcare visit. Additionally, variables that were similar to others, were checked for collinearity and if collinearity was present, one of the variables was removed from the model. Finally, two variables, income and savings, were winsorized. This occurred because the range of the values was incredibly wide and skewed to one side. Winsorization puts a reasonable cap on the values of the variables in order to make more accurate predictions for the coefficients and significance.

The regression includes four variables that had incomplete observations. In one case, the variable for amount of education a respondent had attained had a conditioning variable for amount of education someone had been enrolled in. If someone had not been enrolled in any education, then the value for education attained would be empty. In this case, values that were missing were added to the indicator variable for no formal education. However, in other cases, there were not conditioning variables that led to missing responses. For the variable total savings, there were only 207 observations. However, for the variable recording total formal savings, there were 597 observations. Additionally, for total informal savings, there were 87 observations. For the variables total formal and total informal savings, the values were imputed using the local mean of the existing values. Then, for each observation, if total savings existed, the value remained untouched. However, if the value was missing, then the total formal and total informal savings were summed to create a value for total savings. This process was used to create a variable for the imputed value of total savings. For the total income (541 observations), there is not a conditioning variable, meaning that the missing observations do not have a clear reason. In this cases, the local mean was used to replace missing values to fill the data set. For the variable, "unescorted event," which is one component of the transportation autonomy score, there were six missing observations, so they were replaced using the local mean of the value as there was not an indicator variable that prohibited these responses from being inputted.

Once the variables had a complete set of observations and were usable in a regression model, a regression was ran including all independent variables as well as the responses to if the participant wanted study results. These results are categorized into three sections, all responses, responses to when the question was asked at the beginning of the survey, and responses when the question was asked at the end of the survey. The differentiation of these variables is essential to see if timing of the question impacts the demand for results. The model included clustering at the village level, which helps the model to account for similarities at the village level and see changes on a larger scale. The regressions were combined into a table that shows each dependent variable side by side for ease of looking at differences across location of question as well as the composite responses.

The variables used in the regression model are as follows. “All responses,” “asked at beginning of survey,” and “asked at end of survey” are the dependent variables where “all responses are a combination of the two timings of the question. The specific wording of the question is “are you interested in receiving the results of this study when the researchers are finished with their analysis?” Participants can either answer yes, coded 1, or no, coded 0. The inclusion of all three dependent variables using the same set of independent variables is crucial, as there may be assumed importance if the overall results share is shown to be significant with an independent variable, however, using the two different timings of the responses is a check to see if logically, the significance is important. The independent variables include “survey duration,” which is the number of minutes the survey took to complete. “Respondent age,” number of household members,” and “total savings,” are all variables that are numeric, and the value of the observation represents the numeric value of the variable name such as number of minutes, number of people, or amount of money. For variables such as “respondent alone during survey,” “respondent worked,” “currently married,” “never married,” “not married,” “no formal education,” “basic education,” “secondary education,” “higher education,” “financial knowledge,” “allowance,” “budget allowance,” “household borrowing,” “healthcare visit within 6 mo,” “last healthcare visit 6 mo to 1 yr,” and “last healthcare visit over 1 yr,” are all binary variables where no is coded as 0 and yes is coded as 1. These variables indicate if the respondent has access to the variable or fits into the variable category. The variables “has purchasing autonomy,” “food insecurity score,” and “transportation autonomy score,” are all variables that exist on a scale where 0 is none and the higher the value the higher the level of that variable. For example, for the variable “food insecurity score,” a value of 0 indicates that the respondent didn’t say that there were any situations where they experienced food insecurity over the past three months and a score of six indicates that they experienced food insecurity in all six scenarios that were asked about in the past three months. Dummy variables are included in the regression for each variable that was imputed to account for the imputations, however, these variables are dropped in the final regression table. Additionally, a dummy variable is created to account for the two regions that the data comes from, but it is not included in the regression table, as it is just to provide a control for the regions. Finally, in the regressions, the data is clustered by village to account for any variance that may occur on the village level. This reduces the impact of responses coming from the same villages and the similarities that occur because of it.

The data analysis was completed using the software, Stata. All work done with the data was written in a do-file and the raw data existed untouched. The do-file is included in appendix 1.

Potential limitations of this data are that this is only from one RCT in one country. Because of the large sample size and unanimousness of the responses that show clear demand for wanting results, we can assume that this model could predict responses in other regions with similar demographics however, that cannot be clearly concluded without analyzing data from other locations. Additionally, this data is from a survey only recording responses from women-surveying men and running similar regressions would be a way to further generalize these results. The variables included in this model are used as they have minimal collinearity with other variables in the model, because they have some sort of impact on the individuals social standing, autonomy, or position in a household or community. However, these variables do not predict the entirety of wanting results or not, as shown through the r-squared value. Despite this, these variables can still support the following analyses and claims.

Data Analysis Findings

In a baseline survey for analyzing the usage of a financial tool in Egypt, a question was asked specifically stating "Are you interested to know the results of the study when the researchers have finished with their analysis? If you answer yes, you will receive a short statement briefly summarizing some of the key results of the study. This could take several years." This question was randomly assigned to ask some participants, and if the question was assigned, it was then randomized to be asked either at the beginning or end of the baseline survey. Within this survey of 1,668 participants, 832 participants were randomly assigned to be asked the question about wanting the research results. Within this, 409 were asked at the beginning of the study, and the remaining 423 were asked at the end of the survey. Additionally, 6,466 other variables were observed during the baseline data collection, however, many of these variables are in multiple components to follow up on one question, such as listing all assets a participant has.

Questions during this baseline data collection include a full audit of the participants life situation from demographic factors of the individual such as marital status, education levels, who they are living with, income levels, financial and non-financial assets, factors of autonomy from spending, decision making, travel, and decisions about family members. These variables are useful to see direct and indirect impacts of the study and to ensure that the control and treatment groups are properly randomized where each group has the same baseline characteristics. Not only is this step crucial for the design of an effective RCT, but it is also incredibly beneficial to determine outcomes of studies including factors that may not have been expected initially in study design. In the case of demand for return of results, these baseline characteristics can be used to determine if lifestyle, financial, and personal factors play a role in determining if a research participant wants the results of the research study or not.

