

Design Criteria and Construction of Functional Apparel for Event Decorators in Lafia, Nigeria

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Abstract

The objective of this study was to determine design criteria and construct the functional apparel for event decorators. The study was carried out in Lafia, Nigeria. Population of the study comprised 102 decorators. Simple random sampling techniques was used to sample 50 decorators for the study. The instruments for data collection were the Body measurement chart (BMC), functional apparel need assessment chart (FANAC) and the Judges assessment form (JAF). Four specific objectives guided the study. Frequencies, percentages, means and standard deviations were used for data analysis. Findings revealed six major apparel needs for decorators' functional apparel to include-stress reduction, safety in the work place, for group identification, for job effectiveness, for protection, for uniqueness and self-esteem. the study identified four functions performed by interior decorators in the study area, which include decorating the venue, discussing/meetings with clients, determining decor requirements and performing basic first aid emergency. Among the instrument/tools required in their operations, event decorators are always in need of scissors, tape, office pin, hammer, fabric, nails, thumb pin, ribbon, flowers, spray, gums, masking tapes and staplers, as lead items in carrying out operations. To perform tasks effectively, event decorators desired apparel that will; be comfortable in use, be made with large armhole for free arm movement, be comfortable in fit, allow wearer move freely to perform tasks, have styles safe to prevent fall, be made with durable fabric, be made with correct pattern size for fit, be made with appropriate seams, be well finished to serve its purpose in use and be produced with safe fasteners to prevent injury and be roomy to accommodate all necessary tools to minimize stress. Four recommendations were made among which include-apparel industries and manufacturers should use design criteria identified in this study as the basis for developing functional apparels for event decorators and that the findings should be made available to apparel producing industries and manufacturers to encourage the production of functional apparel for different occupational jobs based on their activities.

Keywords: Creative Constructive Behavior, Prototype Clothing, Clothing Needs Assessment.

Introduction

The driving force to designing in education is all about preparing the learner to become a creative problem solver. In this era of technology, educationists are challenged to find out the easiest way of solving certain problems. According to Thompson (2022), the thrust of design education is

the preparation of students to become creative problem solvers and projecting them to combination of product evolved through a process. Design according to Lawson (2023) is a highly complex and sophisticated skill which must be learnt and practiced. Koberg and Bagnall (2022) stated that design is the process of making

dreams come true and also the process of creative problem-solving; a process of creative constructive behaviour. Design criteria are requirements which the finished apparel constructed must possess. According to Thompson (2022), design criteria are determined based on four basic factors namely-characteristics of individuals involved as users of the designed product; the specific tasks performed by these individuals; the environmental/atmospheric condition where these tasks are performed and the materials and tools available for use by the event decorator.

Event decorators are the potential users of this constructed functional apparel and so will meet up with the specific needs of its profession in a tropical environmental condition with high humid and hot environment such as Lafia. Osabo (2023) noted that the work of a decorator requires a lot of energy and can be stressful if not well organized. Decorators are involved in climbing the ladder often and on in every event decoration and that is the major challenge in all the operations. This energy sapping exercise should be drastically minimized, thus there is need for functional apparel. The needs assessment study resulted in a number of criteria identified for the functional apparel and these identified criteria were based on the fact that the apparel ensemble design should be comfortable; beautiful; easy to care for; unisex; accommodate body movements at work; fit a range of sizes and figure types; accommodate enough working tools at a time; provide adequate closures for easy wearing and pulling off; protect decorators from sharp objects; promote professional image and should be affordable.

