**ANTIBIOTIC RESISTANCE PATTERNS OF *Salmonella* SEROVARS ISOLATED FROM DIARRHEAL STOOL SAMPLES OF PEDIATRICS ATTENDING GENERAL HOSPITAL, LAPAI, NIGER STATE, NIGERIA.**

**BY**

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**ABSTRACT**

The emergence and spread of antibiotic resistance among *Salmonella* serovars pose a significant public health concern, especially in pediatric populations. This study aimed to investigate the antibiotic resistance patterns of *Salmonella* serovars isolated from diarrheic stool samples of pediatric patients. A comprehensive analysis was conducted on One hundred (100) samples collected for a period of seven weeks (October to December, 2023). The samples were collected at random timing (a week for each collection) within the period of this study. Among these samples, 17 (17%) children were found to be infected with Non-typhoidal Salmonellosis by stool culture on *Salmonella-Shigella* agar. The isolates were identified via conventional biochemical tests. The serovars identified include *S*. Typhimurium (76%) and *S*. Enteritidis (24%) as the predominant isolates. Antibiotic sensitivity testing revealed resistance, particularly to Ampicillin (PN), Augmentin (AU), Septrin (SXT) and Nalidixic acid (NA). *S*. Enteritidis showed resistance to Septrin (SXT), Ampicillin (PN) and Augmentin (AU), while *S*. Typhimurium resisted Nalidixic acid (NA). Multiple Antibiotic Resistance (MAR) indicated that the isolates of *Salmonella* serovars exhibited multiple antibiotic resistance index greater than 0.2. This translates to bacterial infection and drug resistance, possibly as a result of frequent use of antibiotics. The statistical analysis revealed that area of domicile, water source, antibiotic use and age are significant factors and are associated with the occurrence of *Salmonella* in the diarrheal stool of pediatrics with the **P value** of **0.00 (P < 0.05)**. This study concludes that understanding these resistance patterns is critical for guiding effective treatment strategies and warrants continuous surveillance to reduce the escalating threat of antibiotic-resistant *Salmonella* infections in pediatric patients. It was recommended that the overuse and misuse of antimicrobial agents should be stopped, especially among pediatric population.

**Key words**: Antibiotics, Diarrheic stool, Resistance, *Salmonella* serovars