This study shows that research participants unanimously and robustly want the results of research studies. Out of 832 responses to the question about wanting research results, only 70, or 8.41 percent stated that they did not want the results of the studies. In total, 28 variables were included in a regression to determine what factors play the largest role in determining the demand for research results. The variables fall under the categories of individual demographics, financial status, and autonomy and scores. Each variable included was regressed with the total responses of both respondents who were asked at the beginning and the end of the survey as well as on the separate groups of timing of responses. This was done to determine if timing impacted the significance of certain variables and as a validity check to determine the impacts of the variables. Regression 1 shows the impact of timing on the desire for results and regression 2 includes all the predictor variables through the summation term.

1. $$\text{WantsResults}_i = \alpha_0 + \alpha_1 \cdot \text{Timing}_i + \varepsilon_i$$

2. $$\text{WantsResults}_i = \alpha_0 + \alpha_1 \cdot \text{Timing}_i + \sum_k \beta_k X_{ik} + \varepsilon_i$$

The summary statistics of the regression variables are in Table 1. Table 2 is a balance table that shows that the participants in the group asked at the beginning and the group asked at the and are the same according to the averages of their responses to the regression variables. Additionally, the p-values calculated from a two-tailed t-test show that there are no statistical differences between the two groups for each regression variable. The full regression is shown in Table 3.

Table 1: Summary Statistics of Variables

Variable	Obs	Mean	Std. dev.	Min	Max
All Responses	832	0.904	0.295	0	1
Asked at Beginning of Survey	409	0.919	0.273	0	1
Asked at End of Survey	423	0.889	0.315	0	1
Survey Duration	832	43.47	11.13	17.07	120.23
Number of Household Members	832	3.607	1.50	0	11
Respondent Age	832	36.44	11.81	18	84
Respondent Alone During Survey	832	0.532	0.499	0	1
Respondent Worked	832	0.231	0.422	0	1
Currently Married	832	0.791	0.407	0	1
Never Married	832	0.105	0.306	0	1
Not Married	832	0.105	0.306	0	1
No Formal Education	832	0.084	0.278	0	1
Basic Education	832	0.162	0.369	0	1
Secondary Education	832	0.499	0.500	0	1
Higher Education	832	0.041	0.198	0	1
Allowence	832	0.468	0.499	0	1
Budget	832	0.626	0.484	0	1
Financial Knowledge	832	0.631	0.483	0	1
Household Borrowing	832	0.102	0.303	0	1
Has Purchasing Autonomy	832	0.257	0.437	0	1
Total Savings (100 EGP)	832	42.41	22.23	0	100

Total Income (100 EGP)	832	47.39	33.79	0	136.8
Food Insecurity Score	832	3.97	2.208	0	6
Transport Autonomy Score	832	0.625	1.393	0	8
Healthcare Visit with 6 Months	832	0.874	0.332	0	1
Healthcare Visit 6 Months to 1 Year	832	0.059	0.236	0	1
Healthcare Visit over 1 Year	832	0.047	0.211	0	1

Table 2: Balance Table of Treatment Groups

Variable Name (1)	Mean of All Results (2)	Mean of Results when Asked at Beginning (3)	Mean of Results with Asked at End (4)	Difference Between column 3 and 4 (5)	P-Value from a Two Tailed T-test (6)
Duration	43.47	43.31	43.63	-0.33	0.672
Number of Household Members	3.607	3.614	3.600	0.01	0.899
Respondent Age	36.44	36.35	36.52	-0.17	0.840
Respondent Alone During Survey	0.532	0.526	0.539	-0.01	0.700
Respondent Worked	0.231	0.235	0.227	0.01	0.791
Currently Married	0.791	0.770	0.811	-0.04	0.149
Never Married	0.105	0.105	0.104	0.00	0.958
Not Married	0.105	0.125	0.085	0.04	0.062
No Formal Education	0.084	0.071	0.097	-0.03	0.177
Basic Education	0.162	0.166	0.158	0.01	0.759
Secondary Education	0.499	0.516	0.482	0.03	0.333
Higher Education	0.041	0.042	0.040	0.00	0.920
Allowence	0.468	0.433	0.501	-0.07	0.048
Budget	0.626	0.614	0.638	-0.02	0.464
Financial Literacy Scale	0.631	0.631	0.631	0.00	0.991
Household Borrowing	0.102	0.120	0.085	0.03	0.099
Purchasing Autonomy Index	0.257	0.240	0.274	-0.03	0.254
Total Savings	42.41	43.29	41.56	1.73	0.263
Total Income	47.39	46.63	48.12	-1.50	0.524
Food Insecurity Index	3.970	3.963	3.976	-0.01	0.932

Transport Autonomy Score	0.625	0.597	0.652	-0.06	0.563
Healthcare Visit with 6 Months	0.874	0.875	0.872	0.00	0.898
Healthcare Visit 6 Months to 1 Year	0.059	0.059	0.059	0.00	0.979
Healthcare Visit over 1 Year	0.047	0.044	0.050	-0.01	0.701

Table 3: Regressions

VARIABLES	(1) All Responses	(2) Asked at Beginning of Survey	(3) Asked at End of Survey
Survey Duration	Coefficient: 0.00331***	0.00275	0.00301
	Standard Error: (0.00118)	(0.00177)	(0.00218)
	P-value: [0.006]	[0.124]	[0.170]
Number of Household Members	-0.00617	-0.0108	0.00668
	(0.00833)	(0.00936)	(0.0143)
	[0.461]	[0.252]	[0.643]
Respondent Age	-0.00135	0.000104	-0.00116
	(0.00163)	(0.00222)	(0.00286)
	[0.407]	[0.963]	[0.686]
Respondent Alone During Survey	0.0497*	0.0371	0.106**
	(0.0287)	(0.0457)	(0.0459)
	[0.087]	[0.419]	[0.023]
Respondent Worked	0.0259	0.0169	0.0218
	(0.0228)	(0.0363)	(0.0389)
	[0.259]	[0.642]	[0.576]
Currently Married	-0.0150	0.0577	-0.0229
	(0.0480)	(0.0658)	(0.0829)
	[0.756]	[0.382]	[0.783]
Never Married	-0.0832	-0.0259	-0.148
	(0.0738)	(0.0928)	(0.135)
	[0.262]	[0.781]	[0.278]
No Formal Education	-0.0442	-0.0921	0.0212
	(0.0491)	(0.0729)	(0.0841)
	[0.371]	[0.210]	[0.801]
Basic Education	0.0212	-0.0252	0.0603
	(0.0428)	(0.0540)	(0.0800)
	[0.622]	[0.642]	[0.453]
Secondary Education	0.0319	-0.0245	0.0914
	(0.0357)	(0.0465)	(0.0680)
	[0.374]	[0.599]	[0.183]
Higher Education	-0.0532	-0.159	0.110
	(0.0798)	(0.118)	(0.134)
	[0.507]	[0.181]	[0.414]
Allowence	0.0377	0.00745	0.0319
	(0.0253)	(0.0429)	(0.0393)
	[0.139]	[0.863]	[0.419]
Budget	-0.000970	-0.0210	0.0376
	(0.0246)	(0.0340)	(0.0460)
	[0.969]	[0.538]	[0.416]
Financial Knowledge	0.0650***	-0.00129	0.0804**
	(0.0226)	(0.0392)	(0.0370)
	[0.005]	[0.974]	[0.032]
Household Borrowing	0.0346	0.0272	0.0321
	(0.0349)	(0.0505)	(0.0668)