Thompson and Anyakoha (2022) conducted a need assessment study on functional apparel for cosmetologists. The study revealed that the identified criteria

for the apparel should be aesthetically pleasing; accommodate body movements around the work area; fit a range of sizes and figure-types; provide adjustable closures for easy donning and doffing operation. The apparel should be comfortable; accommodate equipment for event decorators; protect against water/chemical intrusion; enhance self and professional image; be capable of mass production. Apparel should be affordable and easy to care for; and should adequately cover the body. Illmarinen, Tammela and Korhonen (2022) conducted needs assessment study of new functional work clothing for meat-cutters. Interviews with the wearers revealed a need for protective clothing from extreme cold environmental conditions that allowed mobility and flexibility of the hands and arms. Prototype work clothing was developed and wear-tested, design changes continued until a final set of work clothing were produced. Lee, Sontag and Slocum (2022) determined the perceived needs of apparel manufacturers in Michigan with a view to making their firms more competitive than at present. Some of the needs identified were categorized under-product development, pricing of products, advertising and promotional strategies, identification of target markets. training of employees, labor supply and productivity, new equipment and machinery maintenance of equipment, computer use and taxes. The unique feature of this study was the identification of specific needs within each main needs category. In each category, improvement and optimization of functional roles was needed to make firms more viable than at present.

Alexander (2023), carried out a study on needs assessment for flight attendant uniforms. This study enabled the researcher to gather the preferred design criteria necessary to develop an ideal

flight attendant uniform different from the one in use at the time. Bergen, Capjack, McConnan and Richards (2022), worked on neonates; Yoo, (2023), worked on petite and tall-sized women. Needs assessment studies have also been used to determine task-related clothing needs for female bicycle riders, dancers, tennis players and clean-room workers (Barker, 2023). Clothing needs identified ranged from physical comfort, garment function, fit and design, wearer preferences to garment appearance/attractiveness and protection. Most of these needs assessments were conducted as part of a wider research process.

The literature reviewed exposed several areas of need assessment related to the event decoration practices which includes the socio-psychological, activity, movement and impact assessment of the functional apparel. Socio-psychological assessment addressed the clothing preferences of the users; values that will affect the ultimate acceptance of the apparel for both gender and tolerance of specific design features. Activity assessment which looked into an in-depth observation of activities as performed in the natural setting, movement assessment meant to determine whether clothing interferes with the event decorator's performance of tasks, impact assessment, which determined the areas of the body prone to attack of hit back of iron, paint or pins and accommodation assessment which considered the quantity of tools the apparel can accommodate at a time.

Objectives of the Study

The main objective of the study was the determination of design criteria for the development of functional apparel for event decorators in Lafia. Specifically, the study determined:

1. Functional apparel needs of an event decorator.
2. Functional apparel design criteria for event decorators

3. Develop, draft and construct functional apparel for event decorators
4. Equipment and tools event decorators use.
5. Assess the constructed apparel by the judge

Materials and Method

Design of the Study

Experimental design was adopted for the study.

Population of the Study

The population comprised all event decorators in Lafia metropolis with the estimated number of decorators of about one hundred and thirty-four (134) for both male and female (Market master registration record, 2024)

Sample and Sampling Techniques

Simple random sampling technique was adopted to select the study sample. The names of 134 event decorators were written, folded and kept in a box. Researcher picked 50 names out of 134 to make up for the sample size for the study. With this method every name had the opportunity to be picked.

Instrument for Data Collection:

Three instruments were used to collect data in this study. The first was the Functional Apparel Needs Assessment and Design Chart (FANADC). This instrument was developed after thorough assessment on the various tools used by the event decorators. The reasons for the use of the FANADC instrument was to gather information concerning the functional apparel needs for the event decorators which was constructed to achieve a stress-free operation and the justification for such innovative idea. The second instrument was the Body Measurement Chart (BMC) which was used to establish the average

measurement of the sampled individuals for the construction of the functional apparel for event decorators. The third instrument was the Judges' Assessment Form (JAF). This form was developed to assess the models 'after the construction of the functional apparel. The judges used the JAF to assess some attributes such as comfort, fit, ease of movement, belt well fitted, armhole move freely, safety, aesthetics, expressive, protection among others using 5 Likert scale with the range of assessment at 2.45-2.55.

