Ideation
PhaseLiterature
Survey

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ProjectName	PlasmaDonorApplication

Paper 1: Plasma donor app usage behaviour and perceptions: Considerations for a Plasmadonationapp(AndreaPotgieter,May2022)

This article aimed to determine whether South African Plasma donor app usage behaviour andperceptions were conducive to introduce a Plasma donation app, and what these behavioursand perceptions could reveal, to support South African Plasma Donation Organizations in theirrecruitment and engagement endeavours. The research problem discussed in this article soughtto highlight the app usage behaviour of Plasma donors, and their perceptions about a proposedPlasmadonationapp.formingpartofalargersequentialmixed-methodsstudy,thedatapresented in this article were gathered through a quantitative online questionnaire involving2154 South Africans respondents. The value of this research lies in the insight gained into thebehaviourandperceptionsofSouthAfricanblooddonors,whichcaninformtheconceptualization and design of a Plasma donation app, thereby improving its efficacy andsubsequentlysupportingthestrategyofemployingsuchatechnologytoincreasePlasmadonation .

Paper 2: Evaluation of the Wateen App in the Plasma -Donation Process in Saudi Arabia(TourkiahAlessa, April2022)

Theaimofthisresearchwastoevaluatetheusability,usersatisfactionandperceivedusefulness of this Plasma donation app in Saudi Arabia. A mixed-method study was conductedcomprising a quantitative questionnaire with donor and qualitative semi-structured interviewswith healthcare professionals. Descriptive analysis was used for the quantitative data and athematicapproach forthequalitative data.Quantitative dataanalysis wasconductedusingSPSS software package 19 to calculate descriptive statistics.This Plasma-donation app is highlyusable and acceptable among donors and healthcare professionals in Saudi Arabia, offeringseveral benefits. Some accessibility issues were identified, along with possibilities for improvingaccessibilityandexpanding the app'sfunctionality.

Paper 3: Location-based Mobile Application for Plasma Donor Search(FernandoAlexSierra-Linan,January2022)

The research proposes the development of a location-based mobile application for Plasmadonorsearch (DONAPE), for which the mobile applicationprovides a direct location-basedchannelbetweenPlasmaseekersandPlasmadonationcenters.Achievingtoincreasethenumber of donors, improve the place of origin (geographical location) of donors and improvethe search time. They chose to use the agile Scrum method to develop the project prototype.This method has 5 phases: initiation, planning and estimation, implementation, review andretrospective and launch, for the development of this project. In web and mobile applicationsweredevelopedtomanagePlasmadonation,allowingtoregister,schedule,receivenotifications and access information, synchronizing Plasma donation centers with emergencycenters, to verify the availability of Plasma needed and to send a request to the nearest Plasmadonationcenter.

Paper 4: A Cross-Platform Plasma Donation Application with a Real-Time, Intelligent, andRational RecommendationSystem(Rashik Rahman, September2021)

In this research work, they have designed a real-time, intelligent, and rational recommendationsystem using sentiment analysis of the user's feedback, response rate of the donor, and thecurrent geo-location information and finally develop a cross-platform application for Plasmacollection and distribution system. To process and generate features from the user feedback,they have designed a Bi-directional LSTM-based deep learning model. They chose the flutterframework to develop our cross platform applications. Firebase, a Google platform for mobileand web applications, has been used in the proposed application for authentication man. Thequality of the recommendation of the potential donors has significantly improved. Moreover,theyhaveconductedrigorousrequirementanalysisfromrealusersandevaluatedtheperformanceoftheapplication throughboth indoorand outdoor testing.

Paper5:PreferencesandfeaturesofablooddonationsmartphoneapplicationMulticentermixed-methodsstudyinRiyadh, SaudiArabia(Afaf AliBatis, March 2021)

Toidentifythefeatures andpreferencesofablooddonationsmartphoneappforblooddonationcentersanddonorsinRiyadhCity,SaudiArabia.Thisisamixed-methodstudycomposedofaquantitativecross-sectionalpart(withdonors,usingaself-administeredquestionnaire), and a qualitative/quantitative part (with blooddonationcenterstaff, usingsemi-structuredinterviews).Datawerecollectedbetween15November2017and5February

2018,fromfourblooddonationcentersinRiyadhCity,SaudiArabia.Adescriptiveanalysiswasusedforth equantitativepart and athematicapproachforthequalitativepart.