



BÖLÜM 6

Arş. Gör. Fidan BALKAYA

TELE-SAĞLIK, MOBİL SAĞLIK VE GİYİLEBİLİR TEKNOLOJİLER

ederek kişiselleştirilmiş uyarılar ve öneriler sunmuştur.

3. Bu vaka üzerinden tele-sağlık hizmetlerinin temel avantajı aşağıdakilerden hangisidir?

- A) Sadece hastanede kullanılabilir olması
- B) Hastanın verilerini kamuya açık paylaşması
- C) Coğrafi engellere rağmen sürekli ve hızlı sağlık hizmeti sunması
- D) Hastaların tedaviye katılımını azaltması
- E) Tüm kararları insan müdahalesi olmadan alması

Doğru Cevap: C

Açıklama: Tele-sağlık hizmetleri, coğrafi engelleri ortadan kaldırarak hastalara sürekli ve zamanında sağlık hizmeti sunulmasını sağlar.

KAYNAKLAR

- Adams, R. J., Ellington, A. L., Kuccera, K. A., Leaman, H., Smithson, C., & Patrie, J. T. (2023). Telehealth-guided virtual reality for recovery of upper extremity function following stroke. *OTJR: Occupation, Participation and Health*, 43(3), 446–456. <https://doi.org/10.1177/15394492231158375>
- Al-Arkee, S., Mason, J., Lane, D. A., Fabritz, L., Chua, W., Haque, M. S., & Jalal, Z. (2021). *Mobile apps to improve medication adherence in cardiovascular disease: Systematic review and meta-analysis*. *Journal of Medical Internet Research*, 23(5), e24190. <https://doi.org/10.2196/24190>
- Asaad, R. R. (2021). Virtual reality and augmented reality technologies: A closer look. *International Research Journal of Science, Technology, Education, and Management*, 1(2), 1–10. <https://doi.org/10.5281/zenodo.5652297>
- Asadzadeh, A., Samad-Soltani, T., & Rezaei-Hachesu, P. (2021). Applications of virtual and augmented reality in infectious disease epidemics with a focus on the COVID-19 outbreak. *Informatics in Medicine Unlocked*, 24, 100579. <https://doi.org/10.1016/j.imu.2021.100579>
- Baumgärtel, M., Riessen, R., & John, S. (2019). Digitization in intensive care medicine. *Deutsche Medizinische Wochenschrift*, 144(7), 436–441. <https://doi.org/10.1055/a-0846-2581>
- Broffman, L., Barnes, M., Stern, K., & Westergren, A. (2022). Evaluating the quality of asynchronous versus synchronous virtual care in patients with erectile dysfunction: Retrospective cohort study. *JMIR Formative Research*, 6(1), e32126. <https://doi.org/10.2196/32126>
- Chandler, J., Sox, L., Kellam, K., Feder, L., Nemeth, L., & Treiber, F. (2019). Impact of a culturally tailored mHealth medication regimen self-management program upon blood pressure among hypertensive Hispanic adults. *International Journal of Environmental Research and Public Health*, 16(7), 1226. <https://doi.org/10.3390/ijerph16071226>
- Chiauzzi, E., & Wicks, P. (2019). Digital trespass: Ethical and terms-of-use violations by researchers accessing data from an online patient community. *Journal of Medical Internet Research*, 21(2), e11985. <https://doi.org/10.2196/11985>
- Durneva, P., Cousins, K., & Chen, M. (2020). The current state of research, challenges, and future research directions of blockchain technology in patient care: Systematic review. *Journal of Medical Internet Research*, 22(7), e18619. <https://doi.org/10.2196/18619>
- Eberly, L. A., Khatana, S. A. M., Nathan, A. S., Snider, C., Julien, H. M., Deleener, M. E., & Adusumalli, S. (2020). Telemedicine outpatient cardiovascular care during the COVID-19 pandemic: Bridging or opening the digital divide? *Circulation*, 142(5), 510–512. <https://doi.org/10.1161/CIRCULATIONAHA.120.048185>

