

Title :Ergonomics of designing kitchen hand tools in industrial design field

Name :Osama Ali El Sayed Nada

Job title : Lecturer in Industrial design Dept., Faculty of Applied Arts, Benha University

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ABSTRACT :

With the urbanization ,people are engaged in doing many things in daily life such as preparing food activities for family members in kitchens . They have to perform physical efforts in cooking and preparing food by small kitchen tools like graters,peeler,knives...etc,which are widely used in kitchens .Many national and international data suggests that there is increased number of injuries attributable to kitchen hand tools used in preparing food in kitchens, resulting in unnecessary suffering and injuries .

Some tools are advertised as “ergonomic” or are designed with ergonomic features. A kitchen hand tool becomes “ergonomic” only when it fits the task user is performing, and it fits user hand without causing awkward postures, harmful contact pressures, or other safety and health risks. If user uses a tool that does not fit his hand or use the tool in a way it was not intended, he might develop an injury or uncomfortable. These injuries do not happen because of a single event, such as a fall. Instead, they result from mismatch with user hands or bad design of the tool itself .

The principles of ergonomics are rapidly emerging as a "must" for kitchen hand tools design .Prevention of these injuries is a high priority for industrial designers, they can prevent or reduce them by designing ergonomic kitchen tools .

The purpose of this thesis was planned to know some of these tools in the market and covers most ergonomic features that should be considered when designing, selecting or purchasing kitchen hand tools, but does not cover all features.

An ergonomic investigation concerning handle design has been conducted providing guidelines on design features to consider in order to design an ergonomic handle.A marketing analysis, investigating some tools on the market has been implemented. The analysis focused on analyzing functions, materials and design in order to find problem areas and be able to use the analyzed material in a more detailed function analysis.

The results of this thesis includes compiling information about the ergonomic considerations of kitchen hand tools with focus on the ergonomic factors concerning anthropometry of the hand and design of hand tools. This information is later to be used by the industrial designers and applied within the area of industrial design.