	[0.324]	[0.592]	[0.632]
Has Purchasing Autonomy	-0.0496	-0.00716	-0.0911*
	(0.0313)	(0.0447)	(0.0507)
	[0.116]	[0.873]	[0.0.076]
Total Savings (100 EGP)	-0.000127	0.000727	-0.00117
	(0.000460)	(0.000674)	(0.000802)
	[0.783]	[0.283]	[0.149]
Total Income (100 EGP)	-0.000241	-0.000257	-0.000182
	(0.000320)	(0.000570)	(0.000577)
	[0.452]	[0.653]	[0.753]
Food Insecurity Score	0.000308	-0.00378	0.00372
	(0.00579)	(0.00858)	(0.0104)
	[0.958]	[0.661]	[0.722]
Transport Autonomy Score	-0.00233	-0.0109	0.0160
	(0.00915)	(0.0210)	(0.0114)
	[0.799]	[0.607]	[0.162]
Healthcare Visit Within 6Mo	-0.0103	-0.0138	0.0567
	(0.104)	(0.130)	(0.201)
	[0.921]	[0.915]	[0.779]
Healthcare Visit 6Mo to 1Yr	0.0955	0.0852	0.164
	(0.108)	(0.132)	(0.208)
	[0.379]	[0.512]	[0.433]
Healthcare Visit Over 1Yr	0.0402	0.0213	0.0998
	(0.108)	(0.143)	(0.204)
	[0.710]	[0.882]	[0.627]
Constant	0.783***	0.844***	0.581*
	(0.142)	(0.196)	(0.296)
Observations	832	409	423
R-squared	0.217	0.270	0.378

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Regressions are clustered at the village level

Timing

The regression's three dependent variables, all results, asked at the beginning of the survey, and asked at the end of the survey, all have a column in the regression table. The purpose of this is to see if there are variances between the collective responses of wanting results and the two different timings of the question about wanting results on the independent variables included in the regression and analysis.

Table 4: Timing Variables

Variable Name	Variable Question or Construction	Meaning
All responses	Both timing of responses to the question "Are you interested to know the results of the study when the researchers have finished with their analysis? if you answer yes, you will receive a short statement briefly summarizing some of the key results of the study. This could take several years."	The response is coded as a 1 if they answer yes and a 0 if they answer no
Asked at the beginning of the Survey	The respondent was randomly assigned then asked at the beginning of the survey "Are you interested to know the results of the study when the researchers have finished with their analysis? if you answer yes, you will receive a short statement briefly summarizing some of the key results of the study. This could take several years."	The response is coded as a 1 if they answer yes and a 0 if they answer no
Asked at the end of the Survey	The respondent was randomly assigned then asked at the end of the survey "Are you interested to know the results of the study when the researchers have finished with their analysis? if you answer yes, you will receive a short statement briefly summarizing some of the key results of the study. This could take several years."	The response is coded as a 1 if they answer yes and a 0 if they answer no
Survey Duration	Created by subtracting variables “endtime” from “starttime” and dividing by 100 to put time into minutes	Minutes taken to complete the survey

There are two variables, the respondent being alone during the survey and has purchasing autonomy, where the statistical significance varies between the two timings of the survey responses. For both variables, being asked at the end of the survey has a statistical significance at the 5 and 10 percent levels, respectively. However, these variables do not vary over time, therefore the fact that the significance varies by timing of the question is not relevant for predicting if the person would want results or not.

On another aspect of timing, duration is a variable that shows the number of minutes taken to complete the survey. A theory is that respondents would be more demanding of results if they were asked at the end, as they would have realized the time invested into the survey, whereas people asked at the beginning may not realize the time investment they were making. On the flip side, research participants may put more effort into answering the questions which would increase the length of time taken on the survey if they wanted results meaning that regardless of when the question was asked, so the length of the survey would be longer, on average, for respondents who answered yes to wanting results.

However, when looking at duration of the survey, the coefficient is 0.00331 and significant at the 1% significance level. This may initially seem to indicate that increased time taken to complete the survey would increase the likelihood that a respondent would want the results to the study, but this does not hold up when looking at the specific timing of the responses as seen in column two and three. Neither of these two columns have any statistical significance and have relatively similar coefficients and standard errors. This leads to the conclusion that although when looking at all responses, it seems that an increased time taken to complete the survey would mean an increased likelihood to want results, we cannot determine that duration plays this role, as there is not a difference between the two timings of the questions. This may mean that there is some factor that is being identified through the variable of duration, rather than specifically duration being the reasons for this significance.

Individual Demographics

Individual demographic variabels are incredibly beneficial to understand the participant's personal characteristics and how those impact their desire to know results. These variables specifically share how long the survey took, how many people live with the participant, if the research participant was along with the researcher, if the respondent works a job, their marital status, and their educational levels. The full list of variables in this section as well as the specific wording and variable construction can be seen in Table 3.

