

RESEARCH REPORT: DEVELOPING A SUITABLE TAKAFUL PRODUCT FOR DISABLED SEGMENTS

(PV001-2020)

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RESEARCH INFORMATION

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EXECUTIVE SUMMARY

The study was carried out on seven categories of Persons with Disabilities (Orang Kurang Upaya, OKU), namely physical disability (PD), visual disability (VD), speech disability (SD), mental disability (MD), hearing disabilities (HD), Disabilities (LD) Learning miscellaneous disabilities. This division is similar to the division executed by the Social Welfare Department (Jabatan Kebajikan Malaysia, JKM) organisation responsible for managing OKU in the country.

Seven objectives were outlined in this study. The first objective is to determine the category of OKUs in Malaysia. The second objective is to analyse the risks faced by the OKUs, which can be covered by takaful. The third objective is to review the views, perception, priority and unique needs of the OKUs to subscribe to the Takaful products per the risks they have to cope with.

The fourth objective is to analyse the reasonable contribution amount for OKUs. The fifth objective is to identify the effective distribution channels for the OKUs. The sixth objective is to analyse the legal framework/requirements needed to operate the takaful products for the

OKUs. The final objective that is the seventh objective is to design a suitable takaful product for the disabled segment.

This report comprises seven chapters representing each objective outlined in the study.

Experts from all categories of OKU were interviewed to obtain information and data related to this study. Focussed group discussions, as well as individual discussions, were conducted with the OKU group and caregivers. Apart from that, interviews were also carried out with several associations or NGO for OKUs.

Questionnaires were also distributed to 862 respondents from all seven categories of OKU. The respondents of this study comprise individual OKU or caregivers who represent the OKU under their care. These questionnaires were developed based on the objectives outlined in this study. The results obtained from the questionnaires are described in this report based on the goals of the study.

INTRODUCTION OF THE RESEARCH

INTRODUCTION

People with Disabilities (OKU) are basically different from the majority of society. These differences exist because of their disability. However, these differences should not cause their rights to be marginalized (Hazlin Rosli, Amizah Mahmud & Maizatul Haizan Mahbob, 2015). This includes gaining access to takaful products that suit the needs and risks incurred. Therefore, this study was conducted to develop suitable takaful products for the disabled in Malaysia.

RESEARCH OBJECTIVE

This study was conducted to achieve the following objectives:

- 1. To examine the categories of disabled people in Malaysia.
- 2. To analyse risk faced by disabled person which can be insured with takaful
- 3. To investigate their views, perceptions, preferences and special need in order to subscribe to takaful products that suited with their risk exposure
- 4. To analyze the affordable pricing for disabled persons
- 5. To study the effective distribution channel for disabled people in Malaysia
- 6. To analyze legal framework / requirements needed to operate Takaful products for disabled segments
- 7. To design suitable Takaful product for disabled segments in Malaysia

SCOPE OF THE RESEARCH

This study was conducted on seven categories of People with Disabilities (OKU) namely physical disability, mental disability, learning disability, speech impaired, hearing impaired, visually impaired, and various disabilities.

JUSTIFICATION OF THE RESEARCH

This study should be done because takaful products for the disabled who are available in the market are not partially offered to certain categories of disabled people such as mentally disabled and various disabled people. This study is also seen as significant because the risk position for each category and sub-category varies which can lead to differences in premium payments for each category and sub-category. Therefore, the results of this study will provide details of the needs and level of risk for each category and sub-category as a reference by takaful operators in providing specific takaful products for the disabled.

RESEARCH METHODOLOGY

INTRODUCTION

This research using qualitative and quantitative methodologies. Qualitative methodology is conducted using an instrument as an interview with an expert, interview with OKU association, interview with OKU individual, interviews with OKU caretaker, focus group discussions as well as text analysis. Meanwhile, the quantitative methodology was adapted using a questionnaire instrument.

RESEARCH FRAMEWORK

This research involved data from primary and secondary sources. Primary data is the main source for this study including interviews from various parties and questionnaires. Meanwhile, secondary data as a side source for this study includes information from research papers and articles.

RESEARCH DATA

This study involved data from primary and secondary sources. Primary data is the main source for this study including interviews from various parties and questionnaires.

INTERVIEW WITH EXPERTS

Experts from all categories were interviewed to obtain their view on the sub-categories of the OKU categories. Also, to find out the risk faced by each category of OKU and the costs involved.



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INDIVIDUAL INTERVIEWS WITH OKU

Interviews were conducted with several OKU individuals to obtain views on their needs, priorities and to assess their perception towards takaful policies, risks faced as well as recommendations for developing specific Takaful products for OKUs.

INTERVIEW WITH THE CAREGIVERS OF OKU

Interviews were conducted with guardians to individuals with disabilities to obtain views on needs, priorities, assess their perceptions of takaful policies, risks faced and obtain recommendations to develop specific takaful products for the disabled. The interview questions are based on the objectives of the study as well as inputs from experts. Interviews are partially structured.

INTERVIEW WITH THE ASSOCIATION FOR OKU

Interviews were conducted with several associations / NGOs for the Disabled (OKU) to understand the needs of the disabled as well as to obtain their views on takaful specifically for the disabled. The interview questions were designed based on the objectives of the study that focused on the needs of the disabled. Interviews are partially structured.

INTERVIEW WITH THE COMMUNITY WELFARE DEPARTMENT (JKM)

Interviews were conducted online with two representatives from the Social Welfare Department (JKM) to obtain data related to the number of OKU in Malaysia, assistance provided by JKM to OKU. The interview questions are based on the objectives of the study as well as inputs from experts. Interviews are partially structured.

FOCUSED GROUP DISCUSSIONS

Group-focused discussions were conducted with several categories of OKUs to explore the needs of the disabled, the risks faced, their perceptions of takaful products, related costs as well as suggestions for developing specific takaful products for the disabled. Group-focused discussion questions were designed based on the objectives of the study. Group-focused discussions are partially structured.









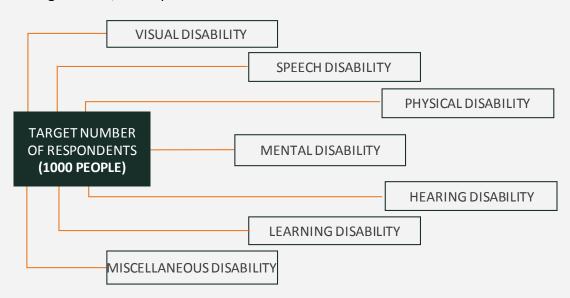


QUESTIONNAIRE

Before the questionnaire was conducted, researchers have conducted interviews and examining the relevant articles to identify risks involving people with disabilities of the seven categories. Based on the findings from the interviews and research, the researchers have constructed questions for the questionnaire. As a result, a total of 33 questions were constructed for the purpose of this questionnaire. Since some of the disabled are taken care of by their guardians, the questionnaire

has been divided into two sets. A set of questionnaires for the disabled filled by the guardian and a set of questionnaires filled by the disabled individual.

However, the form of questions for both sets is the same. The only difference is in the structure of the question. This questionnaire was distributed to the respondents covering all seven categories of People with Disabilities (OKU).



The determination of the target number of respondents for each category refers to the percentage of People with Disabilities (OKU) from each category according to the data of registered OKU released by the Department of Social Welfare (JKM). The questionnaire was distributed online (google form) through appointed enumerators, through several OKU associations and through schools for OKU children. The target respondents are less than 6 years old to 60 years old. The target respondents are also from all races and

total household income. As a result, a total of 1,217 responses were obtained. However, after the screening, only 1016 responses were received. Some were rejected due to several reasons, among others, because the response was filled more than once representing one respondent (checked through the phone number provided). This number includes a questionnaire filled by the guardian to the disabled who are 554 people or 54.5 percent and who are filled by individuals with disabilities which is 462 people or 45.5 percent.

RESEARCH METHODOLOGY

The following are the number of respondent by category:

Total
110
17
327
36
66
347
113

The numbers of 1016 respondents among the disabled from the seven categories, most are from the physical disability of 327 people or 32.2 percent and learning disabilities of 347 or 34.15 percent. This amount is not much different from the number of initial targets that have been set in this study.

The following are the number of respondents by age:

Age	Total
Below 6 years old	80
7-12 years old	145
13-18 years old	87
19-21 years old	78
22-35 years old	357
36-45 years old	120
46-59 years old	111
above 60 years old	38

The number of 1016 respondents among the disabled from the seven categories, most of them are from the respondents aged 22-35 years which is a total of 357 people or representing 35.14 percent of the total number of respondents. While the least age group is the respondents among the age group over 60 years which is a total of 38 people or 3.74 percent.

The following are the number of respondents according to household income:

Household Income	Total
RM 1 - RM 4,360 (B40)	834
RM 4,360 - RM 9619 (M40)	136
RM 9619 and above (T20)	46

The number of 1016 respondents among the disabled, most of them are among the respondents with a household income of RM 1- RM 4,360 or B40 which is 834 people or 82.1 percent.

RESEARCH METHODOLOGY

The following are the number of respondents by gender:

Gender	Total
Male	617
Female	399

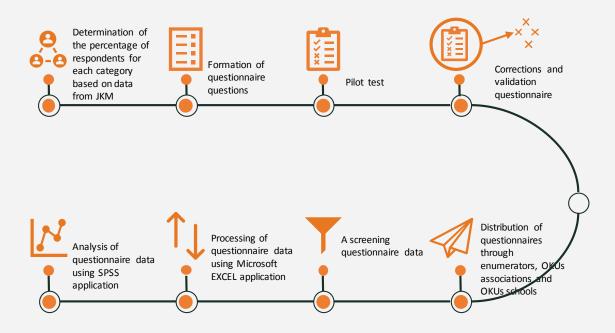
The number of 1016 respondents among the disabled, 617 people or 60.7 percent are respondents from among men. Meanwhile, 399 people or 39.3 percent were among the female respondents.

The following are the number of respondents by race:

Race	Total
Malay	918
Chinese	38
Indian	12
Other	48

The number of respondents in 1016 among the disabled, the majority is Malay respondents, namely a total of 918 people or 90.4 percent.

PROCESS INVOLVING THE QUESTIONNAIRE



LIMITATIONS OF THE RESEARCH

A timeline, which was agreed by FWD Takaful, was established at the beginning to complete this study. This study was conducted from 1 January 2020 - 30 June 2020, for six months. However, the previous timeline had to be revised due to the Covid-19 outbreak that occurred mid-way of the study.

The planning of the Focus Group Discussion (FGD) with the designated OKU category could not be carried out as planned because of the Movement Control Order (PKP) which started on 18 March 2020 due to the Covid-19 outbreak. Applications for interviews with OKU associations did not receive any response during this period because the associations were closed. Also, field studies with Persons with Mental Disability were challenging because Persons under this category of disability hide their respective identities.

At the same time, the determination of OKU for the mental category can only be conducted for OKU cardholders from JKM, where the majority of respondents obtained were from the low-income group (B40). Group-focused interviews and discussions with several categories of OKU and experts had to be postponed, changed, and some had to be cancelled because they could not be conducted online. Thus, some interviews with experts and the OKU were replaced and done entirely online.

Similarly, surveys that were initially intended to be conducted face-to-face via the association for OKUs had to be performed entirely online, assisted by a team of enumerators.

These limitations have, to some extent, prevented the study from being conducted according to the set milestone.



CATEGORY OF PERSONS WITH DISABILITIES (OKU)

According to the Persons with Disability Act 2008, the OKUs are:

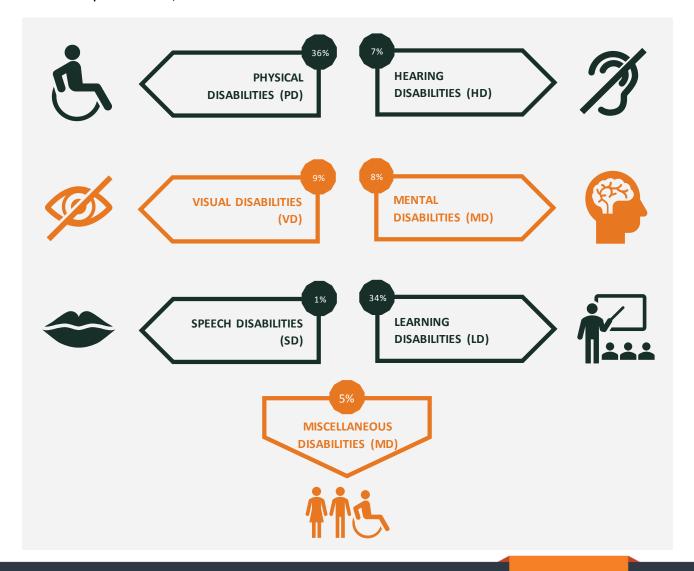
"Including those with long-term physical, mental, intellectual or sensory deficiencies who when interacting with various barriers, can restrict their full and effective participation in society."

The definition provided does not clearly describe every category of Persons with Disabilities.

However, based on the annual report issued by the JKM, there are seven

categories of OKU in Malaysia. They are OKUs with Physical Disabilities, OKUs with Visual Disabilities, OKUs with Visual Disabilities, OKUs with Hearing Disabilities, OKUs with Speech Disabilities, OKUs with Mental Disabilities, OKUs with Learning Disabilities and Various OKUs.

Each category of OKUs is further divided into several sub-categories. The breakdown of each of these categories or sub-categories further specifies each group of OKU.



SUB CATEGORY OF PERSONS WITH DISABILITIES (OKU)

PHYSICAL DISABILITIES

- Dwarf
- Limb Defect
- Finger Amputation
- Paralysed or Stroke
- · Spina Bifida
- Spinal Cord Injury
- Musculor Dystropyn
- Cerebral Palsy
- Traumatic Brain Injury



SPEECH DISABILITIES

- Complex Communication Disorders
- Motor Speech Disorder
- Voice Disorders
- Fluency Disorders
- Resonance Disorder



VISUAL DISABILITIES

- Blind-both or side.
- Limited visual (low vision/ partially sighted)- both or side.
- Other Eye Disorders (Albinism).



MENTAL DISABILITIES

- Skizofrenia, Schizotypal dan Delusional Disorders.
- Mood Disorder
- Severe Anxiety Disorder
- Organic Mental Disorder



LEARNING DISABILITIES

- Down Syndrome
- Intellectual Disabilities
- Autisme
- Attention Deficit
 Hyperactive Disorder
 (ADHD)
- Specific Learning
 Disability (Dyslexia,
 Dyscalculia, Dygraphia)
- Global Development Delay



HEARING DISABILITIES

- Bilateral Hearing Loss
- Single Sided Deafness (SSD)/ Profound Unilateral Hearing Loss
- Permanent Hearing Loss/Syndrome Related Ear/ Syndrome Related Hearing (Microtia, Atresia, Anotia, Treacher Collins, Goldenhar Syandrom)



POPULATION OF PERSONS WITH DISABILITIES (OKU) IN **MALAYSIA**

The data released by JKM stated that there are a total of 539,131 Persons with Disabilities (OKU) registered in Malaysia up to 2019.

However, according to the World Health Organization (WHO), it is estimated that 15% of the total population or one in seven people are from the OKU group. Therefore, based on this ratio, Persons with Disabilities (OKU) in Malaysia are estimated at 4.7 million people.

This number covers all seven categories of OKUs of all ages. This number shows that only 11.5 per cent of the estimated number of Malaysians registered with the (JKM) as OKUs. Meanwhile, most of the OKUs in Malaysia, which is 88.5 per cent, are not registered with JKM.

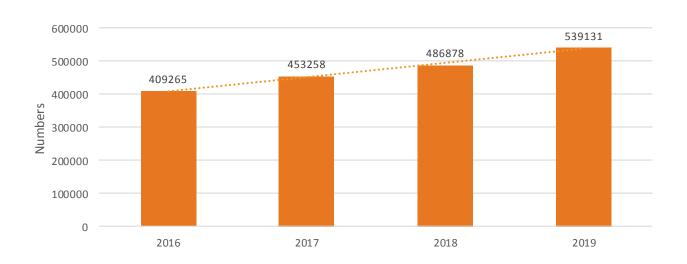
Based on the data from the JKM, the registration trend for OKUs in Malaysia shows an increase from year to year.

539,131 TOTAL OF OKUS REGISTERED WITH THE SOCIAL WELFARE DEPARTMENT (JKM) FOR 2019

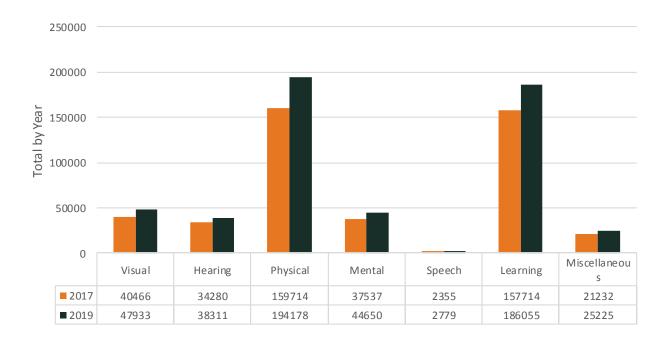
4.7 MIL

ESTIMATED TOTAL OF OKUS IN MALAYSIA BASED ON THE RATIO OF OKUs **ISSUED** WORLD **HEALTH ORGANIZATION (WHO)**

OKUS REGISTERED BY YEAR



TOTAL OF OKUS REGISTERED BY CATEGORY FOR 2017 AND 2019



The graph above shows the registration trend for OKU by category for 2017 and 2019. This graph shows that the increase in the registration of OKU occurs in all categories and is not limited to one category only.

This graph also shows that the number of Persons with Disabilities (OKU) from each category is different. There are categories where the amount is more significant and there are categories where the number is too small.

Based on this graph, the category with the most significant number in the category of OKU with Physical Disabilities totalled at 194,178 people or 36.02 per cent of the total number of OKUs registered in Malaysia for 2019.

The second-highest category is the category of OKUs with learning disabilities which totalled at 186,055 people or 34.5 per cent of all OKUs registered in Malaysia for 2019.

The OKUs with visual disabilities was third with a total of 47,933 people or 8.9 per cent. Following that are OKUs with a mental disability at 44,650 people or 8.3 percent; OKUs with hearing disability at 38,311 people or 7.11 per cent; and OKUs with various disabilities at 25,225 people or 4.68 per cent of the grand total of OKUs registered in Malaysia for 2019.

Meanwhile, OKU with speech disability is the lowest number of OKU categories in Malaysia with a total of 2,779 people or 0.52 per cent of all OKU registered for 2019.