Method of Data Collection and Analysis Techniques

Descriptive statistics was used to analyze the data obtained from the needs assessment instrument. Frequencies, percentages, mean and standard deviation were used to analyze functional

apparel needs of study participants. The mean was used to analyze the design criteria obtained from the study participants. The analysis was done with the statistical package for social sciences software (SPSS) version 12. On a 5-point Likert-type scale, a mean value of 3.00> was considered satisfactory in all the variables measured. Mean scores on any variable <3.00 were considered unsatisfactory.

Results

Table 1 displays the functional apparel needs of event decorators. 100% responded positively to the needs of event decorators on the need for job effectiveness, protection against sharp objects, easy identification, stress free and self-esteem needs.

Table 1: Functional Apparel Needs of event decorators

S/N	Category of Needs	n = 195			
		Yes		No	
		F	%	F	%
1	For easy identification	50	100	0	0
2	For safety in the workroom	50	100	0	0
3	For protection against sharp objects	50	100	0	0
4	For stress free	50	100	0	0
5	For job effectiveness	50	100	0	0
6	For self-esteem	50	100	0	0

Table 2- reveals the design criteria of event decorators. An eleven-items under 5-point Likert-type scale of 'strongly agree' – "strongly disagree' was presented for assessing the design criteria to be

utilized in producing the functional apparel to accommodate the activities of event decorators and only one item was found not so important being below the mean decision range of 2.45-2.55.

Table 2: Functional apparel design criteria of an event decorator

SN	Functional apparel design criteria of an event decorator	SA	A	D	SD	Total respondents	Decision total	Decision mean	Decision Range	Remarks
1	Apparel should be comfortable	60	0	0	0	60	240	4.00	2.45-2.55	Vi
2	Design should adequately cover the body	50	4	5	1	60	223	3.72	2.45-2.55	Vi
3	Apparel should be affordable	40	12	6	2	60	210	3.50	2.45-2.55	Vi
4	Apparel should be easy to care for	55	4	1	0	60	234	3.90	2.45-2.55	Vi
5	Design should be beautiful	57	3	0	0	60	237	3.95	2.45-2.55	Vi
6	Design should accommodate body movements at work	60	0	0	0	60	240	4.00	2.45-2.55	Vi
7	Design should fit a range of sizes and figure types.	53	4	3	0	60	230	3.83	2.45-2.55	Vi
8	Apparel should accommodate enough equipment/tools at a time	60	0	0	0	60	240	4.00	2.45-2.55	Vi
9	Design should protect decorators from sharp objects	45	15	0	0	60	225	3.75	2.45-2.55	Vi
10	Design should promote professional image	48	10	2	0	60	226	3.77	2.45-2.55	Vi
11	Design should provide adequate closures for easy wearing in and pulling off of the apparel	54	2	3	1	60	229	3.82	2.45-2.55	Vi
12	Apparel should not be made from dull coloured fabrics	32	20	4	4	60	200	3.33	2.45-2.55	Vi
13	Design should be unisex	60	0	0	0	60	240	4.00	2.45-2.55	Ni

Key Vi= very important, Ni = Not important

Table 3: Develop, draft and construct functional apparel for event decorators

Measurement was taken from 15 identified body parts of the 50 respondents and average of each body part was established and standardized to three sizes. The established

