

Requirements to Design Sustainable Functional Clothing for Low-Risk Security in National Projects

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Abstract:

Egypt is witnessing national development in all sectors through several national projects "Egyptian Vision 2030". National projects aim to invest the available resources, provide job opportunities, and attract investment. They also consider the dimensions of sustainability, which represent unprecedented, civilized development. It is noted that many private organizations such as schools and commercial malls rely on the use of private security to guard these organizations, which is low-risk private security. Studies proved that wearing clothes that are inappropriate for the job requirements of low-risk security, especially in hot and humid climates (such as the environmental and climatic conditions in Egypt) causes great physiological pressures on workers and leads to cognitive impairment and a feeling of fatigue and discomfort, which results in a decrease in the worker's job performance, especially when increasing the working hours. In this context, the research aims to study the requirements to design sustainable functional clothing for low-risk security in national projects, considering the Egyptian tendency in achieving sustainability standards in national projects by proposing designs for security clothing for low-risk organizations in national projects. A survey was conducted through personal interviews that included 26 low-risk private security personnel in private organizations such as schools and commercial malls, to determine the functional and aesthetic requirements to reach the highest job performance. Based on the results of the survey, a set of designs for low-risk private security were proposed to be in line with the Egyptian environment and climatic conditions considering the dimensions of sustainability. A questionnaire was used for specialists containing 17 phrases divided into four axes to measure the suitability of the proposed designs to the required performance by achieving the axes and objectives of the research. (SPSS) program version 27 was used to analyze the statistical results and arrange the proposed designs according to the achievement of the research axes and objectives. The order of designs according to the opinions of specialists was the seventh, then the fifth, then the third, then the first, then the second, then the fourth, then the eighth, then the sixth design. By asking specialists about the best color combinations that suit the chosen designs for functional clothing to low-risk private security, the preferences were for the color group that expressed light blue for the shirt and navy for both the jacket and pants. Based on the statistical analysis of the results of the specialists' responses, the best designs that obtained the highest results in achieving the research axes and objectives were implemented, and the color group that received the highest acceptance rate among specialists was used.

Keywords:

Clothing design - functional clothing – low-risk security - national projects

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