

# Impact of conducting student-led developmental disability educational programs in a virtual versus an in-person setting

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## Introduction

One in six children in the United States had a developmental disability (DD)<sup>1,2</sup>. The need for comprehensive training programs for medical providers has been previously evaluated; however, there is little research on the efficacy of student-led educational programs in doing so while also investigating the difference in the impact of such programs through a virtual versus in-person platform<sup>3,4,5</sup>.

The ARIE program is a student-led program, with approximately 30 medical student volunteers in the program annually. Two students are paired with a family who has a child with a DD. The families and students engage in a phone call, two in-person or two virtual visit sessions, and an end-of-program celebration. Students are able to learn more about developmental disabilities, the family's lifestyle, and obstacles that the family experiences in accessing healthcare.

The aim of this study is to determine the efficacy of student-led educational programs on DD while also assessing the impact of virtual versus in-person visits.

## Methods

After receiving IRB approval, 12 families and 24 students have been recruited to participate in the program. A pre-survey (at the start of the program) and post-survey (at the end of the program) is administered to medical student participants. This is to understand the baseline attitudes and perceptions that medical students have toward individuals with developmental disabilities and how participation in the program affects these attitudes and perceptions. Further investigation will determine whether the setting (virtual vs. in-person) influences these results. Paired t-tests were used for data analysis. The survey given in this study is a published validated survey used after obtaining permission from the authors<sup>6</sup>.

For the survey: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

## Results

In the in-person environment, both questions four and six had a significant positive change. This demonstrates that the in-person ARIE program successfully aided medical students in learning more about and being more comfortable around individuals with DDs. Interestingly, no significant changes occurred when the visits were completed virtually. This may be because the virtual environment does not allow for physical contact or environment exploration. Furthermore, for some individuals it is more difficult to maintain focus and to build a meaningful connection virtually.

## Results

This research is based on a limited sample size due to the limited number of families that are able to participate due to caregiving and logistical constraints. Moreover, post-surveys are still in the process of being collected as the ARIE program has just recently concluded, further limiting the sample size of this study. However, this preliminary data provides initial insight on the efficacy that a program like ARIE has on medical students while also demonstrating that a program like ARIE may not be as beneficial in the virtual setting. Further data analysis when a larger sample is obtained will be useful to further elucidate the difference in efficacy of a virtual versus in-person platform.

## Conclusion

This early stage data hints at the fact that the ARIE program can successfully influence medical students regarding their comfort and knowledge of individuals with DDs when visits are completed in-person. However, it does not seem like a virtual environment is able to replicate these effects.

Impact of the ARIE Program					
Survey Question	Visit Type	Pre-Survey Average	Post-Survey Average	Significant Change (p<0.05)	Sample Size
I feel confident working with patients who have a disability.	In-person	4	4.5	No	n=2
	Virtual	3.5	4.5	No	n=2
I feel confident communicating with a patient's family member(s).	In-person	4	4.5	No	n=2
	Virtual	3.5	5	No	n=2
I would be comfortable interacting with a person with an intellectual disability who was in the community on his or her own (i.e., without staff members or caretakers).	In-person	3.5	5	No	n=2
	Virtual	2.5	4	No	n=2
I am comfortable being around a person who has an intellectual disability.	In-person	4	5	Yes	n=2
	Virtual	3.5	4.5	No	n=2
Most people with disabilities feel sorry for themselves.	In-person	2.5	2	No	n=2
	Virtual	1.5	1.5	No	n=2
Most people with disabilities resent people without disabilities.	In-person	3	2	Yes	n=2
	Virtual	1.5	2	No	n=2

## References

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