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## **Component-1 (Blog-Poster)**

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Table of Contents

**Blog-1** ..... 3

**Blog-2** ..... 6

**References:** ..... 9

**Poster:** ..... 10

## **Blog-1**

## **“MYFITNESSPAL APP: NUTRITIONAL NAVIGATOR IN THE WORLD OF DIETARY CHALLENGES.”**



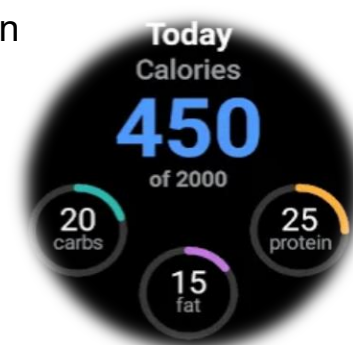
Achieving a well-balanced diet is a fundamental aspect of maintaining a healthy lifestyle. However, with our busy lives and the endless array of food choices available, many individuals have been struggling to maintain a healthy diet. According to [WHO \(2021\)](#), prevalence of underweight and overweight in adults in 2020, was 462 million and 1.9 billion respectively. Among under 5 children 45% deaths occurred because of malnutrition and incidence of childhood obesity was also booming ([WHO, 2021](#)).

### **MYFITNESSPAL: CALORIE COUNTER**

- Are you constantly wondering for your intake of vitamins and minerals in your diet?
- Are you concerned about excess calories and sugar intake?

MyFitnessPal is versatile app that can be incredibly helpful in addressing your all nutrition-related concerns. By using this app, you can track your daily calorie intake for managing your weight, whether it is losing, gaining, or maintaining. This app helps you understand if you are consuming too many or too few calories based on your targeted goals like weight loss, or muscle gain ([Chen et al., 2019](#)).

[The app provides a comprehensive breakdown](#) of the nutrients in the foods you consume, allowing you to ensure your meeting your daily nutritional requirements. You can plan your meals in advance and log what you intend to eat. Macro tracker and hydration tracker are most essential feature of app, they track your carbs, protein, fat, and water intake, respectively. This app includes a barcode scanner, making it effortless to log packaged foods. Since 1989, 70% dieters followed this app for better plan diet ([Alonso, 2015](#)).



(Source: Google)

## **PROS**

This app was successful because it's self-monitoring features ([Scheid and Lupien, 2021](#)) and increased awareness about calorie intake, and nutritional content. MyFitnessPal has been a momentous change for people. The app can synchronise with various fitness wearable devices, making it easier to track your exercise and count you steps. MyFitnessPal has improved the mental well-being of users. Setting and achieving goals can boost self-esteem and confidence.



This app can lead stress and anxiety for those, who cannot achieve their goal and leading eating disorders. This app prioritizing calories and macros over food quality and has limitations for users with specific health conditions.

To address these limitations to create support network within the app's community to stay motivated. To create platform, where users consult with healthcare professionals who can provide tailored dietary guidance and monitor health condition.

## **Blog-2**

# **"HerHealth360: Empowering Women's Wellness"**

In today's fast-paced world, it is essential for women to keep track of their health and overall well-being. One survey conducted by the Public Health England ([PHE, 2018](#)) shows that 31% women developed reproductive health problem. In addition, according to [WHO \(2023\)](#), 8-13% reproductive-aged women suffered from PCOS (Polycystic Ovary Syndrome) and 70% women remains undiagnosed. Moreover, 8 to 12% couples have been leaving with infertility and 48 million couples have experience of infertility worldwide ([Ombelet, 2020](#)).

## **"HerHealth360": A comprehensive women's Health Tracker App**



This app is not just only tracker app; it has features for managing stress and well-being, maintain the sleep time, hydration level and if you have any conditions then face to face consultation with doctor. This app allows you to log and predict your periods accurately, track symptoms, and mood changes. It also offers fertility and ovulation tools for those who are trying to conceive. It predicts your fertile window and ovulation days, making family planning more accessible for women. Pregnant women or new mother can rely on HerHealth360 to guide them through this transformative phase. This app provides a wealth of information and resources about common reproductive health problems like PCOS, endometriosis, pelvic inflammatory Disease (PID), Fibroids to aware them about symptoms and treatment.

### **Advantages:**

HerHealth360 provides knowledge about women's bodies and reproductive health, empowering them to make informed decisions about treatment. By tracking symptoms and menstrual cycles, the app aids in the early detection of irregularities and reproductive health issues.