Table 5: Demographic Variables

Variable Name	**Variable Question or Construction**	**Meaning**
Number of Household Members	"How many individuals are in the household without including yourself?"	How many people live in the house with the respondent
Respondent Age	"what's your age?"	How many years old the participant is
Respondent Alone During Survey	"Was the beneficiary alone during this part of the survey?"	If the participant was alone with the research assistant deploying the survey
Respondent Worked	Created by using variable “resp_worked_past7days” which asked the question “Did you work during the past seven days?” and “resp_worked_past3mos” which asked "Did you work during the past 3 months?"	If the participant has worked in the past 3 months
Currently Married	If the participant responded “married” or “contractually married” to the question "what's your marital status?"	If the participant is currently married (either legally or contractually)
Never Married	If the participant responded “never_married” to the question "what's your marital status?"	If the respondent has never been married
Not Married	If the participant responded “divorced” or “widow” or “separated” to the question "what's your marital status?"	If the participant is not married currently but has been married – due to death of spouse, divorce, or separation – This variable was dropped due to low variation
No Formal Education	If the participant responded “Never had an education” to the question “what is your educational enrollment status” or responded “illiterate” or “can read and write but does not have a degree” to the question” "what's the highest level of education you have completed?"	This variable codes having no formal education as 1 and having a different level of education as 0
Basic Education	This participant responded “has a literate certificate,” “primary education,” or “prepatory education” to the question “"what's the highest level of education you have completed?"	This variable codes having a basic education as 1 and having a different level of education as 0

Secondary Education	This participant responded “secondary technical education,” “secondary,” or “diploma” to the question "what's the highest level of education you have completed?"	This variable codes having a secondary level of education as 1 and having a different level of education as 0
Higher Education	This participant responded “university degree” to the question “what's the highest level of education you have completed?”	This variable codes having higher education as 1 and having a different level of education as 0

In this section of variables, there is one variable which has statistical significance. This variable is if the respondent was alone during the survey. As for respondents being alone, this value is statistically significant at the 10% level and indicates that if the respondent was alone during the survey they are 0.0497 units more likely to want results than if the research participant is accompanied by another person (who is not the researcher) in this situation. This shows that there may be an impact of sense of autonomy when a person is alone compared to when the participant is with another person. This value even more significant when isolating the observations where the question about wanting results was at the end of the survey. It is significant at the 5% level meaning that after engaging in the time it takes to complete the survey, the respondent feels an increased sense of wanting to know the results specifically if they are alone which quantitatively is an increase of 10.06 percentage points more likely to want results if alone at the end of the survey rather than if they are with someone else (not the researcher) at the end of the survey.

As for the respondents age and how many other people are in their house, there is no statistical significance. Despite no statistical significance, the coefficients for both variables are negative, meaning that (even though not significant) there could be a slight decreased in wanting to know results as the age of the respondent and the number of household members increases.

Respondent Worked is a variable that identifies if the participant has worked in the past three months. This variable could indicate a level of self-sufficiency that the woman must have, it could indicate that the woman is has a desire to work, or it could indicate a necessity for the woman to work in order to provide for her family to survive. This coefficient is also not significant, however, it is positive, meaning that if the woman is working they are more likely to want research results. Whereas this value is not statistically significant, it does indicate a slight increase in demand for results if the woman has worked in the past three months.

As for marital status, being married and never married both lead to a slight decrease in demand for results but neither is statistically significant at the overall responses or when timing is isolated. The variable for not being married was dropped due to no observations. In this situation there are also not values that are statistically significant, likely due to a lack of consistency among marital status for those who do not demand research results.

Educational standing also does not have any statistically significant values in the regression model. Surprisingly enough, having no formal education or having a degree in higher education both have negative coefficients, indicating having that level of education leads to a slight decrease in demand for results. Alternatively having a basic level of education or secondary education, there is a slight positive impact on demand for research results. One possible explanation for a lack of statistical significance is that there are very few research participants that do not want research results. Therefore, if these cases do not all fit clearly into one category, such as one level of educational attainment, then there cannot be effects that are statistically significant for the value as there is not a clear enough explanation.

Overall, in this category, the only variable that really is statistically significant and is an indicator of demanding results is if the respondent is alone during the survey. There is a positive correlation between the respondent being alone with the researcher during the survey and the research participant wanting results from the research study. The lack of statistical significance for the other variabels in this category likely comes from a lack of consistency among respondents who do not demand results and how they fit in to the variables in this regression due to the overarchingly low numbers of people who do not wants results in the sample.

Financial Status

Variables in this category all relate specifically to income and money. The variables allowence and budget are asking if the respondent is given an allowence from their household head or husband and budget is asking if the household has a budget. Financial knowledge is a question that asks if the respondent feels confident in the financial. Household borrowing is asking if the respondents household has borrowed money from a formal financial group within a year of the survey date. Has purchasing autonomy is variable that uses the responses to a question that asks who in the family unit is able to make decisions about how to spend money. The survey is set up so that respondents can select multiple people (such as themselves, their husband, parent, etc.). The variable "has purchasing autonomy" identifies all respondents who select themselves as someone who can make a purchasing decision. Finally, total savings and total income are variables that measure the level of money for the household and the responses are an amount of money in 100s of Egyptian Pounds.

Table 6: Financial Variables

Variable Name	**Variable Question or Construction**	**Meaning**
Allowance	"Do you receive a regular allowance from your husband to cover regular household expenses?"	If the research participant gets an allowance from their husband this is coded as 1 and if not, then it is recorded as a 0
Budget	"Do you have a budget for your household?"	If the research participant answered yes to this question, then it is recorded as 1 and if not, it is recorded as 0
Financial Knowledge	"Do you feel knowledgeable about financial matters?"	A value of 0 equals no and a value of 1 equals yes.
Household Borrowing	"In the past 12 months, has any member of your household borrowed any money from a commercial bank or microfinance institution?"	If the answer is yes, then it is coded as 1 and if not then it is recorded as 0
Has Purchasing Autonomy	"If money is available, who in your household decides whether to pay school fees for a relative from your side of the family?"	Participants can select multiple people who have the ability to make this purchasing decision, meaning that for most respondents, there are multiple people listed. This variable sums the people who are able to make the decision for themselves. This means that a score of 0 means that they cannot make purchasing decisions and 1 means that they can (although others may be able to too)
Total Savings (100 EGP)	The sum of variabels "total_formal_savings" and "total_informal_saving"	The amount of total savings the household has including formal and informal savings in thousands of Egyptian Pounds
Total Income (100 EGP)	For each household member there is a question asking if they work for a wage. If the answer is yes, the following question is asked. "How much does (household member) earn in this job in a month?"	This variable is created by summing the amount each household member makes in a month in hundreds of Egyptian pounds

In this category, there is only one variable that statistical significance, and it is "financial knowledge." This value is statistically significant at the 1% level for all results and significant at the 5% level for when the question about wanting results was asked at the end of the survey, indicating that the variable about financial knowledge index is highly indicative of if the respondent wants to know the results of the research. The coefficient for financial knowledge on all results responses, is 0.0650 meaning that if the respondent feels that they have financial knowledge, the likelihood that the respondent wants the results of the study increases by 6.5 percent. These results indicate that feeling that you have financial knowledge is an indicator of if there research participant wants research results. Having self-identified financial knowledge increases the likelihood that the respondent wants to know the results of the study.