REGISTRATION OF OKU BY CATEGORY BASED ON AGE LEVEL

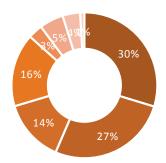
In general, the number of OKU for each category in terms of age varies. Adults dominate some categories, while younger people or children dominate some other categories.

For example, the category of learning disabilities mostly consists of individuals aged between 7 to 35 years which is 84 per cent of

the total number of OKUs with Learning Disabilities registered with JKM.

While the OKUs who are visually impaired, with hearing impaired, physical disabilities and mental disabilities are mostly people aged between 22 years to 60 years and above.



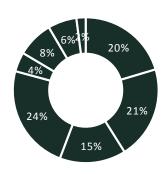


- More than 60 years old
- 46-59 years old
- 36-45 years old
- 22-35 years old
- 19-21 years old
- 13-18 years old
- 7-12 years old
- Less than 6 years old

71 %

OKUs who are visually impaired are aged between 35 to 60 years old



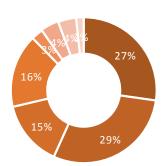


- More than 60 years old
- 46-59 years old
- 36-45 years old
- 22-35 years old
- 19-21 years old
- 13-18 years old
- 7-12 years old
- Less than 6 years old

80 %

OKUs who are hearing impaired are aged between 25 to 60 years old





- More than 60 years old
- 46-59 years old
- 36-45 years old
- 22-35 years old
- 19-21 years old
- 13-18 years old
- 7-12 years old
- Less than 6 years old

87 %

OKUs who are physically impaired are aged 22 to 60 years old



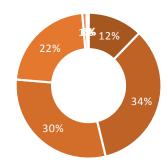


- More than 60 years old
- 46-59 years old
- 36-45 years old
- 22-35 years old
- 19-21 years old
- 13-18 years old
- 7-12 years old
- Less than 6 years old

58 %

OKUs with speech disabilities are aged 22 to 60 years old and above





- More than 60 years old
- 46-59 years old
- 36-45 years old
- 22-35 years old
- 19-21 years old
- 13-18 years old7-12 years old
- Less than 6 years old

98 %

OKUs with mental disabilities are aged 22 to 60 years old and above



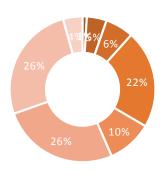


- More than 60 years old
- 46-59 years old
- 36-45 years old
- 22-35 years old
- 19-21 years old
- 13-18 years old
- 7-12 years old
- Less than 6 years old

57 %

OKUs with various disabilities are aged 22 to 60 years old



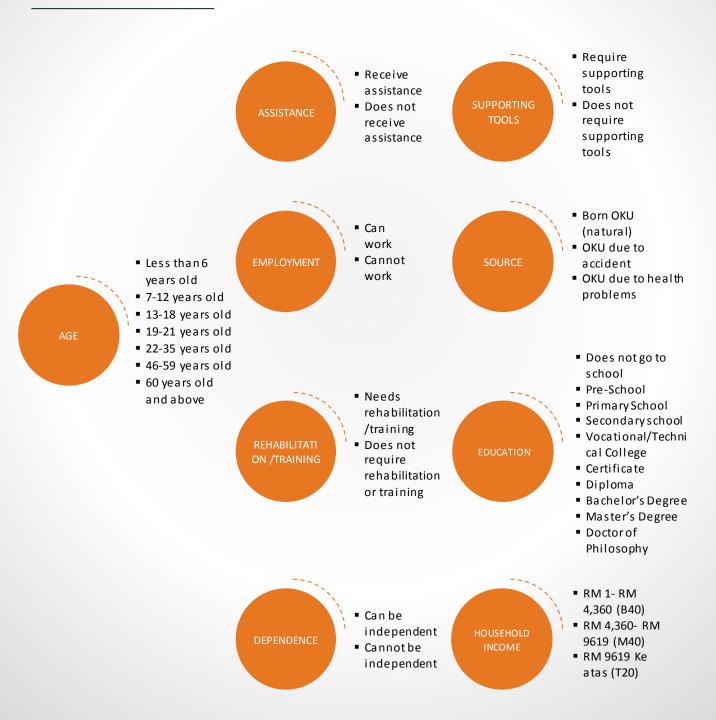


- More than 60 years old
- **46-59** years old
- **36-45** years old
- 22-35 years old
- 19-21 years old
- 13-18 years old
- **7-12** years old
- Less than 6 years old

84 %

People with learning disabilities are 7 and 35 years old

CATEGORY DIVISION OF PERSONS WITH DISABILITIES (OKU) IN GENERAL





INTRODUCTION

OBJEKTIF KEDUA memfokuskan kepada meneliti dihadapi risiko yang oleh golongan Orang Kurang Upaya (OKU) kategori daripada semua iaitu merangkumi enam kategori serta sub kategori. Manakala bagi kategori OKU pelbagai, risko yang dihadapi adalah gabungan daripada mana-mana enam kategori OKU tersebut.

Risiko-risiko yang dihadapi oleh golongan OKU telah dikenal pasti berdasarkan kepada kajian-kajian lepas. Bagi mengenal pasti keterdedahan setiap sub-kategori OKU terhadap risiko-risiko tersebut, maka telah dijalankan temu bual terhadap pakar-pakar bagi setiap kategori.

Data yang diperolehi daripada pakar-pakar tersebut dianalisis dan disusun semula dalam bentuk jadual.

Selain data daripada temu bual pakar, data-data kajian yang telah dijalankan berkaitan OKU daripada dalam dan luar negara juga telah digunakan pada bahagian ini.

LIST OF RISKS FACED BY THE OKU

Based on the analysis of previous studies as well as interviews with OKUs, experts from all categories of OKUs and writings issued by authoritative bodies, it was found that seven types of risks related to OKUs. These risks include the risk of premature death, the risk of hospitalisation, the risk of self-inflicted injury/committing suicide, the risk of damage to support equipment, the risk of medication needs, health risk, and the risk of rehabilitation needs.

The premature mortality risk is the risk of OKUs facing death earlier than the average

age of death of an ordinary individual, and this early death is due to the disability that they experience.

The risk of frequent detention in the ward refers to the situation where OKUs are often hospitalised due to the disability that they experience.

The risk of a drug overdose is a condition in which an OKU, due to their disability, relies on certain medications to continue with their daily life at a certain age or throughout life.



Source: Previous research, focus group discussion and interview with OKUs and experts

Rehabilitation need risks refer to OKUs from a particular category which requires rehabilitation due to their disability, either at a certain age or throughout their life. Such rehabilitation is needed for various purposes depending on the category and disability experienced, among which is to ensure that the disabled can be self-sufficient, reduce the disability they experienced and others.

The risk of self-inflicted injury or committing suicide is the risk faced by some OKUs due to the disability they experienced. The duration of exposure to the risk will depend on the type of disability and degree of severity of the

OKU.

Health risk refers to the risk of health problems that OKUs are exposed to due to their disability. For example, individuals with Down syndrome may be more susceptible to other diseases such as lung and heart disease.

The risk of damage to a support device refers to the condition in which an OKU with a disability faces malfunction of the said device that helps him or her perform daily activities. Damage to this support device will affect his or her daily interactions.

RISK BY CATEGORY OF PERSONS WITH PHYSICAL DISABILITIES

The risk faced by all sub-categories of OKUs with physical disability varies from one subcategory to another, and from one condition to another. Some sub-categories are regarded as riskier or more susceptible to many risks in certain situations and less risky in other circumstances.

For example, individuals with abnormal dwarfism (dispropernate) face the risk of frequent hospitalisation, while healthy dwarf individuals (propernate) have no risk of periodic hospitalisation. This difference needs to be taken into consideration by the Takaful company in issuing the Takaful policy for OKUs with physical disabilities.

In general, of all the seven risks listed, all sub-categories of OKUs who have physical disabilities only are not exposed to the risk of self-inflicted injury or suicide. Whereas, OKUs with physical disabilities who have other disabilities or have more than one disability may face the risk of self-inflicted injury or suicide depending on the category of the OKU. OKUs are no longer categorised as persons with physical abilities. Instead, they are classified as a multi-OKU, for having more than one disabilities.

The remaining seven risks highlighted are premature mortality risks, the risk of being hospitalised; risk of non-employment; damage to support equipment; risk of medication requirements; health risks; and the risk of the need for rehabilitation which OKU with physical disabilities are most susceptible based on the sub-categories and conditions of the OKU.

In general, most of the sub-categories of OKU with physical disabilities face the risk of premature mortality. Only a fraction of sub-categories of OKUs is not exposed to these

risks. That includes those whose legs were amputated because of an accident and crippled since birth.

However, life expectancy varies from one subcategory to another and different subcategories based on the state of the OKU. There are sub-categories of OKUs with physical disabilities who have a shorter life than those of other sub-categories. Therefore, although most categories of OKUs with physical disabilities are exposed to premature death risks, life expectancy or the promptness rates of death should refer back to the subcategories, levels, conditions, and other factors.

The risk of hospitalisation is also evident in almost all sub-categories of OKUs with physical disabilities. Only a few sub-categories are not exposed to this risk. There are sub-categories of OKUs with physical disabilities who are at risk of frequent hospitalisation at a certain age only. Period of hospitalisation will decrease as they get older. There is also a sub-category of OKUs with physical disabilities that face the risk of hospitalisation throughout their life. This sub-category of OKUs has to be hospitalised as they are forced to rely on wheelchairs and experience breathing difficulties such as subcategory of OKU with physical muscular dystrophin.

Regular risk of ward detention for some subcategories of OKUs with physical disabilities depend on the level of health problems suffered, such as cancer and *infection*.

For the medication requirements risk, almost all of the sub-categories of OKUs with physical disabilities face this risk. It depends partly on the level of seriousness, such as physical disability due to cancer. Some other risks require lifelong medication such as extreme cases of *cerebral palsy*.

1. The Stage or age of the diagnosis as a disabled

Subcategory	The stage or age of the diagnosis as a disabled
Dwarf	 Dwarf normal at the age of 15-18 years, dwarf abnormal from birth
Limb Defect (hand/arm, feet/leg or both)	 Since birth Cancer: no age limit Disease: no age limit Infection: no age limit Accident: no age limit
Limb Defect (fingers)	 Since birth Cancer: no age limit Disease: no age limit Infection: no age limit Accident: no age limit

Subcategory	The stage or age of the diagnosis as a disabled
Stroke and Paralysis	Disease: no age limitInfection: no age limitAccident: no age limit
Spinal Cord Injury	Disease: no age limitInfection: no age limitAccident: no age limit
Spina Bifida	Since birth
Muscular Dystrophy	Age 7-8 year
Cerebral Palsy	Since birth
Traumatic Brain Injury	Disease: no age limitInfection: no age limitAccident: no age limit

Source: Yusniza Binti Mohd Yusof, (Rehabilitation Consultant, Cheras Rehabilitation Hospital), in an interview on 12 April 2020, 14 April 2020, 2 May 2020, 12 May 2020, 3 June 2020, 5 June 2020 dan Dr Norhayati Hussein, (Rehabilitation and Neurorehabilitation Consultant, Cheras Rehabilitation Hospital) in an interview on 12 May 2020.

Based on interviews with Rehabilitation Consultants, Cheras Rehabilitation Hospital, physically disabled people can be diagnosed from birth and other factors such as cancer, disease, infection, and accidents. For sub-categories of Physical Disabilities can be diagnosed from birth are abnormal dwarfs, Limb (hand/arm, feet/leg or both), Limb Defect (fingers), Spina Bifida and Cerebral Palsy. For Spinal Bifida more specifically, this category of defects can be detected as early as 1 month of fetus in the mother's womb (Hamdan Abd Rahman, (2012). Therefore, the diagnosis of this subcategory is from birth. Cerebral Palsy can also be detected from birth, there are some cases of babies born normal, but have a disability after having a fever during childhood 1-4 years (Mayo Clinic, 2020).

For normal dwarfs that cannot be diagnosed at birth, the diagnosis is at the age of 15-18 years. Muscular Dystrophy at the age of 7-8 years.

In addition, the physically disabled can also be diagnosed when other factors occur such as cancer (Barnard, J. 2004), disease, infection and accident, these factors do not have a specific age limit. In the event of a medical report from a specialist stating a person has lost the ability of cancer or other diseases such as diabetes, infection, gangrene or accidents resulting from any ages then that individual is categorized as physical disabilities, which involves the amputation of arms or legs or both which (Limb Defect), amputation of the fingers, stroke and paralysis, Spinal Cord Injury, traumatic Brain Injury.

2. Risk of other health

Subcategory	Risko of other health
Dwarf	Obesity, heart problems (Genetik, 2020) (Marjorie Hecht, 2018)
Limb Defect (hand/arm, feet/leg or both)	Pressure wounds, high blood pressure, renal failure, heart problems, depression (interview Yusniza Binti Mohd Yusof, 2020)
Limb Defect (fingers)	Difficulty grasping, gangrene (interview Yusniza Mohd Yusof, 2020)
Stroke and Paralysis	Pneumonia, contracture / spasm- spasticity, pressure sores, high blood pressure, kidney failure, heart problems, depression (interview Norhayati Hussein, 2020)
Spinal Cord Injury	Cardiovascular disease; pneumonia; life-threatening blood clots; bladder, intestinal and sexual dysfunction; constipation and other gastrointestinal problems; pressure ulcers; and chronic pain, according to a new report (interview Yusniza Mohd Yusof, 2020)
Spina Bifida	Fever, inflammation of the bladder, pressure ulcers on the feet or organs involved can cause pain in other (interview Yusniza Mohd Yusof, 2020)
Muscular Dystrophy	Pneumonia, cough (interview Yusniza Mohd Yusof, 2020).
Cerebral Palsy	Higher risk of heart and lung disease, and pneumonia (often from inhaling bits of food into the lungs), digestive problems and dental problems (National Institutes of Health, 2020)
Traumatic Brain Injury	Excess fluid accumulation in the brain, (hydrocephalus), blood vessel rupture, vertigo, and chronic headache (Mayo Clinic, 2019)

Source: Yusniza Binti Mohd Yusof, (Rehabilitation Consultant, Cheras Rehabilitation Hospital), in an interview on 12 April 2020, 14 April 2020, 2 May 2020, 12 May 2020, 3 June 2020, 5 June 2020 dan Dr Norhayati Hussein, (Rehabilitation and Neurorehabilitation Consultant, Cheras Rehabilitation Hospital) in an interview on 12 May 2020.

Based on interviews with Rehabilitation Consultants, Cheras Rehabilitation Hospital, health risks for dwarfs are obesity and heart problems which are also mentioned in the Online medicine info website (Genetics, 2020) and healthline (Marjorie Hecht, 2018). Limb Defect (hand/arm, feet/leg or both) defectinvolve pressure sores, high blood pressure, renal failure, heart problems, depression.

Meanwhile, limb defect (fingers) has difficulty grasping, gengren. Moreover, paralysis and stroke have health risks such as pneumonia, contracture / spasm-spasticity, pressure sores,

high blood pressure, kidney failure, heart problems, depression. Similarly, the Spinal Cord Injury involve such cardiovascular health; pneumonia; life-threatening blood clots; malfunction of the bladder, bowel and sexual; and constipation other gastrointestinal problems; pressure ulcers; and chronic pain, according to a new report. Spina Bifida also involve health risks such as inflammation of the bladder, pressure ulcers on the feet or organs involved can lead to other hospitals. For Muscular Dystrophy involves health risks such as pneumonia and cough.

For Cerebral Palsy there are health risks such as heart disease, higher lung, and pneumonia which are usually caused by inhalation of food into the lungs, digestive problems and dental problems. In addition, there are dental problems among CP children who are at risk of gum and cavity due to poor dental hygiene. Certain medications such as the wrong medication can cause the condition to get worse (Karen Gill, M.D. (2020).

Traumatic Brain Injury there are health risks such as seizures, excess fluid accumulated in the brain, (hydrocephalus), rupture of blood vessels, vertigo and chronic headache (Joline E. Brandenburg, M.D. (2019). In addition, there are also post-traumatic cramps that often occur after moderate or severe TBI, Hydrocephalus, Vein thrombosis can occur as high as 54%, Heterotopic Osification can occur

11-76% and 10-20% can occur for clinically significant heterotopic oxidation, spastic, gastrointestinal and genitourinary complications are among the most common disorders in patients with TBI, acute disorders, and disorders that commonly occur after TBI, chronic trauma encephalopathy (CTE).Longterm physical, cognitive, and behavioral injuries are the most limiting factors in reuniting patients into the community and returning to work. These include those such as insomnia, cognitive decline, post-traumatic headaches such as common headaches, severe headaches such as migraines. In addition, there is post-traumatic depression i.e. post-TBI depression is associated with cognitive decline, anxiety disorders, substance abuse, emotional aggressive expression disregulation, and explosions.

3. Risk of Premature Death

Subcategory	Risk of Premature Death
Dwarf	 Normal (Proportionate): almost the same as the normal population (Marjorie Hecht, 2018). abnormal (Disproportionate): same as the normal population (Marjorie Hecht, 2018).
Limb Defect (hand/arm, feet/leg or both)	 Since birth: same as the normal population Cancers such as bone cancer, Diseases such as diabetes and infections such as gangrene reduce the risk of disease (Ornish, D. et. al., 2005) Kemalangan: same as the normal population
Limb Defect (fingers)	 Since birth: same as the normal population Cancer (such as bone cancer), disease (such as diabetes) and infection (such as gangrene), decreases the risk of disease Accidents: similar to the normal population
Stroke and Paralysis	An average loss of 1.71 years from 5 years obtained by the normal population (Henry Hoffman, 2018)
Spinal Cord Injury	Decreased by 5 years compared to normal individuals (Lawrence S Chin, 2018).
Spina Bifida	Up to 40 years (David Strauss, 2010)
Muscular Dystrophy	Duchenne: Over 20 years old in Malaysia, abroad can reach the age of 40 (interview Yusniza Mohd Yusof, 2020)

Subcategory	Risk of Premature Death		
Cerebral Palsy	Can reach the age of 30 to 70 years (Birth Injury Guide, 2015).		
Traumatic Brain Injury	50% of these patients experience deterioration and end in death 5 years after		
	injury (Craig Hospital, 2015).		

Source: Yusniza Binti Mohd Yusof, (Rehabilitation Consultant, Cheras Rehabilitation Hospital), in an interview on 12 April 2020, 14 April 2020, 2 May 2020, 12 May 2020, 3 June 2020, 5 June 2020 dan Dr Norhayati Hussein, (Rehabilitation and Neurorehabilitation Consultant, Cheras Rehabilitation Hospital) in an interview on 12 May 2020.