### **Challenges:**

This app collects sensitive personal health data, raising concerns about data privacy and security. Not all women may have access to smartphones or the necessary technology to use HerHealth360, potentially excluding a portion of the population. This relies on user input, which may lead to variations in accuracy, especially when tracking health symptoms. Maintaining user engagement and consistency in tracking health data can be challenging, as users may lose interest or forget to use the app regularly.

## **Solutions:**

Implement robust data encryption and security measures to protect user data. Clearly communicate the app's data privacy policy to users and obtain their informed consent for data collection and usage. Consider creating a web-based version of the app for users who may not have access to smartphones. Collaborate with organizations and government initiatives to provide access to underserved populations.

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# Poster:

## "Transform Your Plate, Transform Your Life: MyFitnessPal- Companion for Healthy Nutrition and Diet" -Saleha Gugarman (2236803)



### Background

This poster aims to provide a comprehensive knowledge about public health problems to nutrition and diet, focusing on the prevalence and the need for scaling up interventions to address these challenges. Public health problems related to nutrition and diet: Undernutrition/malnutrition occurs when insufficient intake of calorie and essential nutrients, losing 5-10% weight in 3 months, less than 18.5 body mass index (BMI) (NHS, 2023). In 2016, in worldwide, 155 million children under -5 aged children experienced problems related to undernutrition like stunting, wasting, lack of minerals and vitamins and in 2020, 462 million adults suffered from underweight (WHO, 2021) and in the UK, 1.3 million over 65 years people were leaving with undernutrition and cost for undernutrition in 2011-12 was £19.6 billion (HFE, 2022) and Overnutrition: the consumption of high-calorie, low-nutrient foods contributing the growing obesity epidemic, over 25 BMI, and high weight (NHS, 2023). It leads to increased risk of chronic health conditions, such as type 2 diabetes, heart disease, and certain cancers (NHS, 2023). In 2020, the prevalence of overweight in adults, was 1.9 billion globally and 41 million children were developed obesity (WHO, 2021). In the UK, in 2018-19, 1 million people admitted to hospital because of obesity (Digital NHS, 2021).

"Change4Life" was a public health campaign in England led by Public Health England (PHE) with the aim of reducing the amount of sugar and saturated fat and salt intake in children's breakfast. Change4Life provides guidance for parents and caregivers by developing Be Food Smart App, this app allows users to scan barcodes and discover the sugar content in products (PHE, 2017).

Described one of the intervention -MyFitnessPal, Calorie Counter App in part-1, is a famous mobile app and website that provides tools and resources to help individuals to manage their nutrition and diet, tracking their physical activity, and work towards fitness and goals.

### Health Promotion Values and Principles

The main concepts of health promotion are determinants health, health literacy, quality of life and empowerment (Rootman and O'Neill, 2017).

- Empowerment:** Health promotion empowers individuals and communities to take control of their health and it is a social process to improve equity and quality of life by changing their social and political environment (Wallerstein et al., 2015). MyFitnessPal app provides tools and knowledge and skills to make informed, healthy choices and helps users to make informed choices by tracking their food intake, exercise, and nutrition data.
- Equity:** Health promotion aims to reduce health inequalities and ensure that everyone can achieve their best possible health (Dugani, Bhutta, and Kisson, 2017). While this app doesn't directly address social determinants of health, it involves addressing disparities in access to healthy food and resources.
- Health Literacy:** Improving health literacy is a fundamental principle of health promotion. It includes ensuring that individuals have the knowledge and skills to understand and act upon health information, to make decisions and prevent disease and to communicate information (Rootman, Frankish and Kaszap, 2007). This app educate users about calorie content, macronutrients, and micronutrients, and information related to nutrition and diet.
- Determinants of Health:** This includes a wide range of factors: social, economic, environmental and cultural determinants (Rootman and O'Neill, 2017). Social factors include income, education, employment, and social support systems, affect an individual's access and choices about healthy foods; economic factors influence food affordability and accessibility. It can impact on an individual's ability to maintain a nutritious diet; the proximity of grocery stores and access to fresh produce, can significantly impact dietary choices; cultural practices, traditions, and food preferences play a crucial role in diet.
- Quality of Life:** This includes individual's physical, psychological, emotional, financial, social and overall well-being (Rootman and O'Neill, 2017). This app gives proper nutrition supports to prevent diet-related issues, influence mood and cognitive function, by sharing meals and communal dining experiences enhance social connections, and by reaching goal can enhance the self-esteem.