As for other variables in this category, "allowence" and "household borrowing," have positive coefficients. Neither have statistical significance, however, they indicate slight increases in likelihood to want results as values as the independent variabels increase. For example, if a participant receives an allowence, there are slight increases in the demand for wanting research results as opposed to not having these, holding all else constant. The variables "budget," "has purchasing autonomy," "total savings," and "total income," all have negative coefficients for all responses column but do not have statical significance. This means that increased levels of these variables or indicating yes for binary variables has an ever so slightly negative impact on wanting results from research studies.

Overall, financial variables are not super indicative of respondents wanting results from the research they are participating in. However, having self-identified financial knowledge is the most statistically significant variable out of all variables analyzed in all categories aside from the duration variable. However, income, savings, and ability to make other financial variables are all not statistically significant and do not help to assume if a respondent wants the results of a study or not. Regardless of significant of these coefficients, there is strong and robust demand for results as overwhelmingly respondents indicated that they wanted results for the study, therefore even without statistical significance of these variables, there is evidence of demand overall for research results from participants.

Autonomy and Scores

Table 7: Autonomy Variables and Scores

Variable Name	Variable Question or Construction	Meaning
Food Insecurity Score	Created by summing the scores of all the following variables where a no equals 0 and a yes equals 1 to questions regarding if they/their household have experienced food insecurity for six different situations in the past three months "foodsec_enoughfood" "foodsec_preffood" "foodsec_limitedfood" "foodsec_smallmeal" "foodsec_nofood" "foodsec_nofood_limited"	A 0 score means the person and their household has not experienced any food insecurity in the past three months. A 6 means that they answered that they have experienced food security for all of the indicated situations in the past three months
Transport Autonomy Score	Created by turning the following variables into indicator variables with the score 1 assigned if the participant can go to that place alone without permission (response is "yes alone you do not need permission" and a 0 if they cannot. Each participant's values are summed to give them a score between 0 and 9 to share how much transport	A 0 score means that the person cannot attend any place included without permission or accompaniment. A score of 9 means that they can go any of these places without permission and alone. A higher score indicates a higher level of transportation autonomy

	autonomy they have. “transport_autonomy,” “unescorted_parents,” “unescorted_relative,” “visiting_women,” “unescorted_village,” “unescorted_friends,” “unescorted_market,” “unescorted_personal,” & “unescorted_event” where the response options are “never,” “Yes, but never alone,” “Yes, alone, with permission,” Yes alone you do not need permission,” Don’t know,” “do not apply”	
Healthcare Visit within 6mo	If the response to the question "When was the last time you were unwell and visited a health care provider for treatment?" was “last week,” “last month,” “last 3 months,” or “last 6 months”	If the response was within this time frame the response is a 1 and if not, it is a 0
Healthcare Visit 6Mo to 1Yr	If the response to the question "When was the last time you were unwell and visited a health care provider for treatment?" was “last year”	If the response was within this time frame the response is a 1 and if not, it is a 0
Healthcare Visit Over 1Yr	If the response to the question "When was the last time you were unwell and visited a health care provider for treatment?" was “more than a year ago”	If the response was within this time frame the response is a 1 and if not, it is a 0

Variables in this category are all relating to autonomy and ability for the respondent to make decisions. Additionally, the food insecurity score is included in this section. There are no statistically significant variables within this category, meaning that there are no variables in the section that have any ability to adequately predict demand for results. Despite this, there are two main conclusions that can be drawn.

Transportation autonomy score's regression coefficient is negatively correlated to wanting results. This means that as the score values increase and transportation autonomy increases, the demand for results decreases. This is interesting as the transportation variable is measuring autonomy and it would be easy to assume that as autonomy increases so does the demand for results. This evaluation, although interesting, is not a predictor of results. Food insecurity score is positively correlated with wanting results, indicating that as food insecurity increases so does the demand for results. This value is not statistically significant but does show a slight increase in demand for results with rising food insecurity. When thinking about transportation autonomy and food insecurity together, we can conclude (while not statistically significant) that having more flexibility (as identified through increased autonomy and decreased food insecurity) the demand for results decreases, which seems counterintuitive, as this shows that with decreased ability to make decisions about ones life the demand for results increases. These results are all speculative in nature as there is not statistical significance, so these trends cannot be assumed to hold constant among all research participants across all studies.

The second area of finding shows that there is not a clear linear relation between the last time you or a household member visited a healthcare facility when sick with the demand for results. If someone had visited within 6 months there is a negative correlation for wanting results compared to a small positive association for a visit between 6 months and a year and a slightly smaller correlation for a visit more than a year ago. These findings are not indicative of predicting factors for wanting results.

Conclusions:

The data analysis suggests that research participants want to know the research results of the studies they participate in and the lack of statistical significance for most predictor variables emphasize the demand for wanting results. Since there are not many variabels with statistical significance towards wanting results, this shows that demand is consistent among participants regardless of social, financial, or other factors. With that being said, duration of the survey, having self-identified financial knowledge, and the respondent being alone during the survey are predictors of wanting survey results, with increases in demand of results as those factors increase. The lack of overwhelming statistical significance in the model supports an argument that research results should be returned across the board, as there are not clear indicators that can predict who specifically wants research results. This, in conjunction with the overwhelming percent of respondents who answered yes to wanting results, show that results should be returned as nearly all respondents want results, despite variances in life status, demographics, education, or other variables.

Chapter 4: Conclusions

Even with growing usage of randomized control trials being used for Development Economics, there is limited discussion on how to treat research participants, despite, the necessity of their participation for research. While many ethical considerations are at play with RCTs due to power dynamics and imbalanced treatment arms, returning research results seems like it could be one of the most straight forward ways to lessen the ethical burdens of the research. Returning results not only benefits research participants through increased knowledge of themselves, their communities, and potential ways to improve life circumstance, it also has benefits for the research team. Researchers can benefit through gaining feedback of how the research collection went, getting insights and ideas for further research, and strengthening relationships and trust between with the research participants and their communities.