Based on Marjorie Hecht, (2018) states the life expectancy of dwarfs is almost the same as the life expectancy of a normal population. Limb defect since birth and accident are the same as the normal population, while due to cancers such as bone cancer, diseases such as diabetes and infections such as gangrene can provide a reduced life expectancy, faced (Ornish, D. et. al., 2005). Stroke and paralysis were reduced life expectancy by an average of 1.71 years from 5 years from the normal population (Henry Hoffman, 2018). Spinal Cord Injury also reduced life expectancy by 5 years compared to the normal population (Lawrence S Chin, 2018). Spina Bifida no distribution of life expectancy based on the types of Spina Bifida.

Generally, Spina Bifida have a lifespan of up to 40 years old (David Strauss, 2010).

Duchenne Muscular Dystrophy for life expectancy up to 20 years in Malaysia, overseas reach the age of 40 years (interview Yusniza Mohd Yusof, 2020). Cerebral Palsy (CP) individual life span between 30 to 70 years depending on the specific disability suffered. Generally, individuals with mild cases often live longer than CP individuals with various health complications (Birth Injury Guide, 2015) (Holmes L Jr at.al, 2013). Traumatic Brain Injury life expectancy 50% of these patients experience deterioration and end in death 5 years after injury (Craig Hospital, 2015).

4. Risk of Equipment Damage Support

Subcategory	Risk of Equipment Damage Support			
Subcategory	Туре	Range of Cost	Endurance	
Dwarf	• None	• None	• None	
Limb Defect (hand/arm, feet/leg or both)	Artificial ArmArtificial legWalking Stick/ crutchWheelchair	 MYR3,000-7,000 MYR4,000-10,000 MYR50-200 MYR300-4,000 	5 years5 years5-8 years3-5 years	
Limb Defect (fingers)	Artificial ArmArtificial legWalking Stick/ crutchWheelchair	 MYR3,000-7,000 MYR4,000-10,000 MYR50-200 MYR300-,000 	5 years5 years5-8 years3-5 years	
Stroke and Paralysis	Walking Stick/ crutchWheelchair	MYR50-200MYR300-4,000	5-8 years3-5 years	
Spinal Cord Injury	Walking Stick/ crutchWheelchair	MYR50-200MYR300-4,000	 3-5 years 2-3 years	
Spina Bifida	Walking Stick/ crutchWheelchair	MYR50-200MYR300-4,000	5-8 years3-5 years	
Muscular Dystrophy	Walking Stick/ crutchWheelchairRespiratory assistance (BiPaP)	MYR50-200MYR300-4,000MYR300-3,000	5-8 years3-5 years	
Cerebral Palsy	Walking Stick/ crutchWheelchair	MYR50-200MYR300-4,000	5-8 years3-5 years	
Traumatic Brain Injury	WheelchairHospital Bed	MYR50-200MYR1,650-5,000	• 2-3 years	

Source: Yusniza Binti Mohd Yusof, (Rehabilitation Consultant, Cheras Rehabilitation Hospital), in an interview on 12 April 2020, 14 April 2020, 2 May 2020, 12 May 2020, 3 June 2020, 5 June 2020 dan Dr Norhayati Hussein, (Rehabilitation and Neurorehabilitation Consultant, Cheras Rehabilitation Hospital) in an interview on 12 May 2020 and Faizal, "Sewa Atau Beli Katil Hospital Mengikut Bajet Anda", laman sesawang Reich Richesse Sdn Bhd., Dicapai pada 28 Sept 2020, http://reichrehab.com/index.php/katalog/.

Based on interviews with Rehabilitation Cheras Rehabilitation Consultants. Hospital, the risk of needing support equipment involves artificial arm, artificial legs, Walking Stick/ crutch, wheelchairs, Respiratory Assistance (BiPaP), and price estimates Hospital beds, vary according to limb specifications or equipment. For example, necessary

materials used whether using plastic or steel stainles, foot length estimates, electric or manual wheelchairs and so on, the estimated durability is 5-8 years depending on usage, there is also some equipment that lasts for 3-5 years and 2-3 years depending on usage. The estimated cost is based on the website Reich Richesse Sdn Bhd. (Faizal, 2020).

5. Risk of medication needs -Type of medication, cost, duration

Subcategory	Risk of Medication Needs			
	Stages	Medication	Range of Cost	Duration
Dwarf	Normal Abnormal	Hormone injections	Dollar Amerika 10,000-60,000 per year	1 year to reach normal growth (maximum up to 7 years old) (Marjorie Hecht, 2018).
Limb Defect (hand/arm, feet/leg or both)	•Since birth •Cancer •Disease •Infection •Accident	None Amlodipine, felodipine, doxazosin, minoxidil	None Goverment: MYR5 Private: MYR200-500 per month	None 1 to 5 years (on the recommendations and advice of experts) (Interview Yusniza Binti Mohd Yusof, 2020)
Limb Defect (fingers)	•Since birth •Cancer •Disease •Infection •Accident	Tiada Amlodipine, felodipine, doxazosin, minoxidil	None Goverment: MYR5 Private: MYR200-500 per month	None 1 to 5 years (on the recommendations and advice of experts) (Interview Yusniza Binti Mohd Yusof, 2020)
Stroke and Paralysis	Mild stroke Severe stroke	Aspirin, chlorotiazide, chlorthalidone, hydrochlorotiazide, bumetanide, furosemide	Goverment: MYR5 Private: MYR200-1,000 per month	Lifelong (<u>Henry</u> <u>Hoffman</u> ,2018). (interview Norhayati Hussein, 2020)
Spinal Cord Injury	A-Complete B-incomplete C-incomplete D-incomplete E-incomplete	Epilepsy Headache Endocrine Disorders Depression	MYR 8,000- 10,000 Per year	Lifelong
Spina Bifida	Occulta Miningocele Mylomeningoce le	Folic acid (more to surgery and therapy)	MYR 100 per month	Lifelong (interview Yusniza Binti Mohd Yusof, 2020)
Muscular Dystrophy	Duchenne	Verapamil, diltiazem, nifedipine, flunarizine,	MYR 200-1,000 per year	Lifelong
Cerebral Palsy	Severe spasticity	Intrathecal baclofen (ITB) Rhizotomy Botulinum Toxin injection	MYR 8,000- 10,000 per year	Lifelong (Interview Yusniza Binti Mohd Yusof, 2020)
Traumatic Brain Injury	Depending on the stage of disability of the patient such as severe spasticity	Epilepsy Headache Endocrine Disorders Depression	MYR 8,000- 10,000 per year	Lifelong (Interview Yusniza Binti Mohd Yusof, 2020)

Source: Yusniza Binti Mohd Yusof, (Rehabilitation Consultant, Cheras Rehabilitation Hospital), in an interview on 12 April 2020, 14 April 2020, 2 May 2020, 12 May 2020, 3 June 2020, 5 June 2020 dan Dr Norhayati Hussein, (Rehabilitation and Neurorehabilitation Consultant, Cheras Rehabilitation Hospital) in an interview on 12 May 2020 and Henry Hoffman, (2018), "Stroke Survival Statistics: 9 Sobering Facts We Should All Be Aware Of", laman sesawang Saebo, dicapai pada 28 September 2020, https://www.saebo.com/blog/stroke-statistics/.

Based on interviews with Rehabilitation Consultants, Cheras Rehabilitation Hospital risk of need of medication and can occur to all these subcategories except for Limb Defect from birth there is no cost of medication required. For other physical disabled people have the need for medicines with an estimated government cost of RM5 and private RM200-RM500.

There is also involved RM8,000-10,000 for medicines for Spinal Cord Injury, Cerebral Palsy, Traumatic Brain Injury needed for life. Meanwhile, for dwarfs, the duration of medication intake is 1 year until it reaches maximum normal growth until it is 7 years old. Whereas, Limb Defect need medication for 1 to 5 years on the recommendations and advice of experts.

6. Risk of Frequency ward detention-Frequency, cost, duration

	Frequency of ward detention			
Subcategory	Stages	Frequency	Duration	Range of Cost
Dwarf	Normal abnormal	Min 1 times per year Max 2 times per year	1 week 1 week	100 per day
Limb Defect (hand/arm, feet/leg or both)	Since birth Cancer Dis ease Infection	None Min 2 times per years Min 1 times per year Min 1 time per year	None 2 weeks 1 week 1 week	None 100 per day 100 per day 100 per day
Limb Defect (fingers)	Since birth Cancer Disease Infection	None Min 2 times per years Min 1 times per year Min 1 times per year	None 2 weeks 1 week 1 week	None 100 per day 100 per day 100 per day
Stroke and Paralysis	Mild stroke Severe stroke	Min 1 times per year Max 2 times per year	1 week 4 weeks	100 per day
Spinal Cord Injury	A-Complete B-incomplete C-incomplete D-incomplete E-incomplete	Min 1 times per year Max 3 times per year	2 weeks	100 per day
Spina Bifida	OccultaMiningoceleMylomeningocele	Min 1 times per year Max 3 times per years	2 weeks	100 per day
Muscular Dystrophy	Duchenne	Min 1 times per year Max 3 times per years	1 weeks	100 per day
Cerebral Palsy	Infants and children	Min 1 times per year Max 3 times per years	1 weeks	100 per day
Traumatic Brain Injury	 Rehab Programme Medical issues such as seizures, spasticity, high brain pressure Surgical Issue such as cranioplasty, Gastrostomy insertion 	Min 1 times per year Max 3 times per year	1 weeks	100 per day

Source: Yusniza Binti Mohd Yusof, (Rehabilitation Consultant, Cheras Rehabilitation Hospital), in an interview on 12 April 2020, 14 April 2020, 2 May 2020, 12 May 2020, 3 June 2020, 5 June 2020 dan Dr Norhayati Hussein, (Rehabilitation and Neurorehabilitation Consultant, Cheras Rehabilitation Hospital) in an interview on 12 May 2020 and Henry Hoffman, (2018), "Stroke Survival Statistics: 9 Sobering Facts We Should All Be Aware Of", laman sesawang Saebo, dicapai pada 28 September 2020, https://www.saebo.com/blog/stroke-statistics/.

Based on interviews with Rehabilitation Consultants, Cheras Rehabilitation Hospital, the risk of detention can occur to all these sub-categories except for the Limb Defect from birth, there is no frequency in ward detention. For other physical disabilities, there is a risk of ward detention at least 1 time in a year and the

maximum depends on the patient's usual condition 3 times a year. In addition, the duration of ward detention is usually a minimum of 1 week and a maximum of 3 weeks depending on the patient's condition. The estimated cost of payment is RM100 per day.

7. Risk of rehabilitation needs-type of rehab, hours/sessions, cost, frequency, duration

	Risiko keperluan rehabilitasi				
Subcategory	Type of Rehab	Hours/	Range of Cost	Frequency	Duration
		sessions			
Dwarf	Hormone Therapy	1-2 hour per session	Goverment: MYR5 per session Private: MYR90- RM280 per session	1-2 times per month	1 year to reach normal growth (maxi up to 7 years old)
Limb Defect (hand/arm, feet/leg or both)	 Use of tools Therapy 	1-2 hour per session	Goverment: MYR5 per session Private: MYR90- RM280 per session	1-2 times per month	1-2 years
Limb Defect (fingers)	 Use of tools Therapy 	1-2 hour per session	Goverment: MYR5 per session Private: MYR90- RM280 per session	1-2 times per month	1-2 years
Stroke and Paralysis	 Use of tools Therap Home program for maintenance	1-2 hour per session	Goverment: MYR5 per session Private: MYR90- RM280 per session	1-2 times per month	1-2 years Henry Hoffman, (2018)
Spinal Cord Injury	 Use of tools Therapy Specialist doctor	1-2 hour per session	Goverment: MYR5 per s ession Private: MYR90- RM280 per s ession	1-2 times per month	1-2 years
Spina Bifida	 Use of tools Therapy Home program for maintenance Specialist doctor 	1-2 hour per session	Hos pital rehabilitasi cheras MYR400- 2500 (Hos pital Rehabilitasi Cheras, 2020)	1-2 times per month	Min 1 year (baby age 9 months to 30 months to be able to perform basic movements).
Muscular Dystrophy	 Use of tools Therapy Home programme for maintenance Specialist doctor 	1-2 hour per session	Eropah: 8,000 EURO (28 times) (Cerebral Palsy.org, 2020)	1-2 times per month	Min 1-2 years
Cerebral Palsy	 Use of tools Therapy Home program for maintenance Specialist doctor 	1-2 hour per session	Eropah: 8,000 EURO (28 times) (Cerebral Palsy.org, 2020)	1-2 times per month	Min 1-2 years
Traumatic Brain Injury	Intensive in the early stagesHome program for maintenance	1-2 hour per session	Goverment: MYR5 per session Private: MYR90- RM280 per session	1-2 times per month	1-2 years

Source: Yusniza Binti Mohd Yusof, (Rehabilitation Consultant, Cheras Rehabilitation Hospital), in an interview on 12 April 2020, 14 April 2020, 2 May 2020, 12 May 2020, 3 June 2020, 5 June 2020 dan Dr Norhayati Hussein, (Rehabilitation and Neurorehabilitation Consultant, Cheras Rehabilitation Hospital) in an interview on 12 May 2020 and Henry Hoffman, (2018), "Stroke Survival Statistics: 9 Sobering Facts We Should All Be Aware Of", laman sesawang Saebo, dicapai pada 28 September 2020, https://www.saebo.com/blog/stroke-statistics/.

Based on interviews with Rehabilitation Consultants, Cheras Rehabilitation Hospital needs rehabilitation to help patients until the patient is able to perform basic movements such as turning, picking up goods and being able to walk well (with or without support equipment) namely the use of tools, therapy, home program for maintenance and specialist doctor.

Rehabilitation of the use of support tools involves all sub-categories of Physical Disabilities using support tools. Therapy is a method of massage on the part where there is a defect that occurs cramps. In addition, there is also a rehab in the form of Home program for maintenance for the Physical Disabilities sub-category who can not go to the hospital usually involves patients who are at a severe level such as

paralysis and stroke, Spina Bifida, Muscular Dystrophy, Cerebral Palsy and Traumatic Brain Injury. Besides that, there is a need for a specialist doctor's appointment to find out the patient's condition and performance.

Rehabilitation is approximately 1-2 hours per session with an estimated cost in government hospitals of RM5 per session. Meanwhile, in private hospitals approximately RM90-RM280 per session, the frequency of rehab sessions is once 1-2 months depending on a person's level. The duration of rehab is 1-2 years except for dwarfs 1 year until it reaches normal growth which is a maximum until 7 years old. Spinal Bifida is a minimum of 1 year at the age of 9 months to 30 months or to be able to perform basic movements.

RISK BY CATEGORY OF PERSONS WITH LEARNING DISABILITY

For sub-category of OKU with learning disability, the exposure to risk differs from one sub-category to other sub-categories. However, in general, for the sub-categories of OKUs with learning disabilities, only seven risks are involved. All risks except the risk of damage on supporting equipment. Of all the six sub-categories of OKUs with learning disabilities, OKUs with down syndrome are exposed to more risks compared to other sub-categories.

For the risk of premature death, only the sub-category of down syndrome has the potential to expose to this risk. Meanwhile, other sub-categories are not exposed to this risk. Likewise, all sub-categories are not exposed to the risk of regular hospitalisation except for down syndrome. However, these

risk exposures depend on other health problems faced by the individuals, such as infections, respiratory problems and others.

Whereas for the risk of drug requirements, most of the sub-categories are exposed to this risk. The sub-category of down syndrome is partly exposed to this risk in the event of a side health problem such as infection and respiratory problems.

All sub-categories of OKUs with learning disabilities are also exposed to the risk of rehabilitation needs. However, the exposure rate of this risk varies from one sub-category to another sub-category either at low or medium-level—likewise, the risk of self-inflicted injury and suicide.

1. The Stage or age of the diagnosis as a disabled

Sub Category	The Stage or age of the diagnosis as a disabled
Down Syndrome	Starting from birth (newborn)
Intellectual Disability	Age 5 years and above
Autism	Age 2 years and above, if severe at age 1 year
Attention Deficit	Age 6 years and above, if severe at age 5 year
Hyperactivity Disorder	
(ADHD)	
Specific Learning Disability	Age 6 years and above
(Dyslexia, Dyscalculia,	
Dysgraphia)	
Global Developmental	• Infants aged 6 months, if severe infants 3-4 months, when age 5 years and
Delay (GDD)	above will be included in the category of learning disabilities or
	intellectual disabilities (depending on which category is more appropriate based on level)

Source: Subhashini A/P Jayanath, (Pediatrician, Faculty of Medicine, University of Malaya), in an interview on 7 April 2020 and reviewed on 28 Sept 2020.

Based on interviews with Pediatricians, Faculty of Medicine, University of Malaya, the age for the diagnosis of learning Disabilities for Down Syndrome is from birth, intellectual disability at the age of 5 years and above, autism at the age of 2 years and above and if severe at the age of 1 year can be diagnosed. For Attention Deficit Hyperactivity Disorder (ADHD) is at the age of 6 years and above, if severe at the age of 5 years can be diagnosed.

Specific Learning Disability (Dyslexia, Dyscalculia, Dysgraphia) at the age of 6 years and above. Meanwhile, late global development at the age of 6 months if infants during the age of 3-4 months can be diagnosed, when they are 5 years old and above will be included in the category of learning disabilities or intellectual disabilities depending on which category is more appropriate based on level.

2. Risk of premature death

Sub Category	Risk of premature death
Down Syndrome	 The average life expectancy less than 60 years (Interviews). In 1960 the average life expectancy was 10 years. Then in 2007, the average life expectancy changed to 47 years in the US (Centers for Disease Control and Prevention, 2020)
Intellectual Disability	 Cannot be estimated because it depends on the cause of intellectual disability for example certain syndromes (for certain syndromes, for example: Rett syndrome, Prader Willi syndrome and so on, the risk of premature death is higher)
Autism	 Life expectancy is the same as the normal population except for other health problems such as depression, anxiety etc., which have a higher risk of premature death
Attention Deficit Hyperactivity Disorder (ADHD)	• Life expectancy is the same as the normal population except for other health problems such as depression, anxiety etc., which have a higher risk of premature death
Specific Learning Disability (Dyslexia, Dyscalculia, Dysgraphia)	• Life expectancy is the same as the normal population except for other health problems such as depression, anxiety etc., which have a higher risk of premature death
Global Developmental Delay (GDD)	Cannot be estimated because it depends on the cause of intellectual disability for example certain syndromes (for certain syndromes, for example: Rett syndrome, Prader Willi syndrome and so on, the risk of premature death is higher)

Source: Subhashini A/P Jayanath, (Pediatrician, Faculty of Medicine, University of Malaya), in an interview on 7 April 2020 and reviewed on 28 Sept 2020.

