



**INCLUSIVE GARMENT DESIGN FOR MUSLIMAH ELDERLY WITH  
PHYSICAL DISABILITIES IN AN OLD FOLKS HOME IN BANGI,  
SELANGOR, MALAYSIA**

By

**JULIZA BINTI JAMIAN**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra  
Malaysia, in Fulfilment of the Requirements for the Degree of  
Master of Science**

**April 2022**

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in  
fulfilment of the requirement for the degree of Master of Science

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**Chairman : Associate Professor Nazlina binti Shaari, PhD**  
**Faculty : Design and Architecture**

World experiencing ageing growth as one of the global phenomenon by increasing the size and proportion in their population. This group of people facing various challenging issues in their life such as medical and health problem. This situation leads to ageing population who disabled and need more quality of care in their life. The chronic condition of disabled elderly cause a burden to them as for example disabled elderly having difficulties in control their body movement while handling dress and undress their garment. In addition, to ensure the high quality health system for disabled elderly in nursing or care unit, there is a need to improve assistive garment in order to provide ease of treatment access to disabled people in old folks home. The purpose of this study is to identify the best pattern design for garment to respect dignity of disabled elderly in folks home. Prior observation shows that, the problem of the existing opening of gowns that disabled elderly wear, effect on how disabled elderly wear the gowns while in the treatment centre or care centre. The health worker having difficulty in changing disabled elderly garment and have problem on the accessibility for medical examination. On a case study, a qualitative technique was applied literature research to create a suitable design pattern based on elderly need in the folks home. 15 respondents and 3 informants have contribute idea and opinion in this study. Then, it employs observation and interview of the case on prototype to assess the improvement of the existing garment's everyday use. Finally, a semi-structured questionnaire was used in the interview to assess the user's suitability for the proposed assistive garment. A sample of prototype been develop through out the process understanding elderly needs. It has been found that garment can contribute comfort and easy access for daily wear.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia  
sebagai memenuhi keperluan untuk ijazah Master Sains

**PAKAIAN YANG DISPEKIFIKASIKAN BAGI GOLONGAN WARGA EMAS  
MUSLIMAH YANG KURANG KEUPAYAAN FIZIKAL DI RUMAH ORANG  
TUA-TUA BANGI, SELANGOR, MALAYSIA**

Oleh

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**April 2022**

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Pada hari ini, dunia mengalami perkembangan warga emas sebagai salah satu fenomena global yang sedang meningkat berdasarkan penambahan saiz populasi mereka. Golongan ini mengalami pelbagai isu yang mencabar dalam kehidupan mereka seperti masalah kesihatan dan perubatan. Keadaan ini menyatakan bahawa warga emas yang kurang upaya memerlukan penjagaan yang lebih berkualiti dalam kehidupan harian mereka. Manakala bagi warga emas yang mempunyai penyakit kronik, pemasalah ini amat membebankan mereka sebagai contoh warga emas OKU sukar untuk mengawal pergerakan badan mereka semasa mengendalikan pakaian (memakai dan membuka pakaian). Oleh itu, bagi memastikan system kesihatan dinaik taraf untuk warga emas yang kurang upaya di unit jagaan, terdapat keperluan untuk menambah baik pakaian khas bagi warga emas yang bertujuan untuk memudahkan akses rawatan kepada mereka. Selain daripada itu, tujuan kajian ini juga adalah untuk mengenal pasti rekabentuk dan corak terbaik bagi warga emas kurang upaya bagi memenuhi keperluan mereka di pusat jagaan. Pemerhatian sebelum ini menunjukkan bahawa terdapat masalah pada bukaan baju yang sedia ada, dimana ia memberikan kesan kepada si pemakai. Penjaga juga mengalami kesukaran untuk memakaikan pakaian kepada warga emas selain daripada mengalami masalah semasa pemeriksaan perubatan dilakukan. Dalam kajian kes ini, teknik kualitatif telah menggunakan kajian literatur dalam mencipta rekabentuk yang sesuai berdasarkan keperluan warga emas dipusat jagaan. 15 responden dan 3 informan telah menyumbang idea dan pendapat dalam kajian ini. Selain daripada itu, kajian ini juga menggunakan pemerhatian dan temu bual kes pada prototaip bagi penambahbaikan pakaian yang sedia ada. Akhir sekali, soal selidik separa berstruktur digunakan dalam temu bual, untuk menilai kesesuaian pengguna bagi pakaian alternatif yang dicadangkan. Satu sampel prototaip telah dibangunkan sepanjang proses memahami keperluan warga emas. Prototaip tersebut telah didapati dapat menyumbang keselesaan dan mudah dipakai oleh warga emas setiap hari.

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Respectfully yours,  
Juliza Binti Jamian  
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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

The introduction chapter describe the significance of the research follow with problem of research, research aim, research objective, research scope, research contribution and summary of thesis structure.