SN	BMC- parts of body to be measured	SA	A	D	SD	Total respondents	Decision total	Decision mean	Decision Range	Remarks
1	Shoulder	40	10	5	5	60	205	3.42	2.45-2.55	Vi
2	Bust	50	6	4	0	60	226	3.77	2.45-2.55	Vi
3	Waist	60	0	0	0	60	240	4.00	2.45-2.55	Vi
4	Hip	45	10	5	0	60	220	3.67	2.45-2.55	Vi
5	Tigh	50	10	0	0	60	230	3.83	2.45-2.55	Vi
6	Ankle	48	12	0	0	60	228	3.80	2.45-2.55	Vi
7	Crotch	51	9	0	0	60	231	3.85	2.45-2.55	Vi
8	Arm circumference	60	0	0	0	60	240	4.00	2.45-2.55	Vi
9	Sleeve length	45	10	5	0	60	220	3.67	2.45-2.55	Vi
10	Armhole measurement	50	10	0	0	60	230	3.83	2.45-2.55	Vi
11	Neck measurement	48	12	0	0	60	228	3.80	2.45-2.55	Vi
12	Half-length measurement	51	9	0	0	60	231	3.85	2.45-2.55	Vi
13	under bust measurement	15	6	20	19	60	137	2.28	2.45-2.55	Ni
14	wrist measurement	10	4	6	40	60	104	1.73	2.45-2.55	Ni
15	Full length measurement	60	0	0	0	60	240	4.00	2.45-2.55	Vi

average measurement was used to draft pattern for the construction of the functional apparel for the event decorators.

Key *Vi*= *very important*, *Ni* = *Not important*

Table 4: Equipment and tools event decorators use.

Table 4 reveals the tools the event decorators use in undertaking their decoration jobs. 21 tools were identified to be often used by the event decorators. Out of 21 tools only 2

SN	Equipment and tools interior decorators use.	SA	A	D	SD	Total respondents	Decision total	Decision mean	Decision Range	Remarks
1	Hammer	50	5	5	0	60	225	3.75	2.45-2.55	Vi
2	Flamingo nails	48	7	5	0	60	223	3.72	2.45-2.55	Vi
3	Tailors' pin	60	0	0	0	60	240	4.00	2.45-2.55	Vi
4	Measuring tapes	60	0	0	0	60	240	4.00	2.45-2.55	Vi
5	Masking tape	40	10	5	5	60	205	3.42	2.45-2.55	Vi
6	Stapling machine	47	13	0	0	60	227	3.78	2.45-2.55	Vi
7	Press stud nail	40	15	5	0	60	215	3.58	2.45-2.55	Vi
8	Fabrics	60	0	0	0	60	240	4.00	2.45-2.55	Vi
9	Colour sprayer	50	6	4	0	60	226	3.77	2.45-2.55	Vi
10	Ropes/twines	52	8	0	0	60	232	3.87	2.45-2.55	Vi
11	Flowers (natural and artificial)	42	8	5	5	60	207	3.45	2.45-2.55	Vi
12	Gums	39	11	7	3	60	206	3.43	2.45-2.55	Vi
13	Hand gloves	45	10	5	0	60	220	3.67	2.45-2.55	Ni
14	Nails (different sizes)	60	0	0	0	60	240	4.00	2.45-2.55	Ni
15	Hand needles	48	12	0	0	60	228	3.80	2.45-2.55	Vi
16	Markers/crayon	36	14	7	3	60	203	3.38	2.45-2.55	Vi
17	Scissors	60	0	0	0	60	240	4.00	2.45-2.55	Vi
18	Razor blades	52	4	4	0	60	228	3.80	2.45-2.55	Vi
19	Plyer	50	6	4		60	226	3.77	2.45-2.55	Vi
20	Screw driver	46	4	7	3	60	213	3.55	2.45-2.55	Vi
21	Paper ribbon	53	6	1	0	60	232	3.87	2.45-2.55	Vi

were found not to be so important as they fall below the mean decision range of 2.45-2.55 using 5-point Likert Scale.

key Vi= very important, Ni = Not important

Table 5: Judges assessment Form-

Table 5 reveals the opinion of the judges concerning the constructed functional apparel of event decorators as it was on the models. All the assessment indicators were found very important.