Based on interviews with Pediatricians, Faculty of Medicine, University of Malaya the risk of premature death can occur for Down Syndrome with a life expectancy of 60 years and below. Based on the Centers for Disease Control and Prevention stated in 1960 the average life expectancy is 10 years. Then in 2007, the average life expectancy changed to 47 years in the US. Life expectancy for intellectual disability and global development delay cannot be estimated because depending on the cause of intellectual disability such as certain syndromes such as Rett syndrome,

Prader Willi syndrome and so on, the risk of premature death is higher.

Whereas, for Autism, Attention Deficit Hyperactivity Disorder (ADHD) and Specific Learning Disability (Dyslexia, Dyscalculia, Dysgraphia) life expectancy is the same as the normal population unless other health problems such as depression, anxiety and so on, have a higher risk for premature death. This, can happen when OKU This category becomes various OKU that is OKU Learning and OKU Mental.

3. Frequency of ward detention-Frequency, cost, duration

Sub Category	Frequency of Ward Detention
Down Syndrome	Depending on other medical problems. For example more often if there is heart disease, anemia, leukemia, lung problems and so on.
Intellectual Disability	 Same as the normal population unless there are other medical or physical problems
Autism	None, just like normal people
Attention Deficit Hyperactivity	None, just like normal people
Disorder (ADHD)	
Specific Learning Disability	None, just like normal people
(Dyslexia, Dyscalculia,	
Dysgraphia)	
Global Developmental Delay	Same as the normal population unless there are other medical or
(GDD)	physical problems

Source: Subhashini A/P Jayanath, (Pediatrician, Faculty of Medicine, University of Malaya), in an interview on 7 April 2020 and reviewed on 28 Sept 2020.

Based on interviews with Pediatricians, Faculty of Medicine, University of Malaya for the risk of frequent detention in Down Syndrome ward depends on other medical problems, frequency of ward detention more often if there is heart disease, anemia, leukemia, lung problems and so on. For Intellectual Disabilities and Global Development Delay is the same as the normal population unless there is a medical problem or other physical

problem. This is, when this category becomes various OKU that is OKU Learning and Physical OKU. This is, when this category becomes various OKU that is OKU Learning and Physical OKU. Meanwhile, for other sub categories such as autism, Attention Deficit Hyperactivity Disorder (ADHD) and Specific Learning Disability (Dyslexia, Dyscalculia, Dysgraphia) are the same as other categories.

4. Risk of medication needs -Type of medication, cost, duration

Sub Category	Risk of medication needs				
Sub Category	Type of medication	Range of cost	Duration of medication		
Down Syndrome	None (unless there is another medical problem)	• None	• None		
Intellectual Disability	None (unless there is another medical problem)	• None	None		
Autism	 Sleeping pills (if there are sleep and behavior problems) 	RM 30 per month	 Possibly lifelong. However, it depends on the needs of the individual 		
Attention Deficit Hyperactivity Disorder (ADHD)	MethylphenidateMethylphenidate (extended-release)	RM50 per monthRM250-400 per month	 Possibly lifelong. However, it depends on the needs of the individual 		
Specific Learning Disability (Dyslexia, Dyscalculia, Dysgraphia)	None (unless there is another medical problem)	• None	• None		
Global Developmental Delay (GDD)	None (unless there is another medical problem)	• None	• None		

Source: Subhashini A/P Jayanath, (Pediatrician, Faculty of Medicine, University of Malaya), in an interview on 7 April 2020 and reviewed on 28 Sept 2020.

Based on interviews with Pediatricians, Faculty of Medicine, University of Malaya on the risk of medication needs for Down syndrome, Intellectual Disability, Specific Learning Disability (Dyslexia, Dyscalculia, Dysgraphia) and Global Development Delay is dependent on medical problems encountered. If there is no medical problem, then the risk of drug needs is the same as in the normal population. Meanwhile, for austism there are a handful who need medications for sleep problems and behaviors that involve an estimated cost of RM30 per month that need to be taken possibly throughout life

depending on individual needs. Meanwhile, for austism there are a handful who need medications for sleep problems and behaviors that involve an estimated cost of RM30 per month that need to be taken possibly throughout life depending on individual needs. Attention Deficit Hyperactivity Disorder (ADHD) requires Methylphenidate cost of about RM50 per month and Methylphenidate (extended-release) cost of about RM250-400 per month that needs to be taken is likely for life. However, it depends on the needs of the individual.

5. Risk of rehabilitation needs-type of rehab, hours / sessions, cost, frequency, duration

	Risk of Rehabilitation Needs				
Sub-Category	Type of rehab	hours/	Range of	Frequency of	Duration of
	Туреоттепав	sessions	Cost	rehab	rehab
Down Syndrome	 Early Intervention Programme Occupational Therapy Speech therapy 	4 hours a day (morning and evening sessions)	MYR 1,500 per month	5 times a week (minimum 1 time per week)	or at the age of 3 to 12 years
Intellectual Disability	 Early Intervention Programme Occupational Therapy 	4 hours a day (morning and evening sessions)	MYR 1,500 per month	5 times a week (minimum 2 times per week)	Age 3 to 12 years old
Autism	 Early Intervention Programme Behavioral therapy Occupational Therapy Speech therapy 	4 hours a day (morning and evening sessions)	MYR 1,500 per month	5 times a week (minimum 2- 5 times per week)	Age 3 to 12 years old
Attention Deficit Hyperactivity Disorder (ADHD)	 Early Intervention Programme Behavioral therapy Occupational Therapy 	4 hours a day (morning and evening sessions)	MYR 1,500 per month	5 times a week (minimum 1 time per week)	Age 3 to 12 years old
Specific Learning Disability (Dyslexia, Dyscalculia, Dysgraphia)	 Early Intervention Programme Reading, counting and writing exercises 	4 hours a day (morning and evening sessions)	MYR 1,500 per month	5 times a week (minimum 2-5 time per week)	Age 3 to 12 years old
Global Developmental Delay (GDD)	 Early Intervention Programme Occupational Therapy 	4 hours a day (morning and evening sessions)	MYR 1,500 per month	5 times a week (minimum 2 time per week)	Age 1 year 6 months or age 2 to age 12

Source: Azlina Binti Mohamad Ghafar, (Consultant Clinical Psychology, An-Nur Specialist Hospital and Azlina Clinic), in an interview March 3, 2020, Pn. Rusmawati Abdullah, (Program & Centre Development, The National Autism Society of Malaysia, Petaling Jaya Selangor), in an interview 11 Mac 2020 dan Subhashini A/P Jayanath, (Pediatrician, Faculty of Medicine, University of Malaya), in an interview on 7 April 2020.

Based on interviews with Pediatricians, Faculty of Medicine, University of Malaya and Clinical Psychological Consultants, the rehabilitation needs required in the form of therapy are early intervention programs consisting of behavioral therapy, occupational therapy and speech therapy depending on the functional level of each deficiency faced. In addition, there are also reading, counting and writing exercises for this program. Usually, Down syndrome requires occupational therapy and speech therapy. Intellectual disabilities and global development delay require occupational therapy.

Autism requires all three therapies, namely behavioral therapy, occupational therapy, and speech therapy. Attention Deficit Hyperactivity Disorder (ADHD) usually requires behavioral therapy and occupational therapy. Meanwhile, for Learning Disability (Dyslexia, Specific Dyscalculia, Dygraphia) usually requires reading, counting and writing exercise therapy. However, there are also some in this category that require other therapies.

The frequency of therapy for Down syndrome and Attention Deficit Hyperactivity Disorder (ADHD) is at least once a week. For intellectual disabilities and global development delay at least 2 times a week. For autism and Specific Learning Disability (Dyslexia, Dyscalculia, Dysgraphia) is a minimum of 2-5 times a week.

At the Azlina Psychology Clinic and NASOM, the frequency of therapy is provided 5 times a week with the cost of payment is RM1,500 per month, which is Monday to Friday. There are 2 sessions, namely morning and evening sessions, for morning sessions starting at 8.30-1 pm and 2-6 pm afternoon sessions for about 4 hours. At the Psychology Clinic offers therapy to all sub-categories of Learning Disabilities. Meanwhile, in NASOM is more focused on austism only.

Admission to rehabilitation should be started at an early age of 3 years for intellectual disability, autism, Attention Deficit Hyperactivity Disorder (ADHD), Specific Learning Disability (Dyslexia, Dyscalculia, Dygraphia) and usually up to 12 years depending on the level of functionality to be able to take care of yourself. There are also certain cases up to the age of 17 years or older.

Meanwhile, for Global Development Delay requires early therapy at the age of 1 year and a half or 2 years and Down Sydrome requires therapy from birth that is when the baby needs physiotherapy to learn how to eat starting from infancy or at the age of 3 years to 12 years depending on the level of functionality to be able to take care of their self.

6. Risk of disease and other health

Sub Category	Risk of disease and other health		
Down Syndrome	This article includes the American Academy of Pediatrics Health Supervision for		
	children with Down syndrome from 2011 (Centers for Disease Control and		
	Prevention, 2020):		
	Hearing loss (up to 75% may be affected)		
	Obstructive sleep apnoea, a condition where a person's breathing temporarily		
	stops while asleep (between 50 -75%)		
	• Ear infections (between 50 -70% may be affected)		
	• Eye diseases, like cataracts (up to 60%)		
	Eye issues requiring glasses (50%)		
	Heart defects present at birth (50%)		
	Intestinal blockage at birth requiring surgery (12%)		
	Hip dislocation (when the thigh bone slips out of the hip socket) (6%)		
	Thyroid disease (a problem with metabolism) (4-18%)		
	Anaemia (red blood cells can't carry enough oxygen to the body) (3%)		
	• Iron deficiency anemia (red blood cells don't have enough iron to carry oxygen		
	to the body) (10%)		
	Leukaemia (1%) in infancy or early childhood		
	• Hirschsprung disease (an illness of the gut that can cause constipation) (<1%).		
Intellectual	No, just like the normal population, unless there is a specific syndrome that		
Disability	increases other health risks		
Autism	None, just like normal people		
Attention Deficit	None, just like normal people		
Hyperactivity			
Disorder (ADHD)			
Specific Learning	None, just like normal people		
Disability (Dyslexia,			
Dyscalculia,			
Dysgraphia)			
Global	No, just like the normal population, unless there is a specific syndrome that		
Developmental	increases other health risks		
Delay (GDD)			

Source: Subhashini A/P Jayanath, (Pediatrician, Faculty of Medicine, University of Malaya), in an interview on 7 April 2020 and reviewed on 28 Sept 2020.

Based on interviews and confirmations with Pediatricians, Faculty of Medicine, University of Malaya for other health risks Down Syndrome involves hearing loss (up to 75% may be affected), Obstructive sleep apnea that is, a condition where a person's breathing stops temporarily during sleep between 50-75%, ear infections affect

between 50-70%, eye diseases such as cataracts (up to 60%), eye problems that require glasses (50%), current heart defects birth (50%), intestinal obstruction during birth requires surgery (12%), Hip dislocation (when the femur slips out of the hip socket) (6%), Thyroid disease (problems with metabolism) (4 - 18%),

anemia (Red blood cells can not carry enough oxygen to the body) (3%), iron deficiency anemia (red blood cells do not have enough iron to carry oxygen to the body) (10%), Leukemia (1%) in infants or early childhood children, Hirschsprung Disease (an intestinal disease that can cause constipation) (<1%). Intellectual

disability and Global Development Delay is the same as the normal population unless there is a specific syndrome that increases other health risks. Meanwhile, for Autism, Attention Deficit Hyperactivity Disorder (ADHD) and Specific Learning Disability (Dyslexia, Dyscalculia, Dysgraphia) are similar to the normal population.

7. The risk of suicide and self-injury

Sub Category	Percentage of risk of self-injury / suicide		
Down Syndrome	-Study at Tufts Medical Center, US 2 out of 19 people		
Intellectual Disability	-Finland, 0.02%		
Intellectual Disability	-Israel, 0%		
Aution	-UK, 2017, autism 66%, normal 17%		
Autism	2018, autism 72%, normal 33%		
Attention Deficit Hyperactivity	-US, 2001-2003, ADHD		
Disorder (ADHD)	16% than normal people.		
Specific Learning Disability	-Canada, 2012, SLD male: SLD 7.7%, normal 2.1%		
(Dyslexia, Dyscalculia,	female: SLD 16.6%, normal 3.3%		
Dysgraphia)	Total: 11.1%, normal 2.7%		

Source: Based on previous research

Down Syndrome

Based on a recent study of the risk of suicide attempts among Down Syndorme no recent study was found except in 1985-1995 at Tufts Medical Center, US there were 2 out of 19 people Down Syndorme had attempted suicide (Anne DesNoyers Hurley, 1998).

Intellectual Disability/Global Developmental Delay

For intellectual disabilities and late global development there is a study in Finland

that has done research by following the development for 35 years only 0.02% this category is prone to suicide compared to normal people, in Israel the study in 1991-2005, no cases of suicide attempts from this group (Joav Merrick et.al, 2005). Attempts to commit suicide and suicide among people with intellectual disabilities (ID) are topics that are almost never studied by professionals working with this population. Therefore, it is considered a rare phenomenon (Joav Merrick et.al, 2005).

Austism

For the study autism in the UK in 2017, there were 66% of autism prone to suicide compared to normal people 17% (Sarah Cassidy dan Jacqui Rodgers, 2017). In 2018, 72% of autism are at risk of suicide compared to normal people 33% (Sarah Cassidy et.al, 2018). A literature study by Catherine et.al describes in more detail the percentage of self-injury among autism 46% compared to the normal population exposed 8% among children and adolescents. Meanwhile, adults are exposed to 5.9% (Catherine Steenfeldt-Kristensen, Chris A. Jones dan Caroline Richards, 2020). In Japan, 7.3% of the population have attempted suicide are among autism (Koji Kato et.al., 2013).

Attention Deficit Hyperactivity Disorder (ADHD)

As for ADHD, there are studies in the US, as many as 16% of ADHD are prone to suicide compared to the normal population (Vito Agostia, Ying Chena dan Frances R. Levina, 2011). Findings from 26 literature studies found positive association with ADHD and suicide for both sexes and all age categories (Judit Balazs, Agnes Kereszteny, 2017). Meanwhile, for Specific Learning Disability (SLD) (Dyslexia, Dyscalculia, Dygraphia), there are studies in Canada, suicide attempts among SLDs are higher than the normal population of men with a SLD of 7.7% compared to men of the normal population of 2.1%. Women have an SLD of 16.6% compared to the female population of 3.3% and the overall SLD is

11.1% higher than 2.7% of the normal population (Esme Fuller-Thomson, Samara Z. Carroll dan Wook Yang, 2018). The percentage of suicide attempts can reach 46% among SLDs compared to the normal population if there are additional such as adverse childhood experiences, history of mental illness and sociodemographic drug abuse (Esme Fuller-Thomson, Samara Z. Carroll dan Wook Yang, 2018).

Overall, the percentage of suicides and suicide attempts for Down Sydrom, intellectual disability and Global Development Delay is low. Compared to other subcategories such as Autism, ADHD and SLD are high. This is also based percentage of suicides developed countries such as the US is also high among the average population of 26% (Centers for Disease Control and Prevention, 2020), compared to Malaysia, the percentage of suicides among the general population is 5.5% (statista, 2020). At the same time, the percentage of risk of self-harm or suicide for this category occurs due to OKU Learning category to be OKU Various which is OKU Learning and OKU Mental. The risk of suicide OKU Learning can not confirmed by the Pediatrician because it no longer involves children and asks to make a confirmation with a psychiatrist. Based on the researcher's meeting with the Psychiatrist, Faculty of Medicine, University of Malaya for the purpose of confirming the percentage of suicides among the Learning Disabilities also could not be commented by experts because it requires a more specific study.

RISK BY CATEGORY OF PERSONS WITH MENTAL DISABILITIES

The risk of all sub-categories of mental disabilities, in general, is the same. Of the seven risks highlighted in this study, only six risks are faced by the category of OKUs with mental disabilities. The risk of support equipment damage is not included unless the individual has disabilities from other categories such as the category on physical disabilities that require support equipment. Meanwhile, according to experts, OKUs face the same health risks as healthy individuals.

For the risk of premature mortality, individuals from all sub-categories for OKUs with mental disabilities are exposed to this risk. However, the risk of early death, if scrutinised, is caused by the OKUs own conduct of not being able to maintain their health and is not directly caused by their disability. Therefore, these risks can still be controlled, depending on the level and to how fast the treatment is administered. Based on the interviews with experts in this field, it is easier to control the disease if treatment is applied to the OKU with a mental health condition.

All sub-categories of mental disabilities are also exposed to a constant risk of hospitalisation. However, based on the experts' views, this risk usually occurs in the early stages and will depend on the level of severity. This category also faces the risk of being re-detained for six months.

All sub-categories of mental disabilities are exposed to this risk, including the risk of the requirement for medication. However, the cost and dosage of the medication vary depending on the level of severity.

However, risk cannot be applied for all subcategories of mental disabilities that are severe.

All sub-categories of mental disabilities are also exposed to risk of need for rehabilitation. The estimated cost for this is RM200 per hour. Frequency depends on the level of severity. Risks of self-inflicted injury and suicide are also applicable to all subcategories of mental disabilities.

1. Umur untuk diagnosis sebagai OKU

Sub Kategori	Tahap Umur Penentuan sebagai OKU
Skizofrenia	
Schizotypal dan Delusional Disorders	Umur 14-15 tahun
Mood disorder	
Severe Anxiety Disorder	
Organic Mental disorder	

Sumber: Muhammad Muhsin bin Ahmad Zahari, (Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya), dalam temu bual 28 April 2020 dan disemak pada 30 Sept 2020.

Berdasarkan temu bual Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya tahap umur penentuan sebagai OKU adalah pada umur 14-15 tahun keatas apabila meningkat remaja dan tidak dapat mengawal tekanan, kemurungan dan masalah yang dihadapi.

2. Risiko Kematian Pramatang tempoh jangka hayat mengikut jantina

Sub Kategori	Risiko Kematian Pramatang	
Skizofrenia		
Schizotypal		
dan	Kematian pramatang lebih pendek iaitu perempuan hidup kurang 15 tahun, lelaki hidup kurang 20 tahun lebih awal	
Delusional Disorders		
Mood disorder	daripada populasi normal.	
Severe Anxiety Disorder		
Organic Mental disorder		

Sumber: Kajian lepas dan Muhammad Muhsin bin Ahmad Zahari, (Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya), dalam temu bual 28 April 2020 dan disemak pada 30 Sept 2020.

