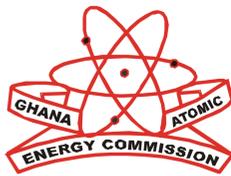




# An Exploratory Study of the Observance of Bacterial Fish Lesions and Infection Risk among Women

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**BACKGROUND:** Some bacteria that infect fish, such as species of *Mycobacteria* and *Salmonella*, are pathogenic to humans and may result in significant morbidity, including skin lesions of the extremities. Fish retailers and processors in Ghana, who are often women, are more directly exposed to fish and so are at a high risk for such infections. Furthermore, they may be burdened with the additional risk of high morbidity since routine clinical microbiological laboratories in Ghana do not consider their profession and so do not test for such uncommon infections. Therefore, this study was designed to obtain information that will inform the design of a laboratory based microbiological study. The prevalence of *Mycobacterial*, *Salmonella* and other such infections of fish and their prevalence in skin lesions among women working in the fish industry in Ghana will be studied therein.

**METHOD:** An exploratory cross-sectional study conducted in the urban communities of the Greater Accra Region of Ghana (study population), one of the three coastal regions and has a high proportion of both marine and inland fish business in Ghana. In order to recruit the 117 participants in this study, purposive and passive-search sampling of persons working with fish were employed in this study. Structured questionnaires were used, by an interviewer-administration method, to collect information from participants on their experience in the fish business, the observance of lesions on the fish and rashes on the participants as well as their customers' perception of the observed lesions. These pictures, presented as figure 1, were used with the questionnaire to help in the identification of the lesions of interest on fish. Collected data were entered in Ms. Excel transferred to and analyzed by SPSS version 20.

**RESULTS:** A greater proportion of the predominately female participants had been involved with only retailing (26.5%) and processing (20.0%) of fish and most of them have been in the fish business for 6 or more years (55.5%) and worked with between 2 and 5 fishes (54.7%). About **55.6%** had observed such lesions on fish and the observance was common among the **retailers and processors** of fish. Additionally **24.8%**, who were mostly involved with retailing and processing fish, reported having had a rash.



Figure 1. Picture of fish showing lesions

Table 1: Distribution of skin rash in relation to fish work among the participants

Fresh fish business	No. who had Rash (%)
Buy	0 (0.0)
Wholesale	0 (0.0)
Retail	9 (31.0)
Process	6 (20.7)
Buy and Retail	3 (10.3)
Buy and Process	1 (3.4)
Wholesale and Retail	1 (3.4)
Retail and Process	8 (27.6)
Buy, Wholesale and Retail	1 (3.4)
Buy, Retail and Process	0 (0.0)
Fishermen	0 (0.0)
Total	29 (100)

**DISCUSSION:** The findings that slightly more than half of the participants (55.5%) had been working with fish for between 6 years and more than 20 years, suggests a high likelihood that the participants may recognise such lesions if they had seen them or were present on fish they have worked with. The association of skin conditions with working with fish have been reported (Janda, 2014; Abowei and Briyai, 2011; Holt *et al.*, 2005), however, the experience of a rash was common among those who were involved with retailing and processing of fresh fish. Even among the participants who were involved in only one type of business, it was only those who were involved with retailing and/or processing that reported having had a rash.

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**CONCLUSION:** The observance of fish lesions mostly by and the occurrence of skin rashes mostly among retailers and processors of fish, who are often women in Ghana, necessitates a study of the prevalence of the *Mycobacterial* and the emerging *Shewanella* bacterial infection among women in the fish business in the coastal region of Ghana.