SN	Judges' assessment form	SA	A	D	SD	Total respondents	Decision total	Decision mean	Decision Range	Remarks
1	Are pockets enough to contain all the decorating tools	40	10	5	5	60	205	3.42	2.45-2.55	Vi
2	The closure of those pockets is of high quality	50	6	4	0	60	226	3.77	2.45-2.55	Vi
3	Armhole not too tight	60	0	0	0	60	240	4.00	2.45-2.55	Vi
4	The legs can move freely	45	10	5	0	60	220	3.67	2.45-2.55	Vi
5	The belt very fitting to the body	50	10	0	0	60	230	3.83	2.45-2.55	Vi
6	Wrist pin holder firmly fixed	48	12	0	0	60	228	3.80	2.45-2.55	Vi
7	Hem of the functional apparel at ankle well fitted	51	9	0	0	60	231	3.85	2.45-2.55	Vi

Discussion

The functional apparel needs of event decorators were determined and presented in table 1. It presents the frequency counts and percentages of respondents who answered "Yes" or "No" to the general functional apparel needs of event decorators in Lafia Metropolis. Fifty (50) responded positively to the needs of event decorators by ticking "yes" to- job effectiveness, protection against sharp objects, easy identification, stress free and self-esteem needs. The summary of the findings shows that majority (82.0%) of the event decorators indicated that job effectiveness, safety, and protection in the workplace, and looking good and different were prominent on the list of perceived needs. A slightly above average (18%) number of event decorators indicated that group identification and the

self-concept played a role in the choice of apparel for occupation. This is an indication that event decorators were more interested in occupational effectiveness, safety and aesthetic appearance that should match the beauty culture trade.

Based on the outlined categories of need, event decorators specifically and positively agreed on eleven criteria that should be utilized for the production of functional apparel to accommodate the needs and the activities performed in the workplace (table 2). The criteria and the mean scores on the items were as follows- Items in the scale included such statements as: 1) Design should be aesthetically pleasing, 2) Design should accommodate body movements around the work area, 3) Design should fit a range of sizes and figure-types, 4) Provide

adjustable closures for easy donning and doffing operation, 5) Apparel should be comfortable, 6) Accommodate equipment for event decorators operation, 7) Design should protect against spray/pins/gum intrusion, 8) Design should enhance self and professional image, 9) Design should be capable of mass production, 10) Apparel should be affordable and easy to care for, 11) Design should adequately cover the body. The mean and standard deviation were calculated for all the design criteria statements. In all the statements, the mean values were above 4.50 indicating that all the respondents strongly agreed to the design criteria statements presented as important specifications to the successful production of functional apparel geared towards user needs.

50 randomly sampled respondents were measured from 15 identified body parts of the 50 respondents and average of each body part was established and standardized to three sizes. The established average measurement was used to draft pattern for the construction of the functional apparel for the event decorators. All the body parts suggested for body measurement were all accepted. The drafted patterns were standardized to three sizes-small, medium and big. These three sizes were used to construct the functional apparel for event decorators as shown in figure 1 and 2. A total of seven items were used in judging the constructed functional apparel. All the items suggested were all very important to this study.

Conclusion and Recommendations

Conclusively, the study identified four functions performed by interior decorators in the study area, which include decorating the venue, discussing/meetings with clients, determining decor requirements and

performing basic first aid emergency. Among the instrument/tools required in their operations, event decorators are always in need of scissors, tape, office pin, hammer, fabric, nails, thumb pin, ribbon, flowers, spray, gums, masking tapes and staplers, as lead items in carrying out operations. To perform tasks effectively, event decorators desired apparel that will; be comfortable in use, be made with large armhole for free arm movement, be comfortable in fit, allow wearer move freely to perform tasks, have styles safe to prevent fall, be made with durable fabric, be made with correct pattern size for fit, be made with appropriate seams, be well finished to serve its purpose in use and be produced with safe fasteners to prevent injury and be roomy to accommodate all necessary tools to minimize stress. From the analyses of the study, the following were recommended-

1. Apparel industries and manufacturers should use design criteria as the basis for developing functional apparels for event decorators
2. The established mean body measurements for interior decorators should be used by students of Home Science and Management, clothing and textiles, and garments makers for mass pattern drafting production.

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