



AWAERANCE , KNOWELADGE AND IMPACT OF PROBIOTICS ON CHILDHOOD DIARRHEA IN BENNGHAZI CITY



PROJECT IS SUBMITTED IN PARTIAL REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHARMACY

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Abstract

Introduction: According to WHO, probiotics are defined as "live microorganisms that, when administered in adequate amounts, confer a health benefit on the host." Lactic acid bacteria and *bifidobacteria* are the most common microbes used as probiotics. Probiotics have several health benefits, such as anti-inflammatory effects, stimulating the production of antimicrobial agents by host cells, elimination of pathogenic bacteria, enhancement of the immune response, hypocholesteremic effect, and cancer prevention. The mechanisms of health-beneficial effects of probiotics are various, which range from bacteriocin and short-chain fatty acid SFAA production, lowering of gut pH, and nutrient competition to stimulation of mucosal barrier function and immunomodulation. Probiotics have shown efficacy in treating and preventing diarrhea in children. Several studies demonstrate that probiotics can reduce the duration of acute diarrhea by approximately one day and decrease the risk of prolonged diarrhea. They can also shorten hospital stays by 24 hours. Probiotics can reduce the risk of antibiotic-associated diarrhea by 50%. Probiotics appear most effective against rotaviral diarrhea and should be introduced at the start of antibiotic treatment for optimal results. The most effective strains in preventing diarrhea are *Lactobacillus rhamnosus* GG and *Saccharomyces boulardii*. While generally safe, rare cases of invasive infections have been reported in immunocompromised children or those with central venous catheters. **Aim of study:** This is a survey study focused on the uses of probiotics as pharmaceutical products in the treatment of childhood diarrhea in Benghazi City. In addition, it discovers the awareness and knowledge of parents about the beneficial effects of probiotics. **Method:** It is a retrospective cohort study. 100 participants were included in this study, and an interview questionnaire was used for the collection of data within two months (June and July 2024). **Conclusion:** Pharmaceutical products containing probiotics are effective in the treatment and prevention of diarrhea and a low-cost probiotic intervention