In other fields of study, returning results is the norm, specifically when they are individualized. Results are especially important to return if the individual is directly negatively impacted by what the research found or if they can take direct action to alter their lives for the better with research results. However, for development economics, results are aggregate in nature and used for improving regions or communities overall; without individual results available, returning results should be a community act, rather than for individual research participants. However, widely across academic literature, government websites, and research associations available research ethics guidelines, returning research results is not the norm. If it is mentioned in guidelines or policies, it is merely a recommendation, rather than a requirement. This could mean that research results are being returned but literature or policy does not speak about it, or this could simply mean that research results are not being returned to research participants. Despite this, studies focused on the desire of research results, show that research participants value the return of results for many reasons, including increased knowledge about research processes, an act of repayment for participation, and to open a field for dialogue between research participants and research teams.

When looking at the data from a study in Egypt focused on financial inclusion of women, there was the assumption that some factors of people's lives would be able to indicate if the research participants would even want the results of research studies such as autonomy indicators or people with higher levels of education or social status. However, the data analysis found that only two variables are accurate and statistically significant predicators of if someone would want the research results. These variables are financial knowledge and if the woman was alone with the research assistant during the study. Whereas these variables do indicate a higher level of education (assumed by increased knowledge) and having autonomy (being alone to make decisions during the survey) improves the likelihood that a respondent would want the results of the study, no other variables with similar implications were significant. Based on these findings, and the overwhelming percent of participants who answered yes to a question asking if they wanted the results returned to them, the conclusions can be drawn that results should be returned to all research participants as there are not clear enough categories of predictors for who wants results.

When looking at the findings overall, the argument can be made that despite the conclusion that returning results is not required across the board, or that there aren't clear enough indicators that point at what participants want results, results should be returned. Overwhelmingly, literature suggests that research participant want results and this is emphasized by the data analysis, as over 90% of respondents answered yes to the question about wanting results. Furthermore, due to the nature of the field of development economics, results should be returned as an ethical imperative. There are significant power imbalances in the field due to status of researchers entering developing countries for the purpose of research and research participants having minimal say in how the research process occurs. Returning results is one step in the right direction of breaking down these power imbalances, improving relations between researchers and research participants and their communities, allowing communities to know the purpose of research and implications of its findings, and finally, opening a space for dialogue about research to improve its data collection methods in the field.

Appendix 1:

Code for Data Analysis

```
*Organizational Code: Adding files to computer and generating a working directory
global cleaningfile "/Users/sadiecreemer/Desktop/data"
use "$cleaningfile/Gharbia.dta",clear

*Creating a dataset that combines Gharbia and Beheria regions
gen region = "Gharbia"
append using "$cleaningfile/Beheira.dta"
*Generating region names to check for data totals
replace region = "Beheira" if region == ""

*Isolating observations where respondents were asked (either before or after baseline survey) if they wanted the study's results
drop if results_share_1==.  &  results_share_2==.

*Creating a variable that shows the number of minutes each observation's survey took
encode (duration), generate (duration1)
destring duration, replace
replace duration = duration/100

*Generating a variable that combines answers if the respondent wants results regardless of location of the question during the survey
generate all_results_share = results_share_1
replace all_results_share = results_share_2 if results_share_1 ==.

*Generate a variable titled resp_worked if the respondent answered "Worked" for either resp_worked_past7days or resp_worked_past3mos. "Worked" is coded as 1 and "Didn't work" is 0.
gen resp_worked = (resp_worked_past7days == 1 | resp_worked_past3mos == 1)

*Generating a transport_autonomy_score for all variables to do with womens' autonomy to visit places
*Using variables transport_autonomy unescorted_parents unescorted_relative visiting_women unescorted_village unescorted_friends unescorted_market unescorted_personal event_attendance unescorted_event visiting_women
*dropping variable unescorted_college due to low response rate (44 observations of 832)
*imputing variable unescorted_event
summarize unescorted_event, meanonly
local mean_unescorted_event = r(mean)
generate unescorted_event_imp = unescorted_event
replace unescorted_event_imp = `mean_unescorted_event' if missing(unescorted_event)
*generate a dummy variable to account for imputed values
gen d_unescorted_event = (unescorted_event == .)
*making each variable in the score into an indicator variable for if the woman can visit the location alone without permission (assigned value = 1) or not (assigned value = 0)
```

```
generate can_visit_any = (transport_autonomy == 4)
generate can_visit_parents = (unescorted_parents == 4)
generate can_visit_relatives = (unescorted_relative == 4)
generate can_visit_village = (unescorted_village == 4)
generate can_visit_friends = (unescorted_friends == 4)
generate can_visit_market = (unescorted_market == 4)
generate can_visit_personal = (unescorted_personal == 4)
generate can_visit_event = (unescorted_event_imp == 4)
generate can_visit_women = (visiting_women == 4)
*for each observation add the value total number of places they can go alone without permission to get autonomy score out of 9 (9 means they can go all 9 places alone without permission and 0 means they can go 0 places alone without permission)
generate transport_autonomy_score = can_visit_any + can_visit_parents + can_visit_relatives + can_visit_village + can_visit_friends + can_visit_market + can_visit_personal + can_visit_event + can_visit_women

*Generating a food insecurity score for all variables related to food insecurity
*Using variables foodsec_enoughfood foodsec_preffood foodsec_limitedfood foodsec_smallmeal foodsec_nofood foodsec_nofood_limited where each has response options of yes (=1) and no (=0)
*the score is the number of times they answer yes to a question that indicates that they have food insecurity (max score is 6)
generate food_insecurity_score = foodsec_enoughfood + foodsec_preffood + foodsec_limitedfood + foodsec_smallmeal + foodsec_nofood + foodsec_nofood_limited
*need to impute these values as there are only 826 observations
summarize food_insecurity_score, meanonly
local mean_food_insecurity_score = r(mean)
generate food_insecurity_score_imp = food_insecurity_score
replace food_insecurity_score_imp = `mean_food_insecurity_score' if missing(food_insecurity_score)
*generate a dummy variable to account for imputed values
gen d_food_insecurity_score = (food_insecurity_score == .)

*Identifiying variables for analysis and identifying number of missing values
*832 observations for following variables
summarize allowence
summarize budget
summarize duration
summarize financial_knowledge
*foodsec_enoughfood has 831 observations
summarize foodsec_enoughfood
*foodsec_preffood has 831 observations
summarize foodsec_preffood
*foodsec_preffood has 830 observations
summarize foodsec_limitedfood
*foodsec_smallmeal has 830 observations
```

```
summarize foodsec_smallmeal
*foodsec_smallmeal has 829 observations
summarize foodsec_nofood
*foodsec_nofood_limited has 829 observations
summarize foodsec_nofood_limited
summarize healthcare_visit
summarize hh_members_count
summarize household_borrowing
summarize money_autonomy
summarize resp_age
summarize resp_alone
summarize resp_marital_status
summarize resp_worked
summarize transport_autonomy_score
*only 541 observations for total_income
summarize total_income
*only 654 observations for resp_educ_attain
summarize resp_educ_attain
*only 541 observations for total_income
summarize total_income
*only 207 observations for total_savings
summarize total_savings

*Need to impute the variables that have incomeplete responses
*total_income
*resp_educ_attain has a conditioning variable "resp_educ_enroll"- every response  "Never had an education" for resp_educ_enroll has a missing variable for resp_educ_attain therefore missing values for resp_educ_enroll should be added to the no_formal_educ indicator variable- missing values are coded as 0
gen resp_educ_attain_imp = resp_educ_attain
replace resp_educ_attain_imp = 0 if resp_educ_attain_imp == .
*generate a dummy variable to account for imputations
gen d_resp_educ_attain = (resp_educ_attain == .)

*Imputations for total_savings- there are 207 observations for total_savings. For the values that are missing, the sum of total_formal_savings and total_informal_saving are summed. For observations with missing values for total_formal_savings and/or total_informal_saving, those values are replaced with the local mean of the variable
*impute total_formal_savings using local mean
summarize total_formal_savings, meanonly
local mean_total_formal_savings = r(mean)
generate total_formal_savings_imp = total_formal_savings
replace total_formal_savings_imp = `mean_total_formal_savings' if missing(total_formal_savings)
*impute total_informal_saving using local mean
summarize total_informal_saving, meanonly
local mean_total_informal_saving = r(mean)
generate total_informal_saving_imp = total_informal_saving
```

```
replace total_informal_saving_imp = `mean_total_informal_saving' if missing(total_informal_saving)
*creating a dummy variable to account for imputations
gen d_total_savings = (total_savings == .)
*summing informal and formal savings into total_savings_imp
generate total_savings_imp = total_savings
replace total_savings_imp = (total_formal_savings_imp + total_informal_saving_imp) if total_savings == .
*changing total savings to be thousands of EGP
replace total_savings_imp = total_savings_imp/100
*winsorize total_savings at 5%
winsor total_savings_imp, gen(w_total_savings_imp) p(0.05)

*total_income doesn't have a conditioning variable so the missing values are replaced by the local mean
summarize total_income, meanonly
local mean_total_income = r(mean)
generate total_income_imp = total_income
replace total_income_imp = `mean_total_income' if missing(total_income)
*generate a dummy variable to account for imputed values
gen d_total_income = (total_income == .)
*changing total savings to be thousands of EGP
replace total_income_imp = total_income_imp/100
*winsorize total_income_imp
winsor total_income_imp, gen(w_total_income_imp) p(0.05)

*Turn resp_marital_status into indicator variables with the categories "currently_married" "never_married" and "non_married"
*Create the 'currently_married' indicator variable using married (= 2) and contractually married (=6)
generate currently_married = (resp_marital_status == 2 | resp_marital_status == 6 )
*Create the 'non_married' indicator variable using divorced (=3), widow (=4), and seperated (=5)
generate non_married = (resp_marital_status == 3 | resp_marital_status == 4 | resp_marital_status == 5)
* Create the 'never_married' indicator variable using never_married (=1)
generate never_married = (resp_marital_status == 1 )

*Turn resp_educ_attain into indicator variables with the categories "no_formal_educ" "basic_educ" "secondary_educ" and "higher_educ"
*Create "no_formal_educ" indicator variable using "Never had an education" response to resp_educ_enroll variable = 0 "illiterate" = 1 and "can read and write but doesn't have a diploma" = 2
generate no_formal_educ = (resp_educ_attain == 0 | resp_educ_attain == 1 | resp_educ_attain == 2)
*Create "basic_educ" indicator variable using "has a literary certificate" = 3, "primary education" = 4, and "prepatory education" = 5