### Transtheoretical Model (TTM): The Behaviour Change Theory

MyFitnessPal app is a powerful tool designed to assist individuals in making positive changes to their nutrition and diet. In achieving this goal, the app draws upon the Transtheoretical Model (TTM), also known as the Stages of Change model which provides a structured framework for understanding and behaviour change in nutrition and diet-related contexts.

**Overview of TTM:** The Transtheoretical Model was organized by Prochaska and DiClemente (Dahl, Eagle, and Ebrahimjee, 2013) and has since become one of the most influential behaviour change theories in the field of health and wellness. TTM identifies distinct stages through which individuals progress as they make lasting changes in their behaviour, including dietary habits. These stages are:

- Precontemplation:** In this stage, individuals are not considering behaviour change. They may be unaware of the need to change or are resistant to making changes to their nutrition and diet.
- Contemplation:** Individuals in this stage are aware of the need for change and are contemplating acting soon, but they haven't committed to a specific plan yet.
- Preparation:** People in this stage are actively preparing for behaviour change and may have taken some initial steps towards it. They are setting goals and gathering information.
- Action:** During the action stage, individuals have made significant changes to nutrition and diet and are actively following a plan.
- Maintenance:** This stage involves maintaining the changes made during the action stage and preventing relapse. Individuals work to sustain their new dietary habits over time.

### How MyFitnessPal incorporates TTM:

- Stage-Tailored Content:** MyFitnessPal adapts its content and recommendations to align with user's specific stages of change. For users in the contemplation stage, it may provide information on the benefits of healthier eating. Those in the action stage receive tools for tracking their meals and exercise.
- Goal Setting and Planning:** The app supports users in the preparation stage by helping them set specific nutrition and diet goals. These goals are defined in the preparation stage, making it easier for users to transition to the action stage.
- Progress Monitoring:** MyFitnessPal encourages users to monitor their food intake and exercise, which is particularly helpful during the action and maintenance stages. Continuous monitoring is key to sustaining positive changes.
- Educational Resources:** The app provides educational content that informs users about the importance of nutrition and diet in each stage, helping to raise awareness and motivation.
- Reminders and Alerts:** MyFitnessPal sends reminders and alerts to help users maintain their goals and sustain changes during the action and maintenance stages. These serve as prompts for continued commitment.
- Feedback and Reinforcement:** Users receive positive feedback and recognition for their progress, reinforcing their commitment to dietary changes during the action and maintenance stages.
- Community and Support:** MyFitnessPal's social features, including the ability to connect with friends and join groups, offer a support system that is invaluable during the action and maintenance stages.

### Expected Outcomes:

The Transtheoretical Model (TTM) offers a structured framework to understand and facilitate behaviour change, particularly in the context of nutrition and diet.

- Increased Self-awareness:** Users of app gain a greater awareness of their current dietary habits and understand the implications, fostering increased awareness about the need of change.
- Goal Setting and Commitment:** Using tools, provided by application, users can set specific, measurable, and achievable nutrition goals. By fostering commitment and intention users can achieve their goals.
- Behaviour Change:** Users can adopt and maintain new healthier dietary behaviour by using goal-setting features, progress tracking, and personalized interventions during the action stage and beyond.
- Relapse Intervention:** Users develop strategies to prevent relapse and maintain positive dietary changes by getting support, daily reminders, and feedback. Because of this, user can stay on track.
- Increased Self-Efficacy:** Users gain confidence in their ability to make and sustain dietary changes and success in goal achievement, coupled with positive reinforcement and community support, contributes to increased self-efficacy, empowering users to make lasting changes.

**Enhanced coping skills:** Because of this app, users gain knowledge about coping strategies and provides resources to address challenges, enhancing their ability to cope with barriers to change.

### Conclusion:

In conclusion, the application of the Transtheoretical Model (TTM) within the MyFitnessPal app for nutrition and diet reflects a dynamic and personalized approach to facilitating behaviour change. Through the stages of change, users progress from self-awareness to sustained positive behaviours, supported by goal-setting features, tailored interventions, and ongoing engagement. MyFitnessPal's alignment with TTM principles positions it as a comprehensive tool, empowering users to navigate their unique journey toward healthier habits. By fostering self-efficacy, addressing relapse prevention, and enhancing outcome expectations, the app contributes to not only immediate behavioural changes but also long-term improvements in overall well-being. As users embrace positive lifestyle changes and experience the transformation impact on their health, the TTM-guided MyFitnessPal app emerges as a valuable companion on the path to a healthier and more nutritious life.

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