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Writing Assignment #4

The article I choose to summarize is from The Washington Post and it's called "Inside the Silicon Valley push to breed super-babies". In this article, a biotech company named, Orchid Health, is promoting a new way to form embryos for parents who are trying to conceive via IVF. They are stating that they can create a embryos entire genetic sequence only based off five cells. They use those five cells to test for more than 1,200 monogenic conditions. By doing so, they can formulate a polygenic risk score. Polygenic risk score is used to measure a possible child's genetic likeliness to develop an illness or physical disorder. The purpose of this is to select embryos with the least amount of risk for disease that affect people lives daily like cancer, obesity, and schizophrenia. The founder, Noor Siddiqui, plans on having four children using her technology. She believes that sex is for fun and embryo screening is for babies. Orchid health also uses technology to screen for intellectual disabilities but not for intelligence. Some people in the scientific community see the pros and cons for the possibility of genetic sequencing. Some compare the technique to picking out your spouse for looks essentially flipping the term eugenics by looking at it as parents using growing technology to amplify their child's future. A pathology professor from Stanford University named Svetlana Yatsenko disagrees with the practice of Orchid Health. Yatsenko specializes in clinical and genetic research that uses saliva or blood for genetic testing. Orchid uses a smaller sample and uses a process called amplification. This creates multiple copies of DNA collected from an embryo which can introduce major inaccuracies. In a review article named, the personal and clinical utility of polygenic risk scores, explain how polygenic risk scores are hopeful but should be approached with caution. Most of the time polygenic risk scores only predict a small amount of disease risk. It also talks about how environmental factors and other factors can increase the uncertainty of genetics. Although Orchid Health has successfully helped a couple conceive, the polygenic risk scores can change health outcomes. This article is related to genetics because it talks about DNA sequencing of embryos and polygenic risk scores. It also talks about DNA replication and minimizing disease risk.

References

- Dwoskin, E., & Torbati, Y. (2025, July 16). Inside the Silicon Valley push to breed super-babies. *The Washington Post*.
- Torkamani, A., Wineinger, N.E. & Topol, E.J. The personal and clinical utility of polygenic risk scores. *Nat Rev Genet* 19, 581–590 (2018). <https://doi.org/10.1038/s41576-018-0018-x>