EUROPEAN SCIENTIFIC JOURNAL
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10 YEARS

Manuscript: **"Detection Of Fecal Coliforms In Water Used In Formal And Informal Food Outlets In Kasungu District, Malawi"**

Submitted: 19 October 2020
Accepted: 15 January 2021
Published: 31 January2021

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Doi: 10.19044/esj.2021.v17n3p300

Peer review:

Reviewer 1: Blinded

Reviewer 2: Evens Emmanuel, University of Quisqueya, Haiti

Reviewer 3: Blinded

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Manuscript Title: Faecal coliforms in water used in formal and informal food outlets of Kasungu District, Malawi	
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Please give each evaluation item a numeric rating on a 5-point scale, along with a thorough explanation for each point rating.

Questions	***Rating Result*** [Poor] **1-5** [Excellent]
1. The title is clear and it is adequate to the content of the article.	**2**
The introduction of the paper should be revised. Indeed, the authors did not provide any information on specific aspects of the problem to be investigated. The reviewer asks the authors to clearly define the research question of the work, and to justify it in relation to the information available in the literature on the subject.	
2. The abstract clearly presents objects, methods and	**4**

results.	
(Please insert your comments)	
3. There are few grammatical errors and spelling mistakes in this article.	
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4. The study methods are explained clearly.	**3**
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5. The results are clear and do not contain errors.	**3**
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6. The conclusions or summary are accurate and supported by the content.	**3**
(Please insert your comments)	
7. The references are comprehensive and appropriate.	**3**
References should be revised, for example the reference (Agensi, 2019) cited, is not in the list of bibliographic references. The work of this author which is referenced is a joint publication: "Agensi, A., Tibyangye, J., Tamale, A., Agwu, E. and Amongi, C., 2019. Contamination potentials of Household Water Handling and Storage Practices in Kirundo Subcounty, Kisoro District, Uganda. Journal of Environmental and Public Health, 2019, pp.7932193-7932193."	

Overall Recommendation (mark an X with your recommendation) :

Accepted, no revision needed	
Accepted, minor revision needed	
Return for major revision and resubmission	**X**
Reject	

Comments and Suggestions to the Author(s):

Manuscript Number: ESJ 1119/20

Title: Faecal coliforms in water used in formal and informal food outlets of Kasungu District, Malawi

Reviewer' comments:

Overall statement of the article

Ensuring the safety of drinking water is an ongoing process. In developed countries, Water is essential to sustain life and a satisfactory supply of drinking water must be

made available to all consumers (WHO, 2006). According to WHO (2003) 80% of sicknesses and deaths among children in the world are caused by unsafe drinking water. Drinking water regulations require the monitoring of numerous bacterial, parasitic, or chemical contamination (Lee and Kim, 2002). It is well established that the risks associated with the consumption of microbiologically contaminated water are a great concern from a health perspective (OECD, 2003). It has been shown that the presence of pathogens correlates well with the presence of contamination (Leclerc et al., 2001) and as a result modern drinking water testing relies on faecal bacteria as indicators of both faecal contamination and the possible presence of disease-causing organisms (Sirajul Islam et al., 2007).

Faecal coliforms are a group of intestinal bacteria used as indicators to determine if treated water is acceptable for human consumption. Their presence of coliforms in drinking indicates the presence of disease-causing organisms (Nwachukwu and Otokunefor, 2006). Indeed, feacal coliform contamination of drinking water is a continuing source of diseases worldwide (Melnick and Gerba, 1979).

In the paper “Faecal coliforms in water used in formal and informal food outlets of Kasungu District, Malawi” submitted to ESJ for publication, the authors aimed to (1) analyze the microbial quality of water used in formal and informal food outlets; (2) establish correlation between faecal coliforms and determinants of water quality (Water pH, Turbidity (T), Total Dissolved Solids (TDS) and Electrical Conductivity (E.C.); and (3) compare the level of risk of faecal contamination between the water used at formal and informal food outlets.

The paper contains 3 keywords: *faecal coliforms, formal food outlets, informal food outlets*.

This work is divided into 7 distinct parts: (i) Abstract, (ii) Introduction, (iii) Materials and Methods , (iv) Results, (v) Discussion, (vi) limitations of the study, and (vii) Conclusion. With the exception of the introduction, study limitations and conclusion, the other sections are subdivided into several sub-parts.

The paper has 7 tables and 5 figures. There are 25 references, which are from 1998 to 2019. The majority of references are from recent dates, and are internationally evaluated and published in peer-reviewed journals with important impact factors.

The conclusion of this study show that contaminated water was used for many activities such as dish washing, washing of food stuffs and served to consumers for drinking. Findings also showed that some determinants of water quality such as turbidity and total dissolved solids were so predictive of faecal contamination. Although formal food outlets had better sanitary conditions than the informal ones, the study did not establish any significant differences in terms of microbial quality.

Overall strengths of the article

The title is clear. The authors clearly state the aims of the paper ESJ 1119/20. The topic of the works is of general interest, and the article reflects a present state of knowledge with a literature sufficiently current and internationally evaluated. The paper has very interesting results. It is an informative paper.

Introduction

The authors described the general aspect of the contamination of water by fecal coliforms, they presented the object of the study.

Methodology

The methodology is very well developed. The variables have been well defined.

Overall statement

The introduction of the paper should be revised. Indeed, the authors did not provide any information on specific aspects of the problem to be investigated. The reviewer asks the authors to clearly define the research question of the work, and to justify it in relation to the information available in the literature on the subject.

The reviewer asks the authors to provide the references from which they have taken the measurements of the parameters determined in this study (which standards or methods have been adopted).

In order to make the paper more impacful, the reviewer asks the authors to revise the article, making the paper more concise.

The reviewer suggests to the authors the idea to modify it to: 'Detection of faecal coliforms in water used in formal and informal food outlets in Kasungu district, Malawi". The paper needs major revisions.

References should be revised, for example the reference (Agensi, 2019) cited, is not in the list of bibliographic references. The work of this author which is referenced is a joint publication: "*Agensi, A., Tibyangye, J., Tamale, A., Agwu, E. and Amongi, C., 2019. Contamination potentials of Household Water Handling and Storage Practices in Kirundo Subcounty, Kisoro District, Uganda. Journal of Environmental and Public Health, 2019, pp.7932193-7932193*."

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