LITTLELIFE: CHILDREN NUTRITION MONITORING SYSTEM

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by

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INTRODUCTION

Study focused on the development of a web-based management information system for monitoring children's nutrition. System automated calculation of nutritional status, processing of reports, inventory management for micronutrient and food pack supplies, audit trails. System includes user accounts for admin, attending staff, secretary, and inventory. System was evaluated by the researchers? chosen client and (10) Information Technology (IT) professionals who are familiar and knowledgeable with the software and applications that were used in the study. System can be added in the future to improve and enhance the system's functionality. The LittleLife: Children Nutrition Monitoring System monitors children's nutrition. The system can be accessed by the ?Admin? of Barangay Pamplona Tres. It includes the name of the sponsor, brand, expiration date, date received, and who received the supplies. The ?Complementary Feeding? module focused on the lists of severely stunted children. The user can upload multiple records through Microsoft ?Microsoft Excel? as well as the adding of individual records. The system's primary function is to monitor the nutritional status of children aged 0-59 at Barangay Pamplona Tres, Las Pinas City. Healthcare workers say it is difficult to keep track of kids and help those at risk without better tools. Web-based monitoring that has features of FAQs can help users get answers to their questions about the feeding program system. Dashboards feature visual monitoring charts for monitoring the nutritionalstatus of the users and overseeing child growth effectively. The system is based on the ISO 25010 Quality Model and is the 25th edition of the ISO Quality Model. The system would help identify kids who are not eating well and people who don?t receive enough micronutrients so people could address the issue right away. The ?Attending Staff? is mainly responsible for supervising the complementary feeding. Integrated interactive features within the calendar module to visualize scheduled activities and the number of children scheduled to be reweighed. The Inventory Management module shows the inventory of micronUTrient supplies and food pack supplies. This comprehensive community-driven strategy demonstrated the barangay's commitment toLITTLE LIFE: CHILDREN NUTRITION MONITORING SYSTEM. The ?Audit Trails? module includes

usernames, dates, times, and actions. The ?Secretary? is mainly responsible for encoding individual record/s, viewpoints, and activities. ?Activities? modules aims to efficiently manage nutrition workers, parents, and caregivers in Barangay Pamplona Tres in the Philippines. The features can display, create, update, delete, and export a list of all users as a PDF file. It would allow doctors, parents and policymakers to easily collect and review data on kids' nutrition.

METHOD

The Littlelife monitoring system is designed to be user-friendly and easy to use. The system will have FAQs that will be shown on the homepage, the categories/legend, and the audit trail that records all the activities of the users on the system. The monitoring system should be appropriate to the user's needs and satisfied with its functions. It should be easy to understand by new users regardless of their ages and capabilities. The users will be able to access all modules of the Littlelife system through any browser. The monitoring system should be responsive to admin and user interaction performed in the system. Records are responsible for facilitating the monthly monitoring of the Nutritional Station of the children using the Child Growth Standard (CGS) Table, and monitoring of qualified children in complementary feeding. The Inventory Manager monitors the flow of the supplies that the stocks are recorded from the supplier. The Secretary is the one responsible for recording and monitoring the children's nutritional status by updating the registered child's weight, and height monthly. The system is designed to be responsive to user interaction. The goal of the study is to develop the most convenient way to monitor the child growth standard. It aims to assist the admin to easily monitor the progress of their beneficiaries and generate a summarized report of their overall activities within the programs. It also includes an option where it will send messages to the guardians of children who are enrolled in complementary feeding programs as a way of reminding them on when to take the food packs. The Dashboard shows the total number of accounts made, thetotal number of activities, the pie graph of child growthstandard, and the line graph of the report?s overview. The monitoring system is easy to understand for new users and users of all ages. It has the power to add, remove, and modify children?s information and track the history database. The admin has access to all modules that are limited to each user. The secretary is also responsible for updating the children's upcoming activities. The attending staff is responsible for distributing the supplies like micronutrients and food packs. The system is designed to be clear and consistent across categories and legends. It is easy for data visualizations and reports to be easy to read and analyze. The LittleLife: Children Nutrition Monitoring System adds individual

