

TITLE: EVALUATION OF MICROBIOLOGY CONDITIONS OF TABLE SURFACES IN SELF-SERVICE RESTAURANTS.

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ABSTRACT:

Self-service restaurants are liable to contamination by pathogenic microorganisms as Enterobacteriaceae and *Staphylococcus* spp that represents main cause of foodborne diseases outbreaks. The great demand of customers in self-service restaurants, causes damages to the hygiene of the tables where meals are held, which has been recognized as reservoirs of pathogenic microorganisms, representing a threat to the health of the people, mainly the immunosuppressed. Further, several bacteria in the environment are antimicrobial resistant and may contaminate water and food with serious consequence to health, as difficulties in treatment foodborne diseases. This study aimed to analyze the presence of microorganisms on table surfaces in self-services restaurants in South region in Goiânia, State Goiás, Brazil; and determine the susceptibility of this microorganism to different antimicrobials. We conducted a cross-sectional, observational study which included 12 samples of swabs of table surfaces from six self-services restaurants in January 2017. Swabs humidified in 0.85% sterile saline solution were rubbed against surfaces; and were inoculated in BHI broth, and each positive culture was streaked on MacConkey, Manitol and SS agar. The developed colonies were submitted to macroscopic and microscopic observation as well as biochemical evaluation. The susceptibility profiles were determined by the disk diffusion method. Of the total of 24 samples, 100% was positive for bacterial growth, and in 10 were detected more than one isolate. It was observed high microbial counts (>10 UFC/cm²) in 67% of the table surfaces, exceeding limits proposed by the American Public Health Association. Amongst 19 isolated bacterial, 21%, 15% and 5.3% were identified as *Escherichia coli*, *Staphylococcus aureus* and *Salmonella* sp, respectively. The isolates showed resistance or intermediate resistance to at least one of the traditionally used antimicrobials in the medicine practice, as vancomycin, penicillin, imipenem and cefepime. The results supply important contributions in relation to the necessity of the cleanness of table surfaces in the self-services restaurants. With the high frequency of Gram-negative bacteria and the increase of the bacterial resistance to antimicrobials agents, basic procedures of hygiene and cleanness are imperative for the reduction of the rate of foodborne diseases.

Keywords: foodborne diseases, microbiological analysis, self-service restaurants, table surfaces