Secara umumnya kematian pramatang bagi OKU mental berdasarkan kajian di Denmark, Finland dan Sweden pada tahun 1987-2006 bagi perempuan hidup kurang 15 tahun dan lelaki 20 tahun berbanding populasi umum. Pada tahun 2000-2006 kajian di 3 negara yang sama jangka hayat bagi perempuan adalah kurang 15 tahun dan lelaki 20 tahun daripada populasi normal (Kristian Wahlbeck et.al (2011). Bagi skizofrenia terdapat banyak kajian yang dilakukan secara umum iaitu kematian pramatang adalah 15-20 tahun lebih awal daripada orang normal (Psychology & Psychiatry, 2020). Kajian oleh Athif Ilyas, Edward Chesney dan Rashmi Patel 20 tahun lebih awal (Athif Ilyas, Edward Chesney dan Rashmi Patel, 2017). Pada tahun 1995-2014, di Denmark, kematian pramatang pesakit skizo kurang 10-20 tahun(Line Hosbond Lomholt et.al. 2019). Pada tahun 2004 di US,

jangka hayat populasi umum adalah pada umur 76 tahun, jangka hayat skizo adalah umur 61 tahun iaitu jangka hayat lebih pendek 15 tahun. Manakala, pecahan bagi lelaki populasi umum umur 72 tahun, perempuan 80 tahun. Bagi pesakit skizo pula, lelaki umur 57 tahun, perempuan umur 65 tahun (Charles H. Hennekens et.al, 2005). Oleh itu perbezaan jangka hayat bagi lelaki dan perempuan adalah 15 tahun. Pada tahun 2000-2006, di Denmark jangka hayat skizo lebih singkat 18.7 tahun bagi lelaki berbanding generasi umum, bagi perempuan 16.3 tahun berbanding umum (Thomas Munk Laursen, 2011). Hal ini turut disokong oleh pakar psikiatrik universiti Malaya, Kematian pramatang boleh berlaku ketidak disebabkan mampuan dalam mengurus diri dan cara pemakanan dengan baik oleh OKU kategori ini.

3. Risiko kekerapan ditahan wad-kekerapan, kos, tempoh,

Sub Kategori	Risiko Kekerapan di Tahan Wad			
	Anggaran Kekerapan Anggran Kos		Tempoh di tahan	
			wad	
Skizofrenia				
Schizotypal dan Delusional Disorders				
Mood disorder	2 kali setahun	RM 100 sehari	2 minggu	
Severe Anxiety Disorder		di PPUM		
Organic Mental disorder				

Sumber: Muhammad Muhsin bin Ahmad Zahari, (Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya), dalam temu bual 28 April 2020 dan disemak pada 30 Sept 2020.

Berdasarkan temu bual Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya risiko kekerapan di tahan wad adalah 2 kali setahun, anggaran kos adalah RM100 sehari di PPUM dan anggaran tempoh ditahan wad adalah selama 2 minggu.

4. Risiko keperluan ubat-ubatan-jenis ubat, kos, tempoh

Sub Kategori	Risiko Keperluan ubat-ubatan				
	Jenis Ubat	Anggran Kos	Tempoh keperluan		
			Ubat-ubatan		
Skizofrenia	Ubat-ubatan bergantung	Minimum RM 60	Bergantung kepada		
Schizotypal dan Delusional	kepada kedaan pesakit seperti	sebulan	tahap pesakit		
Disorders	antikolinergik, steroid,		minimum 3 tahun,		
Mood disorder	perangsang, theophylline,	Maksimum	maksimum tiada		
Severe Anxiety Disorder	dekongestan hidung, SSRI	RM3,000 sebulan	kemungkinan		
Organic Mental disorder	g.		sepanjang hayat		

Sumber: Kajian lepas dan Muhammad Muhsin bin Ahmad Zahari, (Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya), dalam temu bual 28 April 2020 dan disemak pada 30 Sept 2020.

Berdasarkan temu bual Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya keperluan ubat-ubatan adalah bergantung kepada tahap dan keadaan pesakit seperti antikolinergik, steroid, theophylline, dekongestan perangsang, hidung, SSRI minimum kos ubat-ubatan sebulan adalah anggaran RM60

maksimum kos ubat-ubatan adalah RM3,000 sebulan. tempoh Bagi pengambilan ubat-ubatan adalah bergantung kepada tahap pesakit minimum 3 tahun dan maksimum tiada berkemungkinan keperluan ubat-ubatan oleh pesakit adalah sepanjang hayat.

5. Risiko keperluan rehabilitasi-jenis rehab, kos, kekerapan, tempoh

Sub Kategori	Risiko keperluan rehabilitasi				
	Jenis Terapi	Jam/Sesi	Anggran Kos	Kekerapan	Tempoh
				rehab	rehab
Skizofrenia	Konsultasi pakar	Kali pertama 2	RM250	Minimum 2	Minimum 3
Schizotypal dan	Psikiatrik	jam	sejam	kali setahun	tahun
Delusional Disorders	(farmakoterapi)				
Mood disorder	dan Konsultasi	Seterusnya		Maksimum 4	Maksimum
Severe Anxiety	Psikologi	30-45 minit		kali setahun	tiada
Disorder	(psikoterapi)				
Organic Mental				Bergantung	Bergantung
Disorder				kepada	kepada
				keadaan	keadaan
				pesakit	pesakit

Sumber: Muhammad Muhsin bin Ahmad Zahari, (Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya), dalam temu bual 28 April 2020 dan disemak pada 30 Sept 2020 dan Azlina Binti Mohamad Ghafar, (Perunding Psikologi Klinikal, Klinik Azalina dan Hospital Pakar An-Nur)

Berdasarkan temu bual Pakar Perubatan Psikiatri. Fakulti Perubatan, Universiti Malaya dan Perunding Psikologi Klinikal, Klinik Azalina dan Hospital Pakar An-Nur keperluan rehabilitasi adalah melibatkan konsultasi dengan pakar psikiatrik iaitu farmakoterapi dan perunding psikologi iaitu terapi psikoterapi. Konsultasi dengan pakar psikiatri bertujuan untuk mengenaplasti ubat-batan yang diperlukan oleh pesakit sesi konsultasi kali pertama anggaran 2 jam dan seterusnya melibatkan 30-45 minit dengan anggaran kos RM250 sejam kekerapan minimum 2 kali setahun dan maksimum 4 kali setahun. Manakala bagi tempoh rehab adalah minimum 3 tahun dan maksimum bergantung kepada keadaan pesakit. Selain itu, pesakit juga boleh mendapat psikoterapi konsultasi perunding secara dengan psikologi sebagai alternatif untuk mendapatkan rehab bergantung kepada keselesaan penyakit anggaran sesi rehab, anggarn kos, kekerapan rehab dan tempoh rehab adalah sama dengan dengan farmakoterapi vang dijalankan pakar psikiatrik.

6. Risiko kesihatan lain

Sub Kategori	Risiko Kesihatan Lain
Skizofrenia	Berdasarkan artikel oleh Joseph N. Rawlings (2017) risiko kesihatan adalah seperti berikut (Joseph N. Rawlings ^{, 2017)} : • Endocrine
Schizotypal dan Delusional Disorders	 Hipertiroidisme, hipotiroidisme, pheochromocytoma, penyakit Cushing, penyakit Addison dan menopaus. Kardiovaskular Sindrom koronari akut, aritmia, CHF, hipertensi, hipotensi, prolaps injap mitral.
Mood disorder	Neurologi Epilepsi, penyakit serebrovaskular, Meniere's, penyakit, sklerosis berganda,
Severe Anxiety Disorder	 ensefalitis, awal demensia, migrain. Metabolik Diabetes, porfiria Pulmonari
Organic Mental Disorder	Asma, COPD, embolisme paru, radang paru-paru. Penyakit lain adalah Anemia, UTI pada orang tua, sindrom iritasi usus, keracunan logam berat, kekurangan B-12, elektrolit dan gangguan.

Sumber: Joseph N. Rawlings (2017) dan Muhammad Muhsin bin Ahmad Zahari, (Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya), disemak pada 30 Sept 2020.

Berdasarkan kajian oleh Joseph N. Rawlings (2017) dan disemak oleh Pakar Perubatan Psikiatri. Fakulti Perubatan. Universiti Malaya risiko kesihatan lain melibatkan endocrine berkaitan dengan hormon iaitu hipertiroidisme, hipotiroidisme, pheochromocytoma, penyakit Cushing. penyakit Addison dan menopaus. Terdapat Kardiovaskular juga penyakit terjadi penyempitan atau penyumbatan saluran darah yang akan melibatkan Sindrom koronari akut, aritmia, CHF, hipertensi, hipotensi, prolaps injap mitral. Selain itu, terdapat penyakit neurologi kelainan pada sistem saraf yang melibatkan epilepsi, penyakit serebrovaskular, meniere's, penyakit, sklerosis berganda, ensefalitis, awal demensia, migrain. Metabolik proses penguraian nutrisi dari makanan menjadi energi yang diperlukan badan manusia iaitu Diabetes, porfiria, Pulmonari iaitu satu kumpulan penyakit yang melibatkan gangguan kepada peredaran darah di dalam paru-paru yang melibatkan Asma, COPD, embolisme paru, radang paru-paru. Penyakit lain adalah Anemia, UTI pada orang tua, sindrom iritasi usus, keracunan logam berat, kekurangan B-12, elektrolit dan gangguan.

7. Risiko membunuh diri dan mencederakan diri-kekerapan, peratus keterdedahan terhadap risiko ini berbanding orang normal

Sub Kategori	Peratus terdedah Risiko
Sub Rategori	mencederakan diri/bunuh diri
Skizofrenia	Tahun 1982-2001, 4.9%
3KIZUII EIIIA	Tahun 1959-2001, 19.9%
	Tahun 1966-2006, 5-13%
Schizotypol	Tahun 1982-2001, 11.6%
Schizotypal	Tahaun 1959-2001, 15.2%
Delusional	Tahun 1982-2001, 2.3%
Disorders	Tahun 1959-2001, 10.4%
Mood	Tahun 1982-2001, 42.1%
disorder	Tahun 1959-2001, 20.8%
Severe	Tahun 1982-2001, 7.6%
Anxiety	Tahun 1959-2001, 2.5%
Disorder	Tahun 1957, 1972 dan 1997, 2.5%
Organic	Tahun 1982-2001, 0.4%
Mental	·
disorder	Tahun 1959 dan 2001, 15 %

Sumber: Berdasarkan kajian lepas

Schizotypal

Kajian penerbitan pada tahun 1982 ke 2001 di seluruh dunia di dapati 11.6 % kes bunuh diri terdiri daripada Schizotypal (Alexandra Fleischmann et.al., 2005). Manakala, Kajian penerbitan antara tahun 1959 dan 2001 kajian di seluruh dunia pula di dapati 15.2% kes bunuh diri daripada Schizotypal (José Manoel Bertolote, Alexandra Fleischmann, 2002).

Delusional Disorders

Kajian penerbitan pada tahun 1982 ke 2001 di seluruh dunia di dapati 2.3 % kes bunuh diri terdiri daripada Delusional Disorders (Alexandra Fleischmann et.al,2005). Manakala, kajian penerbitan antara tahun 1959 dan 2001 didapati 10.4% kes bunuh diri daripada Delusional Disorders (José Manoel Bertolote, Alexandra Fleischmann,2002).

Skizofrenia

Kajian penerbitan antara tahun 1982 ke 2001 di seluruh dunia, di dapati 4.9 % kes bunuh diri terdiri daripada skizofrenia (Alexandra Fleischmann et.al., 2005). Dalam kajian bagi penerbitan antara tahun 1959 dan 2001 pula di dapati 19.9% kes bunuh diri daripada skizofrenia (José Manoel Bertolote, Alexandra Fleischmann, 2002). Manakala, pada tahun 1966-2006, daripada pelbagai negara iaitu US, Switzerland, Denmark dan Finland di dapati pesakit skizofrenia mati disebabkan bunuh menunjukkan sekurang-kurang 5-13% (Maurizio Pompili et.al., 2005).

Mood Disorder

Kajian penerbitan pada tahun 1982 ke 2001 di seluruh dunia, di dapati 42.1% kes bunuh daripada diri terdiri Mood Disorder (Alexandra Fleischmann et.al., 2005). Dalam kajian penerbitan lain antara tahun 1959 dan 2001 kajian di seluruh dunia, di dapati 20.8% kes bunuh diri daripada Mood Disorder (José Manoel Bertolote, Alexandra Fleischmann, 2002). Manakala, kajian di Denmark ke atas peserta yang lahir antara 1955 dan 1991 mendapat rawatan sehingga tahun 2006 terdapat 42.2 % pesakit mental Mood Disorder mempunyai idea untuk membunuh diri, 40.4% tidak mempunyai kelakuan untuk membunuh diri dan 17.4 % lagi mempunyai percubaan membunuh diri (Erkki Isometsä, 2014).

Severe Anxiety Disorder

Kajian penerbitan pada tahun 1982 ke 2001 di seluruh dunia, di dapati 7.6% kes bunuh diri terdiri daripada Severe Anxiety Disorder (Alexandra Fleischmann et.al., 2005). Dalam kajian ini lain antara tahun 1959 dan 2001 kajian di seluruh dunia, di dapati 2.5% kes bunuh diri daripada Severe Anxiety Disorder Manoel Bertolote. Alexandra (José Fleischmann, 2002). Manakala, kajian di Swedan, kajian dilakukan pada tahun 1957, 1972 dan 1997 di dapati 2.5% risiko membunuh diri daripada Severe Anxiety Disorder (Holmstrand C et.al, 2015).

Organic Mental disorder

Kajian penerbitan pada tahun 1982 ke 2001 di seluruh dunia, di dapati 0.4 % kes bunuh diri terdiri daripada Organic Mental disorder (Alexandra Fleischmann et.al., 2005). Manakala, dalam kajian lain penerbitan antara tahun 1959 dan 2001 kajian di seluruh dunia, di dapati 15% kes bunuh diri daripada Organic Mental disorder(José Manoel Bertolote, Alexandra Fleischmann, 2002).

Secara keseluruhannya, trend peratus membunuh diri dikalangan OKU Mental tidak konsisten dan tidak dapat dijangka. Peratus tertinggi keterdedahan membunuh diri boleh mencapai 42.1% dan paling rendah adalah 0.4% bagi kategori OKU Mental. Berdasarkan pertemuan penyelidik dengan Pakar Perubatan Psikiatri, Fakulti Perubatan, Universiti Malaya untuk tujuan pengesahan peratus membunuh dikalangan OKU Mental tidak dapat diberi komen oleh pakar.

RISK BY CATEGORY OF PERSONS WITH HEARING DISABILITY

The risk for all sub-categories of hearing disability generally differs from each other. Of the total seven risks outlined, the category of hearing impairment are not exposed to the risk of non-employment, risk of suicide or self-inflicted injury and health risks caused by the disability experienced. The sub-category of hearing disability are exposed only to the risk of premature mortality, frequent risk of hospitalisation, risk of a requirement for medication, risk of supporting equipment damage and risk of rehabilitation needs depending to the subcategories.

For the risk of premature mortality, only the sub-category of down syndrome has the potential to be exposed to this risk. Meanwhile, other sub-categories are not exposed to this risk.

All sub-categories of hearing disability are exposed to the frequent risk of hospitalisation. However, every sub-

category differs with other sub-categories in terms of the frequency.

While the risk of medications should also be exposed to hearing impairment, the matter depends on the level of seriousness of hearing impairment. The need for medication differs at every level.

As OKUs with hearing impairment are dependent on supporting equipment, as such, all sub-categories of OKUs are exposed to support equipment damage. The durability and cost of the support equipment vary depending on the usage and quality.

Similarly, all sub-categories of hearing impairment are exposed to the risk of rehabilitation needs. However, based on interviews with the experts, the cost of getting rehabilitation services varies according to the health centre.

1. Age for diagnosis as disabled

Sub Category	Age for diagnosis as disabled	
Bilateral Hearing Loss		
Single Sided Deafness (SSD)/ Profound Unilateral Hearing Loss	Starting from birth (newborn)	
Permanent Ear Defects / Ear-Related Syndrome / Hearing-		
Related Syndrome (Microtia, Atresia, Anotia, Treacher Collins,		
Goldenhar Syandrom)		

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorhinolaryngologist, Faculty of Medicine, University of Malaya, the age of diagnosis as hearing impairment is from birth (newborn) for the disabled in this category.

2. Risk of Premature Death

Sub Category	Risk of Premature Death
Bilateral Hearing Loss	
Single Sided Deafness (SSD)/ Profound Unilateral Hearing Loss	
Permanent Ear Defects / Ear-Related Syndrome / Hearing-	None, just like normal people)
Related Syndrome (Microtia, Atresia, Anotia, Treacher Collins,	
Goldenhar Syandrom)	

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorhinolaryngologists, Faculty of Medicine, University of Malaya, the risk of premature death for the hearing impaired is similar to that of normal people in these three subcategories.

3. Risk of frequency of ward detention-Frequency, Range of Cost, Duration

Sub Category	Risk of frequency of ward detention			
Jub Category	Frequency	Range of Cost	Duration	
Bilateral Hearing Loss	1-2 times throughout life during surgery cochlear implant, bone bridge atau Brainsterm implant	RM100 per day at PPUM	Min: 1 WeekMax: 3 weeks if none complications	
Single Sided Deafness (SSD)/ Profound Unilateral Hearing Loss	1-2 times throughout life during surgery	 RM100 per day at PPUM 	Min: 1 WeekMax: 3 weeks if none complications	
Permanent Ear Defects / Ear- Related Syndrome / Hearing- Related Syndrome (Microtia, Atresia, Anotia, Treacher Collins, Goldenhar Syandrom)	1-2 times throughout life during surgery	RM100 per day at PPUM	Min: 1 WeekMax: 3 weeks if none complications	

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorhinolaryngologists, Faculty of Medicine, University of Malaya, the risk of ward detention can occur to the Hearing Impaired for the subcategories of deafness on both sides of the ear, side and Permanent ear defects / ear-related syndrome / hearing-related syndrome. For deaf surgery on both sides of the ear requires surgery such as cochlear implant surgery, bone bridge or Brainsterm implant which needs to be kept in the ward 1-2 times in life, the cost of being held

in the ward is RM100 per day and the minimum ward detention period is 1 week and maximum 3 weeks if no complications. Meanwhile, surgery for deafness and permanent ear defects / ear-related syndrome / hearing-related syndrome (microtia, atresia, anotia, treacher collins, goldenhar syandrom) can also occur 1-2 times in life with an estimated cost of RM100 per day and the minimum ward detention period is 1 week and maximum 3 weeks if no complications.