generate basic_educ = (resp_educ_attain == 3 | resp_educ_attain == 4 | resp_educ_attain == 5)
*Create "secondary_educ" indicator variable using "secondary technical
```

```
education" = 6, "Secondary" = 7, and "diploma" = 8
generate secondary_educ = (resp_educ_attain == 6 | resp_educ_attain == 7 | resp_educ_attain == 8)
*Create "higher_educ" indicator variable using "University degree" =9
generate higher_educ = (resp_educ_attain == 9)

*Turn healthcare_visit into indicator variables with the categories "healthcare_visit_within6mo" "healthcare_visit_6moto1yr" and "healthcare_visit_over1yr"
*Create 'healthcare_visit_within6mo' indicator variable using 'last week' =1 'last month' =2 'last 3 months' =3
generate healthcare_visit_within6mo = (healthcare_visit == 1 | healthcare_visit == 2 | healthcare_visit == 3 | healthcare_visit == 4)
*Create 'healthcare_visit_6moto1yr' indicator variable using 'last year  =5'
generate healthcare_visit_6moto1yr = (healthcare_visit == 5)
*Create 'healthcare_visit_over1yr' indicator variable using 'more than a year ago =6'
generate healthcare_visit_over1yr = (healthcare_visit == 6)

*create indicator variable for money_autonomy where 1 means that they have some power to make purchasing decisions
gen has_purchasing_autonomy = regexm(money_autonomy, "\b1\b")

*Adding a control for region
gen region_dummy = (region == "Behira")

*Regressions: Regressing variables and using clustering with the variable vill_id to account for potential correlation between observations in the same villages.

*Regression variables list
*regress  duration hh_members_count resp_age resp_alone resp_marital_status resp_worked resp_educ_attain_imp currently_married never_married non_married no_formal_educ basic_educ secondary_educ higher_educ allowence budget financial_knowledge household_borrowing purchasing_autonomy_index w_total_savings_imp w_total_income_imp food_insecurity_score_imp transport_autonomy_score healthcare_visit_within6mo healthcare_visit_6moto1yr healthcare_visit_over1yr d_resp_educ_attain d_total_income d_total_savings region_dummy, absorb(vill_id) cluster(vill_id)

*Label all variables for the regression table
label variable all_results_share "All Responses"
label variable results_share_1 "Asked at Beginning of Survey"
label variable results_share_2 "Asked at End of Survey"
label variable duration "Survey Duration"
label variable transport_autonomy_score "Transport Autonomy Score"
label variable allowence "Allowence"
label variable budget "Budget"
label variable financial_knowledge "Financial Knowledge"
```

```
label variable food_insecurity_score_imp "Food Insecurity Score"
label variable hh_members_count "Number of Household Members"
label variable household_borrowing "Household Borrowing"
label variable has_purchasing_autonomy "Has Purchasing Autonomy"
label variable resp_age "Respondent Age"
label variable resp_alone "Respondent Alone During Survey"
label variable resp_worked "Respondent Worked"
label variable resp_educ_attain_imp "Respondent Educational Attainment"
label variable w_total_savings_imp "Total Savings (100 EGP)"
label variable w_total_income_imp "Total Income (100 EGP)"
label variable currently_married "Currently Married"
label variable never_married "Never Married"
label variable non_married "Not Married"
label variable no_formal_educ "No Formal Education"
label variable basic_educ "Basic Education"
label variable secondary_educ "Secondary Education"
label variable higher_educ "Higher Education"
label variable healthcare_visit_within6mo "Healthcare Visit Within 6Mo"
label variable healthcare_visit_6moto1yr "Healthcare Visit 6Mo to 1Yr"
label variable healthcare_visit_over1yr "Healthcare Visit Over 1Yr"

*Regress all variables on all_results_share and add regression table to .doc file
regress all_results_share duration hh_members_count resp_age resp_alone  resp_worked currently_married never_married non_married no_formal_educ  basic_educ secondary_educ higher_educ allowence budget financial_knowledge household_borrowing has_purchasing_autonomy w_total_savings_imp w_total_income_imp  food_insecurity_score_imp transport_autonomy_score healthcare_visit_within6mo healthcare_visit_6moto1yr healthcare_visit_over1yr d_unescorted_event d_resp_educ_attain d_total_income d_total_savings region_dummy d_food_insecurity_score, absorb(vill_id) cluster(vill_id)
outreg2 using "all_vars_regression.doc", replace label drop( d_unescorted_event d_resp_educ_attain d_total_income d_total_savings region_dummy d_food_insecurity_score)

*Regress results_share_1 on all variables and add to table in .doc file
regress results_share_1 duration hh_members_count resp_age resp_alone resp_worked  currently_married never_married non_married no_formal_educ basic_educ secondary_educ higher_educ allowence budget financial_knowledge household_borrowing has_purchasing_autonomy w_total_savings_imp w_total_income_imp  food_insecurity_score_imp transport_autonomy_score healthcare_visit_within6mo healthcare_visit_6moto1yr healthcare_visit_over1yr  d_unescorted_event d_resp_educ_attain d_total_income d_total_savings region_dummy d_food_insecurity_score, absorb(vill_id) cluster(vill_id)
outreg2 using "all_vars_regression.doc", append label drop( d_unescorted_event d_resp_educ_attain d_total_income d_total_savings region_dummy d_food_insecurity_score)

*Regress results_share_2 on all variables and add to table in .doc file
```

```
regress results_share_2 duration hh_members_count resp_age resp_alone resp_worked currently_married never_married non_married no_formal_educ basic_educ secondary_educ higher_educ allowence budget financial_knowledge household_borrowing has_purchasing_autonomy w_total_savings_imp w_total_income_imp  food_insecurity_score_imp transport_autonomy_score healthcare_visit_within6mo healthcare_visit_6moto1yr healthcare_visit_over1yr d_unescorted_event d_resp_educ_attain d_total_income d_total_savings region_dummy d_food_insecurity_score, absorb(vill_id) cluster(vill_id)
outreg2 using "all_vars_regression.doc", append label drop(d_unescorted_event d_resp_educ_attain d_total_income d_total_savings region_dummy d_food_insecurity_score)


*Creating a balance table
*Create table summarizing each variable in results_share_1
foreach x in duration hh_members_count resp_age resp_alone resp_worked currently_married never_married non_married no_formal_educ basic_educ secondary_educ higher_educ allowence budget financial_knowledge household_borrowing has_purchasing_autonomy w_total_savings_imp w_total_income_imp food_insecurity_score_imp transport_autonomy_score healthcare_visit_within6mo healthcare_visit_6moto1yr healthcare_visit_over1yr {
    quietly summarize `x' if !missing(results_share_1)
    display "`x' mean = " r(mean)
}
*Create table summarizing each variable in results_share_2
foreach x in duration hh_members_count resp_age resp_alone resp_worked currently_married never_married non_married no_formal_educ basic_educ secondary_educ higher_educ allowence budget financial_knowledge household_borrowing has_purchasing_autonomy w_total_savings_imp w_total_income_imp food_insecurity_score_imp transport_autonomy_score healthcare_visit_within6mo healthcare_visit_6moto1yr healthcare_visit_over1yr {
    quietly summarize `x' if !missing(results_share_2)
    display "`x' mean = " r(mean)
}

*running t-test on results_share_1 and results_share_2
*create dummy variable for missing results_share_1
gen results_group = .
replace results_group = 1 if !missing(results_share_1)
replace results_group = 2 if missing(results_share_1) & !missing(results_share_2)
foreach x in duration hh_members_count resp_age resp_alone resp_worked currently_married never_married non_married no_formal_educ basic_educ secondary_educ higher_educ allowence budget financial_knowledge household_borrowing has_purchasing_autonomy w_total_savings_imp w_total_income_imp food_insecurity_score_imp transport_autonomy_score healthcare_visit_within6mo healthcare_visit_6moto1yr healthcare_visit_over1yr {
```

```
    ttest `x', by(results_group)
}

foreach x in duration hh_members_count resp_age resp_alone resp_worked
currently_married never_married non_married no_formal_educ basic_educ
secondary_educ higher_educ allowence budget financial_knowledge
household_borrowing has_purchasing_autonomy w_total_savings_imp
w_total_income_imp food_insecurity_score_imp transport_autonomy_score
healthcare_visit_within6mo healthcare_visit_6moto1yr
healthcare_visit_over1yr {
    di "===== `x' ====="
    summarize `x' if inlist(results_group, 1, 2)
    ttest `x', by(results_group)
}

*Checking to see if differences between wanting results for
results_share_1 and results_share_2 are statistically different
gen results_share = .
replace results_share = results_share_1 if results_group == 1
replace results_share = results_share_2 if results_group == 2
gen group2 = results_group == 2
gen duration_group2 = duration * group2
reg results_share duration duration_group2 group2
test duration_group2
```