records to the system's data storage. The system can generate reports if needed. The guardians will receive an SMS notification once the food packs are ready for distribution. The admin can add, edit, or delete frequently asked questions that can be seen on the homepage of the website. The researchers created a local development server using a Local Server setup that resembled the production environment. The LittleLife software is designed to be used by external administrators. It is intended to be a tool for monitoring and controlling the nutritional status of children. The LittleLife: Children Nutrition Monitoring System is a web application. It monitors the nutritional status of the child. The Inventory Manager is responsible for monitoring supplies like micronutrients and food packs. Laravel Blade was used for the User Interface Design, templating to generate HTML on the server side. The system is designed with the first phase of the study translated into reality. The second phase is to make the design into code. The third and final phase is the development of the system. poser ?version?s Inventory Management consists of three modules.?Inventory, Micronutrient, and Food pack supplies? give a precise system for monitoring the consumption of micronutrients. ?In inventory, Micronsutrient and Food Pack supplies? give a system for monitoring the Consumption of microns. ?Inventory? is a system to monitor the consumption of micronuts, and ?pack supplies?? are a system for monitoring the consumption of food pack supplies.

RESULTS

The monitoring system was able to respond to admin and user interactions. The monitoring system can load different modules promptly. There are no system freezes or unresponsiveness encountered. The Littlelife system can monitor the user's login activities in the audit trail on the admin side. The system can export the data that is displayed on the table to a PDF file. It can add and delete users in the user management module on theadmin side. It is not possible to use the system to monitor the nutritional status of children. The monitoring system was able to launch properly on different browsers preferred by the users such as Google Chrome and Microsoft Edge. The Littlelife system can monitor the list of qualified children in the complementary feeding program and be able to send an SMS notification for the food pack distribution. The system was designed to allow information related to the nutrition status of children to be transmitted and received through interfaces that have a record of information features on the system. Based on the evaluation of the web-based system using the ISO 25010 framework, the system performed well in many areas. The monitoring system was able to display the updated and latest graphs and the status of the children's nutrition. The Littlelife system can summarize the records, and reports that are displayed on the dashboard. Future developments and improvements in the design and usability can extend the beneficial role of the system and enhance its efficiency by maintaining constant attention to users? feedback. After publishing it online, the researchers underwent evaluation with the client and other IT professionals for testing and approval. The following figures present the different interfaces of the web-based entitled ?LittleLife: Children Nutrition Monitoring System? The monitoring system was able to exhibit its user interface to the user while maintaining its functionalities. The Littlelife system can display the activities on the homepage promptly, as well as integrate the activities into the calendar. The monitoring system has high completeness, bipartisancorrectness, and appropriateness to meet user needs with a weighted mean of 4. The system was developed using the following programming tools namely, Visual, Xampp, Git, DBMS, JavaScript, Laravel, Bootstrap, MySQL, PhpExcel, PHP Native, and jQuery. The researcher developed a web-based system

entitled ?LittleLife: Children Nutrition Georgian system. It was aimed at determining the nutritional status of a child by performing the ?Operation Timbang Plus"program using the World Health Organization (WHO) Child Growth Standard charts effectively and efficiently. The Littlelife system can be utilized by its specific users, such as the Admin, Admin, Attending Staff, and Inventory Manager. The user can send another SMS notification to the guardian if s/he fails to collect his or her child's respective food pack. The Littlelife system can track inventory levels of the micronutrient supplies and food packs supplies. The micronutrients sub-page of the inventory system provides a line graph that shows the stock levels. The user management interface offers administrators the capability to create and manage accounts. The Littlelifesystem cannot retrieve deleted data after the user confirms to delete fiercely permanently. The results of the tests were published in the book Littlelife: The Child Nutritional Monitoring System. The book was published by Oxford University Press.

DISCUSSION

Based on the ISO 25010 criteria for Functional Suitability, Performance Efficiency, Usability, Reliability, Security, Maintainability, and Portability, the LittleLife system was evaluated to be Highly Acceptable. Web-based system allowed the users to send SMS notifications to the guardian of the children who are included in the complementary program. The website was secure enough to guarantee the privacy of each child?s information while it adhered to the highest standards of data security, data accuracy, and privacy of users. LittleLife: Children Nutrition Monitoring System was created using Visual Studios Code IDE, Xampp, Git, DBMS, JavaScript, Bootstrap, PHP Native and jQuery. The website was able to showcase its user interface and at the same time, kept its functionality. The system presents a highly detailed analysis of various data aspects and is able to obtain efficient indicators for children?s follow-up on nutrition. It is also important to continuously upgrade and maintain the system to adapt to the latest technologies.