- Federal Communications Commission. (2018). 2018 broadband deployment report (FCC 18-10). <https://www.fcc.gov/reports-research/reports/broadband-progress-reports/2018-broadband-deployment-report>
- Hermans, K., Webers, C., Boonen, A., Vonkeman, H. E., & van Tubergen, A. (2024). Patient-initiated follow-up supported by asynchronous telemedicine versus usual care in spondyloarthritis (TeleSpA-study): A randomised controlled trial of clinical and cost-effectiveness. *The Lancet Rheumatology*, 6(12), e848–e859. [https://doi.org/10.1016/S2665-9913\(24\)00229-7](https://doi.org/10.1016/S2665-9913(24)00229-7)
- International Medical Device Regulators Forum. (2013). Software as a medical device (SaMD): Key definitions. IMDRF/SaMD WG/N10FINAL:2013. <http://www.imdrf.org/docs/imdrf/final/technical/imdrf-tech-131209-samd-key-definitions-140901.pdf>
- Istepanian, R. S., & Lacal, J. C. (2003, September). Emerging mobile communication technologies for health: Some imperative notes on m-health. In Proceedings of the 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (Vol. 2, pp. 1414–1416). IEEE.
- Kass, J. D., Arpey, N. C., Conway, D. J., Gibbs, C. P., Scarborough, M. T., & Spiguel, A. R. (2025). Orthopaedic oncologic consultation using asynchronous telemedicine: Expedited triage and reduced clinic visits. *JAAOS: Global Research and Reviews*, 9(3), e25.00028. <https://doi.org/10.5435/JAAOSGlobal-D-25-00028>
- Kaya Aytutuldu, G., Ersoz Huseysinoglu, B., Karagoz Sakalli, N., Sen, A., & Yeldan, İ. (2024). LSVT® BIG versus progressive structured mobility training through synchronous telerehabilitation in Parkinson's disease: A randomized controlled trial. *Neurological Sciences*, 45(7), 3163–3172. <https://doi.org/10.1007/s10072-024-07322-0>
- Kişisel Verilerin Korunması Kurumu. (2021). Aydınlatma yükümlülüğünün yerine getirilmesinde uyulacak usul ve esaslar hakkında rehber. <https://www.kvkk.gov.tr/SharedFolderServer/CMS-Files/d7cdaa66-4c6d-4a52-b892-2cdaa64f419d.pdf>
- Kouijzer, M. M. T. E., Kip, H., Bouman, Y. H. A., & Kelders, S. M. (2023). Implementation of virtual reality in healthcare: A scoping review on the implementation process of virtual reality in various healthcare settings. *Implementation Science Communications*, 4(1), 67. <https://doi.org/10.1186/s43058-023-00442-2>
- Lambert, P. (2018). *GDPR: A practical guide to the General Data Protection Regulation*. Thorogood Publishing.
- Li, C., Neugroschl, J., Zhu, C. W., Aloysi, A., Schimming, C. A., Cai, D., Grossman, H., Martin, J., Sewell, M., Loizos, M., Zeng, X., & Sano, M. (2021). Design considerations for mobile health applications targeting older adults. *Journal of Alzheimer's Disease*, 79(1), 1–8. <https://doi.org/10.3233/JAD-200485>
- Li, Y., Tong, Y., Ye, F., & Song, J. (2020). The choice of the government green subsidy scheme: Innovation subsidy vs. product subsidy. *International Journal of Production Research*, 58(16), 4932–4946. <https://doi.org/10.1080/00207543.2020.1730466>
- Liao, S. C., Shao, S. C., Gao, S. Y., & Lai, E. C. (2024). Augmented reality visualization for ultrasound-guided interventions: A pilot randomized crossover trial to assess trainee performance and cognitive load. *BMC Medical Education*, 24(1), 1058. <https://doi.org/10.1186/s12909-024-05998-8>
- Livieri, G., Mangina, E., Protopapadakis, E. D., & Panayiotou, A. G. (2025). The gaps and challenges in digital health technology use as perceived by patients: A scoping review and narrative meta-synthesis. *Frontiers in Digital Health*, 7, 1474956. <https://doi.org/10.3389/fdgh.2025.1474956>
- Manzak Dursun, A. S., Ozyilmaz, S., Ucgun, H., & Elmadağ, N. M. (2024). The effect of Pilates-based exercise applied with hybrid telerehabilitation method in children with adolescent idiopathic scoliosis: A randomized clinical trial. *European Journal of Pediatrics*, 183(2), 759–767. <https://doi.org/10.1007/s00431-023-05340-2>
- Mechanic, O. J., Persaud, Y., & Kimball, A. B. (2022). Telehealth systems. In StatPearls. StatPearls

- Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK459384/>
- Metzendorf, M. I., Wieland, L. S., & Richter, B. (2024). Mobile health (m-health) *smartphone interventions for adolescents and adults with overweight or obesity*. Cochrane Database of Systematic Reviews, 2(2), CD013591. <https://doi.org/10.1002/14651858.CD013591.pub2>
- Morley, J., Machado, C. C., Burr, C., Cows, J., Joshi, I., Taddeo, M., & Floridi, L. (2020). The ethics of AI in health care: A mapping review. *Social Science & Medicine*, 260, 113172. <https://doi.org/10.1016/j.socscimed.2020.113172>
- Obiano, C., Ezeamii, V. C., Idoko, B., Adeyinka, T., Ejembi, E. V., Idoko, J. E., & Ugwu, O. J. (2024). The future of wearable health technology: From monitoring to preventive healthcare. *World Journal of Biology Pharmacy and Health Sciences*, 20(1), 001–009. <https://doi.org/10.30574/wjbphs.2024.20.1.0709>
- Osei, E., & Mashamba-Thompson, T. P. (2021). Mobile health applications for disease screening and treatment support in low-and middle-income countries: A narrative review. *Heliyon*, 7(3), e06639. <https://doi.org/10.1016/j.heliyon.2021.e06639>
- Ozkan-Yildirim, S., & Pancar, T. (2021). Smart wearable technology for health tracking: *What are the factors that affect their use?* In G. Marques, A. K. Bhoi, V. H. C. de Albuquerque, & H. K. S. (Eds.), *IoT in healthcare and ambient assisted living* (pp. 139–157). Springer. https://doi.org/10.1007/978-981-15-9897-5_9
- Privorotskiy, A., Garcia, V. A., Babbitt, L. E., Choi, J. E., & Cata, J. P. (2022). Augmented reality in anesthesia, pain medicine and critical care: A narrative review. *Journal of Clinical Monitoring and Computing*, 36(1), 33–39. <https://doi.org/10.1007/s10877-021-00705-0>
- Raihan, M. M. H., Subroto, S., Chowdhury, N., Koch, K., Ruttan, E., & Turin, T. C. (2025). Dimensions and barriers of the digital (in)equity and digital divide: A systematic integrative review. *Digital Transformation and Society*, 4(2), 111–127. <https://doi.org/10.1108/DTS-04-2024-0054>
- Rodríguez-Abad, C., Fernández-de-la-Iglesia, J. D., Martínez-Santos, A. E., & Rodríguez-González, R. (2021). A systematic review of augmented reality in health sciences: A guide to decision-making in higher education. *International Journal of Environmental Research and Public Health*, 18(8), 4262. <https://doi.org/10.3390/ijerph18084262>
- Saeed, S. A., & Masters, R. M. (2021). Disparities in health care and the digital divide. *Current Psychiatry Reports*, 23(9), 61. <https://doi.org/10.1007/s11920-021-01274-4>
- Serrano, L. P., Maita, K. C., Avila, F. R., Torres-Guzman, R. A., Garcia, J. P., Eldaly, A. S., Haider, C. R., Felton, C. L., Paulson, M. R., Maniaci, M. J., & Forte, A. J. (2023). Benefits and challenges of remote patient monitoring as perceived by health care practitioners: A systematic review. *The Permanente Journal*, 27(4), 100–111. <https://doi.org/10.7812/TPP/23.022>
- Skorburg, J. A., & Yam, J. (2021). Is there an app for that?: Ethical issues in the digital mental health response to COVID-19. *AJOB Neuroscience*, 13(3), 177–190. <https://doi.org/10.1080/21507740.2021.1918284>
- So, C. F., & Chung, J. W. (2017). Telehealth for diabetes self-management in primary healthcare: A systematic review and meta-analysis. *Journal of Telemedicine and Telecare*, 24(5), 356–364. <https://doi.org/10.1177/1357633X17700552>
- Tükek, T., & Şenkal, N. (2022). Tele sağlığın ortaya çıkışı ve günümüzdeki önemi. I. P. Soysal & T. Tükek (Eds.), *Tele sağlık* (pp. 1–6). İstanbul Tıp Kitabevi.
- Vasista, K. (2022). Augmented reality vs. virtual reality. *Central Asian Journal of Mathematical Theory and Computer Sciences*, 3(3), 1–4.
- Viderman, D., Tapinova, K., Dossov, M., Seitenov, S., & Abdildin, Y. G. (2023). Virtual reality for pain management: An umbrella review. *Frontiers in Medicine*, 10, 1203670. <https://doi.org/10.3389/fmed.2023.1203670>
- Wilcox, S., Liu, J., Sevoyan, M., Parker-Brown, J., & Turner-McGrievy, G. M. (2024). Effects of a behavioral intervention on physical activity, diet, and health-related quality of life in postpartum women with elevated weight: Results of the HIPPA randomized controlled trial. *BMC Pregnancy and Childbirth*, 24(1), 808. <https://doi.org/10.1186/s12884-024-07007-8>