### 1.2 Background

In developing countries, the process is being compressed into two or three decades over a single generation. In 2050, there will be two billion people over the age of 60 years; 80% of them will be living in developing countries. The number of persons aged 60 and older in the Region was around 26.8 million (5.8% of the total population) in 2000. It is projected that in 2025, older persons will make up nearly 8.7%, and by 2050 nearly 15% of the population by The World Health Organisation (WHO) and United Nation. The government aims to grow healthcare sector by encouraging more private investments in aged care services, medical devices and clinical research.

According to Mafauzy, 2014 Malaysia has quite a comprehensive health care services for the general population and medical but special programmes for the aged are lacking and due to lack of trained personnel in geriatric health care and also a lower priority being given to geriatric care. The quality of life of health care system become the role and importance to be well recognized by modern society. Thus, the health care services that concern more health care garment for disabled elderly satisfaction while have treatment in Old Folks Home center.

In general, design pattern for the disabled elderly garment, the determination of the functionality and the practicality of the disabled elderly garment and also society awareness about disabled elderly dignity in the old folks home become the most relevant aspect that can improve existing product and to fulfil disabled elderly needs in the old folks home environment.

The research revealed several problems on the existing product. The existing garment problem include, opening side and the effect of garment on elderly dignity as well as safety while have treatment in the folks home. The disabled elderly also having difficulties in changing garment and accessibility for medical examination. In light of actual needs of elderly people and the changes that accompany age in eyesight, hearing, dexterity, mobility, and memory which make aged people unable to carry out the simplest living affairs especially clothing demands (Mady, 2015).

### **1.3 Problem statement**

Thus, the inspiration of searching this issues is because researcher has an experience, dealing with real situation with own family member, After going through for the searching and observation, researcher have found several problems on the existing product. Mostly, disabled elderly use inappropriate garment in daily routine (using oversize shirt or opah garment). Based on existing experience researcher found the existing garment difficult to handle while medical health examination occur and care taker having difficulties in dressing and undressing disabled elderly.

### **1.4 Aim**

The general aim for this research is to design muslimah garment for elderly in folks home center.

### **1.5 Research objective**

1. To observe recent design garment used by disabled elderly in the folks home
2. To analyze and construct the garment use in folks home
3. To validate the practicality and functionality of proposed garment to the elderly.

### **1.6 Research questions**

The main research question from the research is 'what are the best pattern design for assistive garment to respect dignity of disabled elderly in folks home. From this main research question the researcher divide into three research sub-question, which is

1. Sub RQ1: What are the suitable design pattern needed for an inclusive garment in the Old Folks Home?
2. Sub RQ2: what are the improve of garment design in the Old Folks Home?
3. Sub RQ3: How the proposed garment design can be benefit and fulfil the satisfaction?



## **1.7 Research scope and relevance**

Globally, the issue neglect the elderly has been discusses from year by year. According to myhelath.gov.my (2020) there was few factors that cause disabled elderly community got abandon by family and society such as there is no heir can take care, burden for family, busy lifestyle, not easy to handle disabled and etc. 15% of the population worldwide or some 1 billion individuals live with one or more disabling conditions. More than 46% of older persons those aged 60 years and over have disabilities (United Nations, 2020). According to David & Ronnye (2007) professional care need a convenient garment to avoid embarrassment of patients especially for medical procedures.

The scope of this research is focused on improvement inclusive garment for disabled elderly, which is the suitability, functionality and practicality. This research investigates the design on disabled elderly (user) and care taker (experts), who are the main role in this situation to responses the advantages and disadvantages of the design. Therefore, this study only investigate unique/specific element of disabled elderly in Darul Insyirah as the main case and the information is gained to constructing new apparel design based on the case involve.

## **1.8 Research contribution**

The outcomes of the study are expected to, provide a new design that required standard design pattern for disabled elderly. Besides, increase the satisfaction level towards user/patients (disabled elderly)in the Old Folks Home and also required the practicality and functionality of garment that can benefit disabled elderly

## **1.9 Thesis outline**

This study consists six chapters that associate with one another. This thesis will be present as follows:

### **Chapter 1: Introduction**

Begin with research background based on cases that will conduct in this study of the research aim, research objectives, and research scope as well as study area. Besides, in this chapter also discuss about study structure and the research contribution.

## **Chapter 2: Literature Review**

This chapter review the significant issues that related about this study field. It is also to generate the new research gaps and identified the best theory from expert to support this research.

## **Chapter 3: Research Methods**

In this chapter, the source of data and data collection method will explain in detail. Researcher also, describe every phase of research plan on how it is work and performed.

## **Chapter 4: Data analysis and Result**

The analysis of data and results started at phase 3 and 4, when the actual interview between (informant and product) conduct in different stage of product development. Several elements and characteristic are identified, that lead few criteria for disabled needs, product potential and design pattern.

## **Chapter 5: Product Design and Development**

Product design and development will be elaborate in this chapter as design process. Besides, it will explain the guideline of garment used in detail.

## **Chapter 6: Conclusion and recommendation**

This chapter is the summary and conclusion of the research contributions. In the end of this chapter, recommendation are stated for further research.

### **1.10 Summary**

To conclude, this chapter highlight the important guide in this study, that involved theoretical and case study, this two parts of study will be as main attempts to established conceptual framework from literature review and lead for the case.

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