4. Risk of medication / surgical needs-Type of Drug, Range of Cost, Duration

Sub Category	Risk of medication / surgical needs			
	Type	Range of Cost	Duration of ward	
		medication /	detention due to	
		surgical needs	surgery	
	 Brainstem implant 	• RM105,000	Min: 1 Week	
	 Koklea implant per unit 	• RM 95,000	 Max: 3 weeks if 	
Bilateral Hearing Loss	Bone Conduction	• RM6,000-8,000	none	
	• seunit		complications	
	Sound Bridge	• RM40,000		
Single Sided Deafness (SSD)/	 Koklea implant seunit 	• RM 95,000	Min: 1 Week	
Profound Unilateral Hearing	Bone Conduction per	• RM6,000-8,000	 Max: 3 weeks if 	
	unit		none	
Loss	 Sound Bridge 	• RM40,000	complications	
Permanent Ear Defects / Ear-	 Koklea implant per unit 	• RM 95,000	Min: 1 Week	
Related Syndrome / Hearing-	Bone Conduction per	• RM6,000-8,000	 Max: 3 weeks if 	
Related Syndrome (Microtia,	unit		none	
Atresia, Anotia, Treacher	 Sound Bridge 	• RM40,000	complications	
Collins, Goldenhar Syandrom)				

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorhinolaryngologists, Faculty of Medicine, University of Malaya, the risk of needing medicine in the form of surgery for all three sub-categories namely surgery for deaf people on both ears involves Brainstem implant surgery, Cochlear implant, Bone Conduction, Sound Bridge. Surgery for deafness of the ear and Permanent ear defect / ear-related syndrome / hearing-related syndrome (microtia, atresia, anotia,

treacher collins, goldenhar syandrom) involves cochlear implant surgery, Bone Conduction, Sound Bridge. The estimated cost of surgery, for Brainstem implant RM 105,000, Koklea implant RM95,000, Bone Conduction RM6,000-8,000 and Sound Bridge RM40,000. The duration of ward detention is a minimum of 1 week and a maximum of 3 weeks if there are no complications.

5. Risk of need and damage to equipment support

Sub Catagory	Risk of need and damage to equipment support			
Sub-Category	Support tools	Range of Cost	Endurance	
Bilateral Hearing Loss	Hearing aids	RM105,000	Tool: 5-10 years Battery: 2-3 years	
Single Sided Deafness (SSD)/ Profound Unilateral Hearing Loss	Hearing aids	RM3,500-7,000	Tool:5-10 years Battery:2-3 years	
Permanent Ear Defects / Ear- Related Syndrome / Hearing- Related Syndrome (Microtia, Atresia, Anotia, Treacher Collins, Goldenhar Syandrom)	Hearing aids	RM3,000-4,500	Tool:5-10 years Battery: 2-3 years	

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorinolaryngologist, Faculty of Medicine, University of Malaya, there is a risk of need and damage of hearing aids for the hearing impaired for all deaf sub-categories of both ears estimated to be RM105,000 with a device resistance of 5-10 years tool durability and 2-3 years battery life. For the deaf ear sub-category, the estimated support device is RM3,500-7,000 with a 5-

10 year tool durability and a 2-3 year battery life. Meanwhile, the sub-category Permanent ear defects / ear-related syndromes / hearing-related syndromes (microtia, atresia, anotia, treacher collins, goldenhar syandrom) are estimated to be RM3,000-4,500 support devices with 5-10 years tool durability and 2-3 year battery life.

6. Risk of rehabilitation needs-type of rehab, hours / sessions, cost estimates, frequency, duration

	Risk of rehabilitation needs				
Sub-Category	Туре	hours / sessions	Range of Cost	Frequency	Duration
Bilateral Hearing Loss	Audiological therapy	1-2 hours / sessions	RM55-150/ sessions	1-3 times per month	2 years
Single Sided Deafness (SSD)/ Profound	Audi ological	1-2 hours /	RM55-150/	3-6 times	2 years
Unilateral Hearing Loss Permanent Ear Defects / Ear-Related	therapy	sessions	sessions	per month	,
Syndrome / Hearing-Related Syndrome (Microtia, Atresia, Anotia, Treacher	Audiological therapy	1-2 hours / sessions	RM55-150/ sessions	1-3 times per month	2 years
Collins, Goldenhar Syandrom)	шстару	363310113	303310113	month	

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorinolaryngologist, Faculty of Medicine, University of Malaya for the Hearing Impaired requires rehabilitation in the form of therapy with audiology for 1-2 hours for one session with an estimated payment of RM55-150 for one session. The estimated frequency is once every

1-3 months for deafness in both ears and permanent ear defects / ear-related syndrome / hearing-related syndrome is within 2 years. Meanwhile, Deaf on one ear requires an estimated frequency of 3-6 months once in 2 years.

7. Risk of other health

Definisi Risiko Kesihatan-Kebarangkalian untuk mendapat penyakit lain adalah tinggi disebabkan ketidakupayaan yang dihadapi berbanding orang normal-Penyakit dan peratus.

Sub-Category	Risk of other health
Bilateral Hearing Loss	
Single Sided Deafness (SSD)/ Profound Unilateral Hearing Loss	None
Permanent Ear Defects / Ear-Related Syndrome / Hearing-Related Syndrome	
(Microtia, Atresia, Anotia, Treacher Collins, Goldenhar Syandrom)	

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorinolaryngologist, Faculty of Medicine, University of Malaya there are no other health risks for the hearing impaired, the health risks are the same as normal people.

RISK BY CATEGORY OF PERSONS WITH VISUAL DISABILITY

In contrast to other sub-categories of OKUs, the risk for the sub-category of OKUs who are visual disability is not much different, or in other words, each sub-category faces the same risk.

All visual disability sub-categories are not exposed to the risk of premature death, the risk of suicide and self-inflicted injury, the risk of frequent hospitalisation and health risk. All of these risks are the same as for healthy individuals.

However, based on interviews and group discussions with visually impaired individuals, it was found that the risk was still present but not too severe.

The visually impaired are also exposed to the risk of medication needs. However, the matter still depends on the type of disease that causes it to lose its ability, such as glaucoma and retinitis pigmentosa (RP).

All these sub-categories face the risk of damage to support equipment since the visually impaired depend on support equipment. Similarly, all sub-categories of hearing impairment are exposed to the risk of rehabilitation needs.

1. The Stage or age of the diagnosis as a disabled

Sub Category		The Stage or age of the diagnosis as a disabled
Blind in both eyes or one eye	•	Infants and early childhood
Low vision/partially sighted in both	•	(2-8 years old)
	•	Late childhood (9-12 years)
eyes or one eye Other vision disorders (albinism)	•	Adults
Other vision disorders (albinisin)	•	Other reasons

Source: (My Health Kementerian Kesihatan Malaysia, 2019) and (Amir Samsudin, Oftalmologist, Faculty of Medicine, University of Malaya, reviewed on 30 Set 2019)

Eye defects can occur in four stages, namely infants and early stages of children aged 2-8 years, late stages of children aged 9-12 years, adults and other causes. In infancy and early childhood, congenital/natural defects such as congenital cataract, congenital glaucoma, problems during pregnancy such as bacterial infections due to rubella, toxoplasmosis and alcohol causes of perinatal retinopathy of prematurity and infections of ophthalmia neonatorum. Late stage when children are going blind due to refractive amblyopia / amblyopia, strabismus, corneal scarring in the layer-infection, trauma, lack of vitamin A, a hereditary disease caused by

albinism, retinitis pigmentosa. Ranked adults of blindness due to refractive error. cataracts, diabetic retinopathy, glaucoma and age-related Macular Degeneration (Age related Macular Degeneration). Meanwhile, other causes are bacterial infections of the eyes, Injuries to the eyes that are punctured, exposed to chemicals and Retinoblastoma eye cancer (My Health Kementerian Kesihatan Malaysia, 2012). In Malaysia, the disease causing blindness in this country is the highest due to cataracts (58%), diabetes (10%) and glaucoma (7%) Health Kementerian Kesihatan (My Malaysia, 2019).

2. Premature Death Risk-life expectancy

Sub Category	Premature Death
Blind in both eyes or one eye	
Low vision/partially sighted in both eyes or one eye	None, just like normal people
Other vision disorders (albinism)	

Source: (Amir Samsudin, Ophthalmologist, Faculty of Medicine, University of Malaya, in an interview on 31 March 2020)

Based on interviews conducted Ophthalmologist at the Faculty of Medicine, University believes the risk of premature death among the Blind is the same as a normal person.

3. Frequency of ward detention

Sub Category	Frequency of ward detention
Blind in both eyes or one eye	• None
low vision/ partially sighted in both eyes or one eye	• None
Other vision disorders (albinism)	None

Source: (Amir Samsudin, Ophthalmologist, Faculty of Medicine, University of Malaya, in an interview on 31 March 2020)

Based on interviews conducted Ophthalmologist at the Medical Faculty, University of Malaya, there is no risk of hospitalization for the treatment of detained frequency points awarded usually does not require treatment that should be in the ward.

4. Risk of medication needs

Sub Category	Risk of medication needs
Blind in both eyes or one eye	
Low vision/partially sighted in both eyes or one eye	None unless there is another disease
Other vision disorders (albinism)	

Source: (Amir Samsudin, Ophthalmologist, Faculty of Medicine, University of Malaya, in an interview on 31 March 2020)

Based on interviews conducted Ophthalmologist at the Medical Faculty, University of Malaya, visually impaired people who are completely blind have no cost when they are completely blind unless there are other diseases such as glaucoma, the cost of medications required is RM50-100 per month for one type of medication, it is possible to require 3-4 types of medication depending on the patient's level. Therefore, the estimated maximum cost is

RM300-RM400 per month if there is more than one type of medicine that needs to be taken for life. Diabetic Retinopathy if needed, intravitreal injections for diabetic retinopathy can cost RM3,000-RM24,000 a year (an average of 6 injections a year, with each injection costing RM500-RM4,000). Other costs can also involve laser treatment for the eyes, the estimated price can be up to RM1,000-2,000 for the whole.

5. Other health-disease risk, percent probability of getting the disease than normal people

The definition of Health Risk is that the probability of getting another disease is high due to the disability faced compared to normal people

Sub Category	Other health	
Blind in both eyes or one eye		
Low vision/ partially sighted in both eyes or one eye	None, just like normal people	
Other vision disorders (albinism)		

Source: (Amir Samsudin, Ophthalmologist, Faculty of Medicine, University of Malaya, in an interview on 31 March 2020)

Based on interviews conducted Ophthalmologist at the Medical Faculty, University of Malaya, there is no other health risk for the Blind, this risk can apply to the Blind is the same as a normal person.

6. Risk of rehabilitation needs-type of rehab, hours / sessions, frequency, cost, duration

	Risk of Rehabilitation Needs				
Sub Category	Туре	hours/ sessions	frequency	estimated cost	Duration of Rehab
Blind in both eyes or one eye Low vision/partially sighted in both eyes or one eye Other vision disorders (albinism)	Orientation and mobility	8.30 am to 5.30 pm	Monday to Friday (5 days in a week)	Free fee with * allowance of RM75 per month	6 months

*Note: The amount of allowance depends on the grant obtained by MAB from JKM
Source: (Gurney Training Center for the Blind, (Malaysian Association for The Blind (MAB), in an interview on 2 Sept 2020)

Rehabilitation needs for the visually impaired at an early stage are orientation and mobility that can be participated under management of the Malaysian Association for The Blind (MAB) Kinta Valley Rehabilitation Center in Ipoh, Perak for 6 months. This training is done every Monday to Friday at 8.30-5.30 pm. In addition, hostel facilities, food and drink are provided free of charge for participants who have a OKU card from JKM. Participants are also given an allowance of RM75 per month by MAB, the amount of allowance varies and depends on the approval of the grant given by JKM.

Thus, the facilities provided enable participants from all over Malaysia to get orientation and mobility services at this

place. Apart from Rehabilitation, MAB also offers office management, computer, massage therapy and reflexology skills courses at the Gurney Training Center for the Blind, Kuala Lumpur. The duration of the course depends on the course and level, there are courses offered within 6 months, 1 year and 1 year and a half. This training is done every Monday to Friday from 8.30 am-5.30 pm. Course participants are also given hostel facilities, food and drink for free for participants who have a OKU card from JKM. Participants are also given an allowance of RM75 per month, the amount of allowance varies and depends on the grant approval given by JKM. The facilities provided enable participants from all over Malaysia to follow the courses and skills offered.

7. Risk of damage to support equipment, price, durability

	Risk of damage to support equipment			
Sub category	Equipmet	Estimate of Cost	Estimated durability	
 Blind in both eyes or one eye Low vision/partially sighted in both eyes or one eye Other vision disorders (albinism) 	 weWALK (Smart stick) Bawa Cane Smart stick Stick made in India Stick mad in Hongkong Telescopic Stick 	RM2,084RM2,800RM48RM79RM300	Depending on the use	

Source: (Sales Division, (Malaysian Association for The Blind (MAB)), in an interview 7 Sept 2020), (Low vision Division, (Malaysian Association for The Blind (MAB)), in an interview 7 Sept 2020),

The need for support aids for movement for the visually impaired is an estimated price of RM48-RM300, namely a stick from India, a stick from Hong Kong and a telescopic stick. For smart sticks such as weWALK approximately RM 2,084 (amanz, 2019) and Bawa Cane approximately RM 2,800 (asroawani, 2020). In addition, there are other support tools depending on the needs of the disabled for the blind who need reading aids for studying or working need a Screen

Reader Software priced at RM5,000 (Muhammad Firdaus Abu Hassan, 2020). For limited vision requires a pocket magnifier support device with an estimated price of RM50 and above depending on the size. Apart from that, there is also an electronic magnifier estimated at RM2,000 and above as a reading aid for the visually impaired (Malaysian Association for The Blind (MAB, 2020).

RISK BY CATEGORY OF PERSONS WITH SPEECH DISABILITY

The risks for all sub-categories of speech disability are generally the same between one sub-category and another sub-category.

All sub-categories of speech disability are not exposed to the risk of premature mortality and the risk of medication needs unless the speech disability is caused by cancer. Similarly, persons with speech disability face the same health risk as healthy individuals.

While speech-impaired individuals from all sub-categories have the potential to be exposed to the risk of frequent hospitalisation, however, this risk is very low and rare except after surgery.

All speech impairment sub-categories are also exposed to the risk of damage to support equipment, and such support equipment varies in price and durability depending on its quality.

Similarly, all sub-categories of speech disability are exposed to the risk of rehabilitation needs. Estimated cost for rehabilitation is between RM10 thousand to RM15 thousand.

1. Age for diagnosis as disabled

Definisi Risiko Kesihatan-Kebarangkalian untuk mendapat penyakit lain adalah tinggi disebabkan ketidakupayaan yang dihadapi berbanding orang normal-Penyakit dan peratus.

Sub-Category	Age for diagnosis as disabled	
Speech and Language Disorders / Complex Communication Disorders		
Motor Speech Disorder		
Voice Disorders	As early as 2 years	
Fluency Disorders		
Resonance Disorder		

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorinolaryngologist, Faculty of Medicine, University of Malaya, the age of diagnosis as Speech Disabled can be done as early as 2 years old.

2. Risk of premature death

Sub-Category	Risk of premature death
Speech and Language Disorders / Complex Communication Disorders	
Motor Speech Disorder	None, just like normal people
Voice Disorders	
Fluency Disorders	
Resonance Disorder	

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorhinolaryngologists, Faculty of Medicine, University of Malaya, the risk of premature death for Speech Disorders is similar to normal people.

3. Frequency of ward detention — Frequency, cost, duration

Definition of Health Risk - Probability to get other diseases is high due to disability faced compared to normal people - Disease and percentage.

Sub-Category	Frequency of ward detention
Speech and Language Disorders / Complex Communication Disorders	None
Motor Speech Disorder	None except before being diagnosed as disabled
Voice Disorders	None except before being diagnosed as disabled
Fluency Disorders	None
Resonance Disorder	None except before being diagnosed as disabled

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorinolaryngologists, Faculty of Medicine, University of Malaya, there is no risk of detention frequency except Motor Speech Disorder, Voice Disorders and Resonance Disorder can occur before diagnosis as Speech Disorder ie usually they are detained

in the ward due to problems involving efforts to analyze and ensure that there are no other elements such as stroke and infection. In addition, vocal cancer can also cause them to be admitted to the ward for analysis and subsequently an accurate diagnosis will be given.

4. Risk of medication needs -Type of medication, cost, duration

	Ris	k Of Medication Needs		
Sub-category	Type of medication	Range of cost	Duration of medication / surgery	
Speech and Language Disorders / Complex Communication Disorders	None	None	None	
Motor Speech Disorder	 Alternative augmentative communication Injection botox 	 RM10,000-RM 15,000 once surgery RM1,000-RM2,000 onceinjection 	Min: 1 year Max: 5 yearsEvery 4-6 months	
Voice Disorders	 Voice Prosthesis Injection botox	 RM5,000- RM10,000 once surgery RM1,000-RM2,000 once <i>injection</i> 	Min: 1 year Maxi: 5 yearsEvery 4-6 months	
Fluency Disorders	None	None	None	
Resonance Disorder	None	None	None	

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

interviews conducted Based Otorhinolaryngology experts, Faculty of Medicine, University of Malaya, there is no risk of speech-impaired need for medications for the sub-categories Speech disorders/complex Language communication disorders, Speech fluency disorders, Resonance disorders. Meanwhile, Speech Disabled for Speech Motor Disorders sub-category requires medications such as Alternative augmentative communication cost estimate of RM 10,000-15,000 for one surgery minimum 1 year and maximum 5

years depending on the level of patient and Injection botox cost estimate RM1,000-RM2,000 once injection for every 4-6 months. For voice disorders need medication cost estimate Voice Prosthesis RM5,000-RM10,000 once surgery with a minimum of 1 year and a maximum of 5 years depending on the level of the patient and for the cost of Injection botox is the same in terms of cost estimate and duration of injection required with Disorders Speech Motor.

