

A Case Study :

A study of surgical gown requirement

ARUSHI JABEEB ANSARI AND USHA KAHOL

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See end of the article for authors' affiliations

Correspondence to:

ARUSHI JABEEB ANSARI
Department of Home
Science, Sarojni Naidu Govt.
Girls (P.G.) College, Shivaji
Nagar, BHOPAL (M.P.)
INDIA

ABSTRACT

Surgical gowns are worn by doctors and nurses in the operating theatre to address a dual function of preventing transfer of microorganisms and body fluids from the operating staff to the patient, and also from patient to staff. Many of the performance requirements for surgical gowns are well documented. Surgical gowns must repel diseases and infections yet provide adequate freedom to move. The gowns must control the bacteria released into the theatre and aid in maintaining the sterile zone required for patient safety. They must provide for easy donning and doffing without contamination, yet not have openings where the barrier might be breached

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Successful creation of functional apparel products requires a disciplined, structured approach to design and development (Slater, 1998). An effective, integrated approach progresses through investigation of the design problem, delineation of design requirements and critical analysis of those requirements before arriving at a design solution. This is the best accomplished through four major thrusts. The first two, materials analysis and design analysis, initiate the process in a manner consistent with that described by Watkins (1995). The latter two thrusts, design development and evaluation, move in the direction of the design solution. This paper will focus on the design analysis component of the functional design process using a surgical gown case study to illustrate.

It seems appropriate to preface discussion of design analysis with a clarification of the term "functional apparel". All apparel items must meet minimal functional requirements including being supported by the body and allowing some degree of body movement. Likewise, all apparel products meet at least a minimal range of aesthetic requirements such as colour and texture. Therefore, it is helpful to envision apparel products as existing at some point along an aesthetic to functional continuum, where the location along the continuum reflects the balance of requirements. Examples of three common products clarify the continuum. Those items considered to be functional apparel, such as a surgical gown, have requirements dominated by performance needs and are located near the functional end of the continuum.

For present study, hospitals were selected from areas of Indore city. Different areas of Indore has been covered for sample cloth market hospital at Gangwal Bus Hospital, Bafna Hospital at Rajmohalla, Verma Union Hospital at Dhar Road, M.Y. Hospital, Nirmal Hospital at Rajendra Nagar. And 25 doctors were selected for the study and the sample was divided in 5 groups. There were several ways of collecting the data but the survey, interview observation were selected as method for study.

After the data have been collected, they were processed and analyzed under the following heads:

The results depicted in Table 1 show that 84 per cent doctors were satisfied with surgical gowns, while 16 per cent are not satisfied with surgical gowns.

The result depicted in Table 2 show that 100 per cent doctors used surgical gowns for their body safety.

The results depicted in Table 3 show that 100 per cent doctors preferred green and blue in surgical gown for the peaceful atmosphere.

It is clear from Table 4 that 12 per cent doctors were of opinion to change colour of surgical gowns while 88 per cent doctors did not want to change colour of surgical gowns.

The results of Table 5 indicate that 28 per cent doctors wanted to change in surgical gown and 72 per cent doctors did not want change of size in surgical gown.

The results depicted in Table 6 show that 24 per cent doctors wanted some change in fitting in surgical gown, while 76 per cent doctors did not want the change