5. Risk of equipment damage support

Sub Category	Risk of equipment damage support		
	Support tools	Range of Cost	Endurance
Speech and Language Disorders / Complex	None	None	None
Communication Disorders			
Motor Speech Disorder	Support tools	RM7,000-	5-10 years
		10,000	
Voice Disorders	Support tools	RM7,000-	5-10 years
		10,000	
Fluency Disorders	None	None	None
Resonance Disorder	None	None	None

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorinolaryngologist, Faculty of Medicine, University of Malaya there is a risk to the need for equipment and damage to support equipment for the Speech Disorders subcategory involving only Speech Motor Disorders and Voice Disorders with an estimated equipment cost is RM7,000-10,000 with endurance estimates are 5-10 years.

6. Risk of rehabilitation needs-type of rehab, hours / sessions, cost, frequency, duration

Sub Category	Risk of rehabilitation needs				
	Type	hours/	Range of Cost	Frequency	Duration
		sessions			of rehab
Speech and Language	Speech	1-2 hours /	RM200-400	Depending on	2 years
Disorders / Complex	therapy	sessions		the results of	
Communication Disorders				the initial	
				assessment	
Motor Speech Disorder	Speech	1-2 hours /	RM200-400	4 times a	2 years
	therapy	sessions		month	
Voice Disorders	Speech	1-2 hours /	RM200-400	2 times a	2 years
	therapy	sessions		month	
Fluency Disorders	Speech	1-2 hours /	RM200-400	4 times a	2 years
	therapy	sessions		month	
Resonance Disorder	Speech	1-2 hours /	RM200-400	4 times a	2 years
	therapy	sessions		month	

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorinolaryngologist, Faculty of Medicine, University of Malaya for speech problems that require rehabilitation in the form of speech therapy for 1-2 hours for one session, the cost of therapy depends on the place offering this service around RM200-400 (Selangor and Negeri Sembilan), the frequency of speech and language disorders/ complex communication disorders is dependent on Speech Therapist (ST), therapy can be held once a week, 2 times a month or 1 time a month for 2 years. It can also be done individually or in group sessions, communication assistance (AAC) is likely to be introduced to patients for this sub-category. In addition, the frequency of therapy for the sub-categories of Speech Motor Disorders, Speech Fluency Disorders and Resonance Disorders is 4 times a month. Meanwhile, the frequency of therapy for voice disorders is 2 times a month.

7. Risk of disease and other health

Sub Category	Risk of disease and other health
Speech and Language Disorders / Complex Communication Disorders	
Motor Speech Disorder	
Voice Disorders	None
Fluency Disorders	
Resonance Disorder	

Source: Mohd Zukiflee Abu Bakar, (Otorhinolaryngologist, Faculty of Medicine, University of Malaya), in an interview on 22 April 2020.

Based on interviews conducted with Otorinolaryngologist, Faculty of Medicine, University of Malaya there are no other health risks for Speech Disabilities, health risks are the same as normal people.

CONCLUSION

Conclusions from the overall discussion on the risks faced by OKUs, it was found that each category of OKU has a different risk rate from other categories. Even for some categories of OKUs, differences in risk rates also occur between the sub-categories of OKU. However, in general, the category of physical disabilities is the category of OKUs with the highest risk rate. While the lowest risk categories are the speech disability category, the hearing disability category and the visual disability category, provided the disability is not due to cancer.



INTRODUCTION

The third objective focuses on examining the views, perceptions, priorities and specific needs of OKUs to subscribe to Takaful products.

This study is critical because there are fundamental differences between OKUs and ordinary individuals. Moreover, OKUs are more vulnerable to risks compared to ordinary individuals.

Therefore, in this section, the research will cover the needs and priorities of OKUs. It will also explore the views and perceptions of OKUs on takaful products produced for this group. Additionally, the study will dwelve into the perception and opinion on the risk they have to face compared to healthy individuals.

Under this objective, the analysis is done by examining the findings from interviews of Persons with Disabilities (OKUs), the focus group discussions (FGD) as well as through questionnaires that have been distributed to OKUs or guardian to OKUs that include all categories of OKUs.

SPECIAL NEEDS OF PERSONS WITH DISABILITY

In general, the needs of each category vary from one to another. Differences also occur between sub-categories for some categories of the OKUs. This requirement is primarily a reflection of the risks and disabilities faced by each of these categories and sub-categories.

For example, there are people with disabilities who need support equipment

but do not need medications, and there are also people with disabilities who need rehabilitation but need funds to cover the cost of medications and vice versa.

Some disabled people depend on these needs for life, while others only depend on those needs for a certain period of time.

SPECIAL NEEDS OF PERSONS WITH DISABILITY

More Frequent Hospitalisation Needs

Needs Rehabilitation, Counselling Or Consulting Specialist

Medication Needs Differ From Healthy Individuals

Support Equipment Requirements

FREQUENCY OF WARD DETENTION

Based on Figure 3.1, the survey was conducted on 1016 OKUs from all seven categories. It was found that most people with disabilities, that is 89 per cent or 904 people admitted that they were not hospitalised frequently. Only 11 per cent or 112 people admitted that they were often hospitalised.

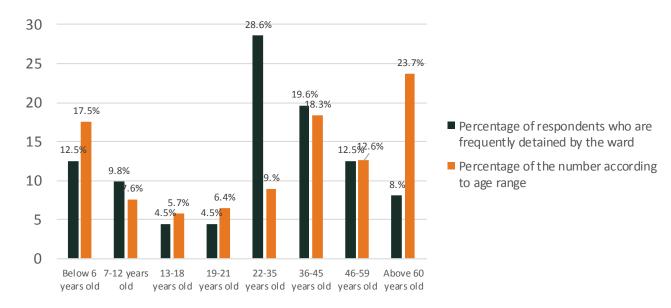
Meanwhile, the percentage of respondents who are frequently ward detention according to age is explained as shown in Figure 3.2 below.

Figure 3.1: Frequency of Ward

Detention



Figure 3.2: Percentage of Ward Detention by Age



Based on Figure 3.2, out of 112 respondents who are frequently detained by the ward, the age range that is most frequently detained by the ward is the respondents between the ages of 22-35 years which is 28.6 percent or a total of 32 people. The second highest number of respondents is between the ages of 36-45 years.

However, based on the percentage of the number according to age range, respondents from the age group of 60 years and above have a higher percentage of ward detention which is 23.7 percent compared to other age ranges. This shows that respondents from this group are more vulnerable to the risk of frequent ward detention than respondents of other ages.

This percentage was followed by respondents from the age of 35-45 years by 18.3 percent, less than 6 years by 17.5 percent, 46-59 years by 12.6 percent and other age groups. The age range among the respondents lowest exposed to the risk of frequent ward detention is those aged 13-18 years.

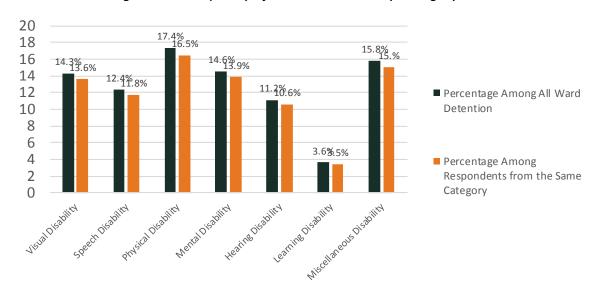
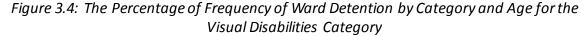


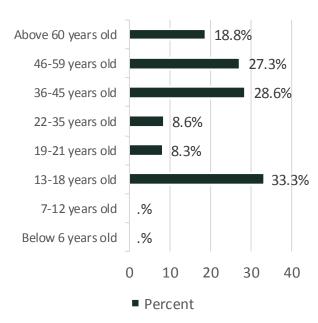
Figure 3.3: Frequency of Ward Detention by Category

The number of respondents who are frequently detained by the ward by category, the highest percentage of the total of 16.5 percent or 54 people are from the physically disabled. This is followed by various disabled people of 15 percent, mentally disabled 13.9 percent,

visually impaired 13.6 percent, hearing impaired 10.6 percent and speech disabled 11.8 percent. Meanwhile, the lowest percentage of respondents who are frequency of ward detention is from the category of learning disabilities which is 3.5 percent or 12 people.

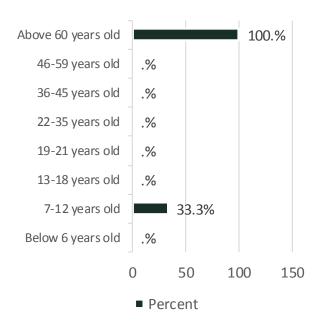
THE PERCENTAGE OF FREQUENCY OF WARD DETENTION FOR ALL CATEGORIES OKUS BY AGE





For the visually impaired category, the highest percentage of respondents who are frequently detained in the ward are respondents aged between 13 to 18 years which is 33.3 percent. Followed by respondents aged between 36 to 45 years 28.6 percent, 36 to 45 years which is 28.6 percent, 46 to 59 years which is 27.3 percent, over 60 years which is 18.8 percent, 22 to 35 years which is 8.6 percent and 19 to 21 years which is 8.3 percent. Meanwhile, for respondents who are between 7 to 12 years old and those who are less than 6 years old, there are no respondents who are frequently detained in the ward.

Figure 3.5: The Percentage of Frequency of Ward Detention by Category and Age for the Speech Disabilities Category



For the speech disabled category, respondents who are more than 60 years old are the respondents with the highest percentage of total detention in the ward which is 100 percent and followed by respondents aged between 7 to 12 years.

Meanwhile, for respondents aged 46-59 years, 36-45 years, 22-35 years, 19-21 years, 12-18 years, and 7-12 years, there are among the respondents who are not frequently detained in the ward.

Figure 3.6: The Percentage of Frequency of Ward Detention by Category and Age for the Physical Disabilities Category

For the physically disabled categories, respondents aged less than 6 years old is the highest number of respondents who frequently detained ward of 33.3 percent of respondents overall physical disabilities among those age than other respondents. Followed by respondents who are more than 60 years old which is 30.8 percent, 7-12 years which is 23.1 percent, 36-45 years which is 20.9 percent, 46-59 years which is 16.4 percent, 19-21 years which is 15 percent, 22-35 years which is 11.9 percent and 13-18 years old which is 11.1 percent.

Generally all ages respondents from the category of physical disabilities have often been detained ward respondents. However, the percentage of respondents who frequently detained wards according to age does not exceed half of all ages in this category.

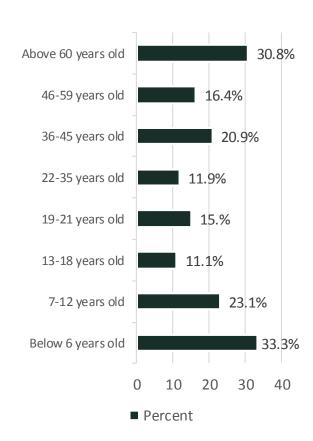
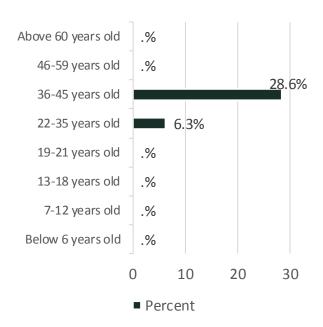


Figure 3.7: The Percentage of Frequency of Ward Detention by Category and Age for the Mental Disabilities Category



For the category of mental disabled, respondents among the age group 36-45 years are the highest age range percentage of the total number of detainees in the ward are 28.6 percent and followed by respondents from the age of 22-35 years which is 6.3 percent of the total number of respondents among that age.

While there are no respondents from other ages who are frequently detained in the ward.

Figure 3.8: The Percentage of Frequency of Ward Detention by Category and Age for the Hearing Disabilities Category

For the category of hearing impaired, respondents among the age group 60 years and above and less than 6 years the higher percentage frequently detained by the ward is 100 percent. This was followed by respondents among the age group 22-25 years which is 13.5 percent.

There were no respondents among the ages of 46-59 years, 36-45 years, 19-21 years, 13-18 years and 7-12 years who were frequently detained in the ward.

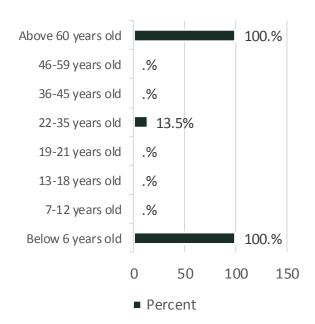
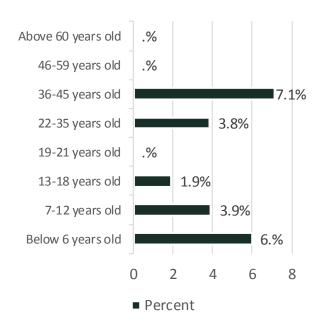


Figure 3.9: The Percentage of Frequency of Ward Detention by Category and Age for the Learning Disabilities Category



For learning disabilities, respondents between the ages of 36-45 years are the respondents with the highest percentage of total detained in the ward which is 7.1 percent compared to other age of respondents. Followed by respondents among the age less than 6 years by 6 percent, 7-12 years by 3.9 percent, 22-35 years by 3.8 percent and 13-18 years by 1.9 percent.

Meanwhile, there were no respondents between the ages of 19-21 years, 46-59 years and over 60 years who were frequently detained in the ward.

Figure 3.10: The Percentage of Frequency of Ward Detention by Category and Age for the Miscellaneous Disabilities Category

For various disabled people, respondents among those less than 6 years old are the respondents with the highest percentage of the total number of detainees in the ward which is 43.8 percent compared to other age of respondents. Followed by respondents from the age group of 7-12 years of 13.6 percent, 13-18 years of 11.1 percent, 36-45 years of 10 percent and 22-35 years of 6.9 percent.

Above 60 years old 46-59 years old 36-45 years old 19-21 years old 19-21 years old 13-18 years old 13-18

Meanwhile, for those over the age of 60, there are no respondents who are frequently detained in the ward.

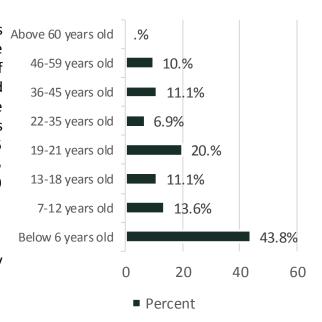
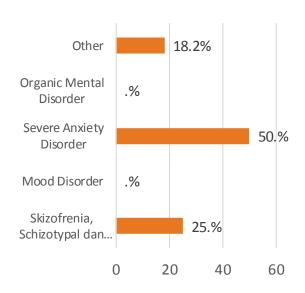


Figure 3.11: The Percentage of Frequency of Ward Detention by Sub-category of The Mental Disabilities Category



The total number of respondents among the category of mental disabled is 36 people, respondents from Severe Anxiety Disorder are higher than the percentage of total respondents who are frequently detained in the ward which is 50 percent compared to other subcategories in this category. This means that half of these sub-categories have the potential to be frequently detained by the ward, while other sub categories are lower in percentage and give an indicator that other sub categories are low. There is a sub-category that has a percentage of 0 percent.

For this sub-category, the potential for frequent ward detention is non-existent. The average percentage of respondents for the mentally disabled in this category who is frequently detained in the ward is 18.64 percent.

Figure 3.12: The Percentage of Frequency of Ward Detention by Sub-category of The Learning Disabilities Category

The total number of respondents among the learning disabilities category is 347 people, the Global Development Delay is the sub-category has a higher percentage of the number of ward detainees which is 12.1 percent compared to other subcategories, followed by other sub categories, Down Syndrome and ADHD.

However, the average percentage of respondents in the category of learning disabilities who are frequently detained in the ward is low at 4.19 percent.

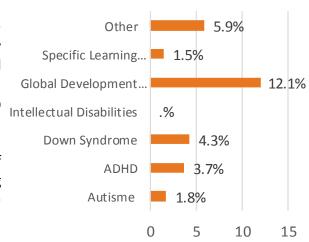
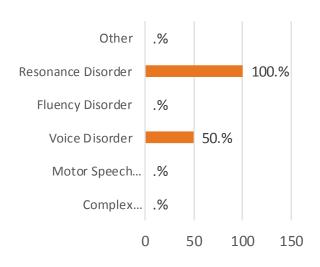


Figure 3.13: The Percentage of Frequency of Ward Detention by Sub-category of The Speech Disabilities Category



For the speech impairment category, resonance disorder is the highest sub-category of the percentage of cases frequently detained by the ward which is 100 percent compared to the total number of respondents from the other sub-category in this category. Followed by voice disorder with 50 percent, while respondents from other sub-categories were not exposed to the risk of the frequency of ward detention.

Overall, the average percentage of the number of ward detainees for all speech sub-categories is 30 percent.

Figure 3.14: The Percentage of Frequency of Ward Detention by Sub-category of The Hearing Disabilities Category

For the category of hearing impaired, other sub-categories are the highest percentage of the total number of detainees in the ward out of the total number of respondents in that sub-category which is 25 percent compared to other sub categories. Followed by a sub-category of single sided deafness 21.1 percent, permanent ear defects / ear-related syndrome 16.7 percent, and biliteral hearing loss 2.7 percent.

Overall, the average percentage of the total number of ward detainees for all sub-categories of hearing impaired is 16.38 percent.

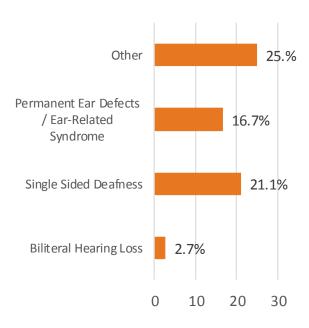


Figure 3.15: The Percentage of Frequency of Ward Detention by Sub-category of The Physical Disabilities Category

The total number of respondents among the category of physical disabilities is 327 people, respondents from the Spina Bifida is the highest sub-category of the percentage of respondents who are frequently detained in the ward compared to other sub-categories in this category. Followed by subcategories of Paralysis or Stroke, Others, Muscular Dystrophy, Spinal Cord Injury, Cerebral Palsy, and Limp defect. While respondents from the dwarf and Traumatic Brain Injury sub-categories were not frequently detained in the ward.

Overall, the average percentage of respondents who are frequently detained in the ward for all subcategories of physical disabilities is 15.43 percent.

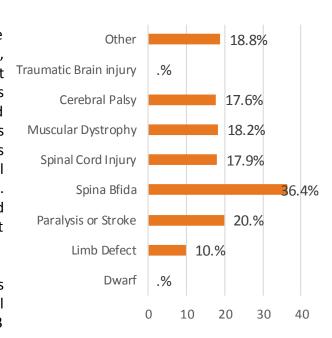
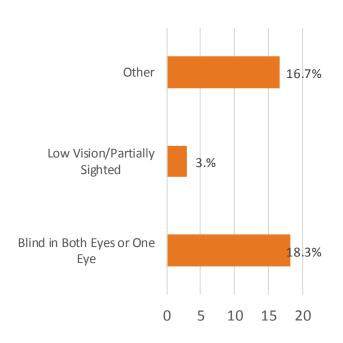


Figure 3.16: The Percentage of Frequency of Ward Detention by Sub-category of The Visual Disabilities Category



The total number of respondents among the visually impaired category is 110 people, respondents from the subcategory who are blind in both eyes or one eye higher percentage of the total number of detainees in the ward compared to the other two subcategories in this category. This was followed by respondents from other vision disorders of 16.7 percent and low vision partially sighted in both eyes or one eye 3 percent.

Overall, the average percentage of respondents who are frequently detained in the ward for the visually impaired for all sub-categories is 12.67 percent.

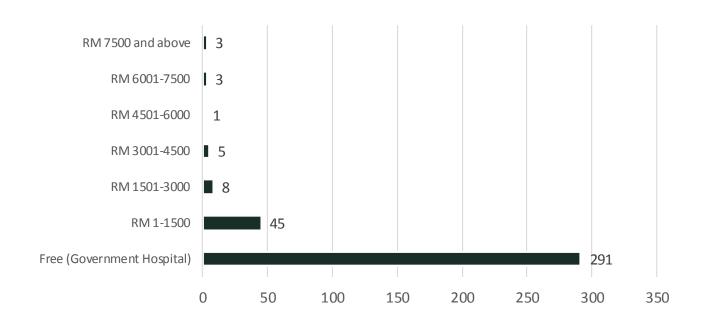


Figure 3.17: The Cost of Ward Detention Per Day Among Respondents

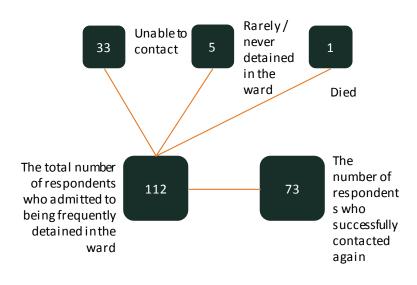
Based on the Figure above, 291 respondents stated that the cost per day if detained in the ward is free. This number covers 81.7 percent of the total respondents detained in the ward.

However, there are also among the respondents who claim to bear the high cost of ward detention, 45 respondents admitted to bearing costs ranging from RM 1 to RM 1500 if detained in the ward. Similarly, there are respondents who claim

to bear the cost of detention in the ward per day between RM 1501 to RM 3000 which is a total of 8 people, RM 3001 to RM 4500 as many as 5 people, RM 4501 to RM 6000 as many as 1 person and RM 6001 to RM 7500 as many as 3 people.

There are also among the respondents who bear the cost of being detained in the ward for a day exceeding RM7500 which is a total of 3 people.

Figure 3.18: Number of Successful Respondents Contacted



To examine the frequency of frequently respondents who are detained in the ward, researchers have contacted all 112 respondents. As a result, a total of 79 respondents were successfully contacted 5 of them admitted never or rarely detained in the ward and 1 of them died (researchers not succeed did in obtaining information from the heirs). While 33 people were not contacted successfully.

Figure 3.19: The maximum frequency of ward detention rate per year for respondents who are frequently detained by the ward

The results of the study found that most of the respondents who are frequently detained in the ward of 64.4 percent or a total of 47 people admitted to having a maximum detention frequency of the ward less than 3 times a year.

There are also among the respondents who are frequently detained in wards that have a maximum frequency of 5 times a year that is 8 people, 6 times a year that is 5 people, 7 times a year that is 2 people, 10 times a year that is 2 people and 13 times a year which is 1 person.

The highest frequency that can be obtained in this study is 30 times a year which is 1 person.

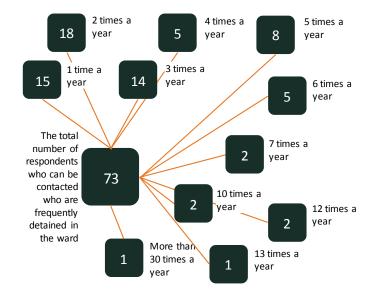


Figure 3.20: The maximum frequency of ward detention rate per year for respondents who are frequently detained by the ward by category

Frequency Rate Per Year	Physical	Mental	Miscellan eous	Hearing	Visual	Learning
1 time	8		2		2	3
2 times	10	2	3			3
3 times	7		4		2	1
4 times	4		1			
5 times	5		1		2	
6 times	2				1	2
7 times	1		1			
10 times	1		1			
12 times	1			1		
13 times						1
30 times	1					

In terms of category, the physically disabled are higher in terms of frequency and number of frequently detained wards. Among the category of physical disabilities, most respondents have a maximum frequency of 2 times a year which is 10 people or 13.7 percent of the total 73 respondents. The maximum frequency per year that can be obtained in this study for the category of physical OKU is 30 times a year for 1 respondent (Neuropathic pain). There are also respondents among the physically disabled who have a maximum frequency of 1 time a year that is 8 people, 3 times a year as many as 7 people, 4 times a year as many as 4 people, 5 times a year as many as 5 people, 6 times a year as many as 2 people, 7 times a year that is, 1 person, 10 times a year 1 person and 12 times a year 1 person.

For the various categories of the disabled, which is the second largest category detained by the ward among the respondents, the maximum frequency is 3 times a year which is 4 people. Followed by a maximum frequency of 2 times a year that is 3 people, 1 time a year for 2 people, 4 times a year for 1 person, 5 times a year for 1 person and 10 times a year for 1 person.

For the visually impaired, the maximum frequency rate per year among the respondents who are frequently detained in the ward also varies. There are respondents who have a maximum ward detention frequency in a year of 1 person as many as 2 people, 3 times a year as many as 2 people and 6 times a year as many as 1 person.

For the mental category, the maximum frequency of detention in the ward in a year of respondents is 2 times a year which is two people. For the visually impaired, there are respondents who are 1 person with a maximum frequency of detention in the ward 12 times. For learning disabilities, the maximum frequency of detention in

the ward in the most numerous years is 1 and 2 times, which is a total of 3 people each. Besides that, there are also respondents who are detained in the ward 3 times a year for 1 person, 6 times a year for 2 people and 13 times a year for 1 person.

Figure 3.21: The number of days detained in the ward among the respondents

Day	Number (respondents)	Day	Number (respondents)
1	2	20	1
2	1	21	1
3	7	24	1
4	6	25	1
5	4	30	5
6	2	45	4
7	10	86	1
10	3	90	3
12	3	120	1
14	15	135	1
18	1		

Figure 3.21 shows that most of the respondents were detained in the ward for a maximum period of 1 day to 14 days once that is a total of 53 people or 72.6 percent of the 73 respondents contacted. The maximum number of days detained in the ward among the 73 respondents was 14 days, which is 15 people or 20.5 percent of all 73 respondents contacted. Of these 15 respondents, most of them are from the physical disability of 10 people. There are

also among the respondents who were contacted were detained in the ward for 30 days and above, which is 5 people (3 physically disabled, 1 various disabled and 1 visually impaired), 45 days for 4 people (physical disabled), 86 days for 1 person (Physical Disabilities), 90 days for 3 people (2 physical disabilities and 1 various disabilities), 120 days for 1 person (physical disabilities), and 135 days for 1 person (learning disabilities).

THE NEEDS OF REHABILITATION, COUNSELING AND SPECIALIST DOCTOR

A survey conducted on 1016 respondents of Persons with Disabilities (OKUs) from all seven categories that most respondents, 47 percent or 476 people expressed their needs whether for rehabilitation, counseling, and specialist doctor. 37 percent or 318 respondents do not need rehabilitation, counseling and need to see a specialist doctor due to disability.

Meanwhile, 18 percent or 182 respondents stated that they are likely to need these services. If the respondents who are likely to need rehabilitation, counseling and see a specialist doctor are combined with the respondents who give the answer yes, a total of 749 people or make up 82 percent of the total respondents.

Figure 3.22: The Needs of Rehabilitation, Counseling and Specialist Doctor among Respondents

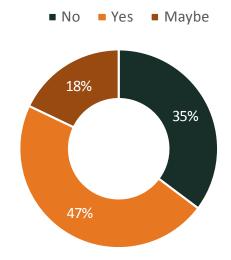
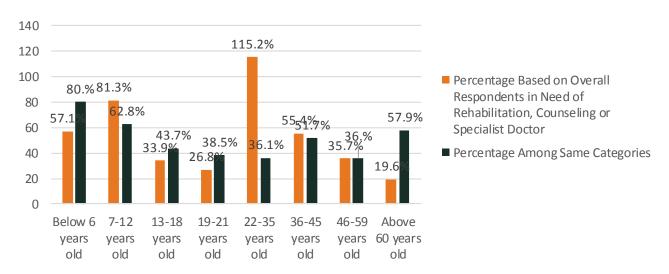


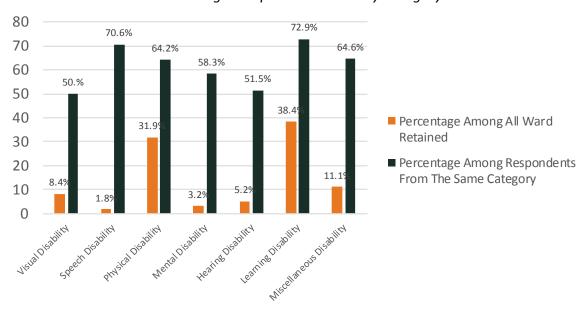
Figure 3.23: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Age



Based on this questionnaire, respondents from the age group less than 6 years higher percentage of those who need to rehabilitation, counseling and specialist doctor that is 80 percent. Followed by respondents among the age group 7-12

years of 62.8 percent, over 60 years of age 57.9 percent, 36-45 years of age 51.7 percent, 13-18 years of age 43.7 percent, 19-21 years of age 38.5 percent, 22-35 years of age 36.1 percent and 46-59 years old by 36 percent.

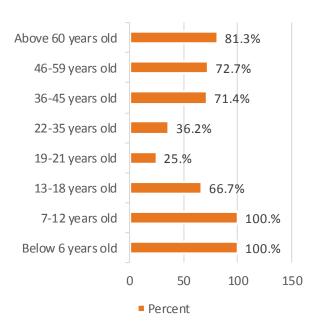
Figure 3.24: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Category



The number of respondents who need rehabilitation, counseling and specialist doctor by category, the highest percentage of the total of 72.9 percent or 253 people are from the learning disabilities. This is followed by speech impairment of 70.6 percent, various disability 64.6 percent,

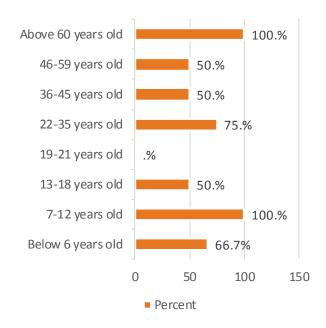
physical disability 64.2 percent, mental disability 58.3 percent and hearing-impaired 51.5 percent. Meanwhile, the lowest percentage of respondents who are frequently detained in the ward is from the category of visually impaired, which is 50 percent or 55 people.

Figure 3.25: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Category and Age for the Visual Disabilities Category



For the visually impaired category, respondents between the ages of less than 6 years and 7-12 years have the highest percentage of those who need rehabilitation, counseling and specialist doctor compared to respondents from other ages that is 100 percent. This was followed by respondents from the age of over 60 years of 81.3 percent, 46-59 years of 72.7 percent, 36-45 years of 71.4 percent, 13-18 years of 66.7 percent, 22-35 years of 36.2 percent and 19-21 years of 25 percent.

Figure 3.26: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Category and Age for the Speech Disabilities Category



For speech disabled, respondents between the ages of 7-12 years and over 60 years are the highest percentage of respondents who need rehabilitation, counseling and specialist doctor which is 100 percent of the total number of respondents among that age. Followed by respondents among the age group 22-35 years by 75 percent, less than 6 years by 66.7 percent, 13-18 years by 50 percent, 36-45 years by 50 percent, and 46-59 years by 50 percent.

While there are no respondents among the age group 19-21 who need rehabilitation, counseling, and specialist doctor.

Figure 3.27: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Category and Age for the Physical Disabilities Category

For the physically disabled, respondents among the age group less than 6 years is the highest percentage of respondents who need rehabilitation, counseling and specialist doctor which is 100 percent of the total number of respondents in that age group. Followed by respondents among the ages of 7-12 years of 84.6 percent, 36-45 years of 71.6 percent, 13-18 years of 66.7, 22-35 years of 62.2 percent, 19-21 years of 60 percent, 46-59 years of 55.7 percent and over 60 years at 46.2 percent.

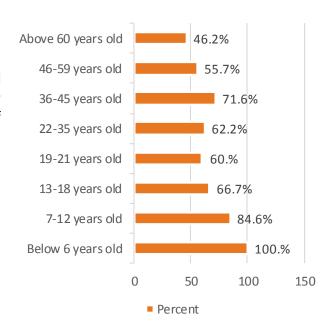
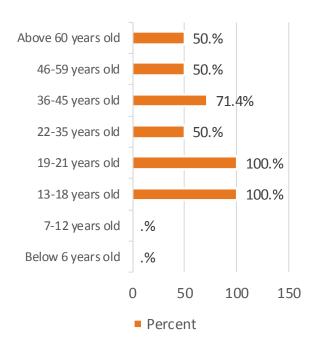


Figure 3.28: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Category and Age for the Mental Disabilities Category



For the category of mentally disabled, among respondents from the age of 13-18 years and 19-21 years is the highest percentage of respondents who need a total rehab, counseling and specialist doctor that is as much as 100 per cent of the total number of respondents among the age. Followed by respondents between the ages of 36-45 years of 71.4 percent, 22-35 years of 50 percent, 46-59 years of 50 percent, and over 60 years of 50 percent.

While there are no respondents among the age group 6 years and 7-12 years. Therefore, there is no data for both age groups.

Figure 3.29: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Category and Age for the Hearing Disabilities Category

For the category of hearing impaired, respondents from the age group over 60 years and less than 6 years is the highest percentage of respondents who need rehabilitation, counseling and specialist doctor which is 100 percent of the total number of respondents in that age group. Followed by respondents among the ages of 7-12 years of 66.7 percent, 22-35 years of 56.8 percent, 36-45 years of 42.9 percent, 46-59 years of 42.9 percent, and 19-21 years of 37.5 percent.

While there are no respondents among the ages of 13-18 years who need rehabilitation, counseling, and specialist doctor.

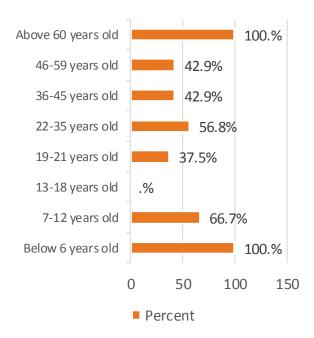
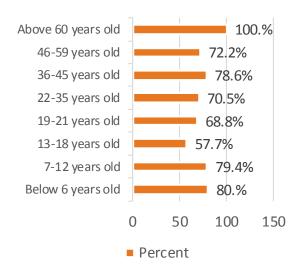


Figure 3.30: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Category and Age for the Learning Disabilities Category



For the category of learning disabilities, respondents among the age group over 60 years is the highest percentage of respondents who need rehabilitation, counseling and specialist doctor which is 100 percent of the total number of respondents in that age group. Followed by respondents among the age group less than 6 years by 80 percent, 7-12 years by 79.4 percent, 36-45 years by 78.6 percent, 46-59 years by 72.2 percent, 22-35 years 70.5 percent, 19-21 years by 68.8 percent and 13-18 years by 57.7 percent.

Figure 3.31: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Category and Age for the Miscellaneous Disabilities Category

For the various categories of the disabled, respondents among the age group less than 6 years is the highest percentage of respondents who need rehabilitation, counseling, and specialist doctor which is 100 percent of the total number of respondents among that age. Followed by respondents among the ages of 7-12 years of 81.8 percent, 36-45 years of 77.8 percent, 13-18 years of 66.7 percent, over 60 years of 50 percent, 22-35 years of 44.8 percent, 19-21 years of 40 percent and 46-59 years old by 30 percent.

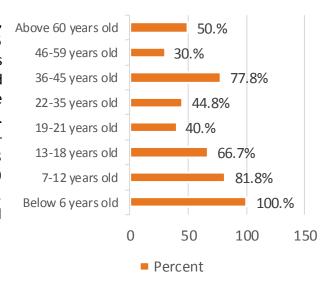
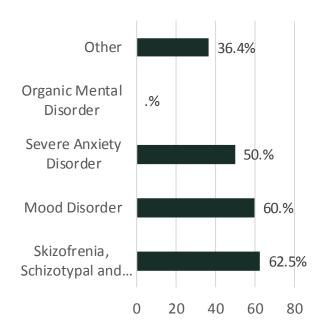


Figure 3.32: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Sub-category of The Mental Disabilities Category



The total number of respondents among the category of mental disabled is 36 people, respondents from the category Schizophrenia, Schizotypal and Delusional higher percentage of the number who need rehabilitation, counseling and specialist doctor which is 62.5 percent compared to other sub-categories. Followed by Mood Disorder, Severe Anxiety Disorder and Others. While respondents from Organic Mental Disorder do not require rehabilitation, counseling, and specialist doctor.

Overall, the average percentage of respondents from the category of mentally disabled who need rehabilitation, counseling and specialist doctor is 41.78 percent.

Figure 3.33: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Sub-category of The Learning Disabilities Category

The total number of respondents among the learning disabilities category is 347 people, respondents from Specific Learning Disability with the highest percentage of total respondents who need to rehabilitation, counseling and specialist doctor which is 76.1 percent. Followed by respondents from the sub-categories of Autism, ADHD, Global Development Delay, Intellectual Disability, Down Syndrome, and others.

Overall, the average percentage of respondents from sub-categories of learning disabilities who need rehabilitation, counseling and specialist doctor is 54.44 percent.

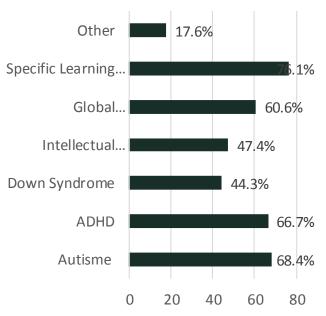


Figure 3.34: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Sub-category of The Speech Disabilities Category

The total number of respondents among the speech disabled category is 13 people, respondents from the resonance disorder has a higher percentage of the number of respondents who ne ed rehabilitation, counseling and specialist doctor which is 100 percent of the total respondents among compared this subcategory to other subcategories. Followed by complex communication disorder by 60 percent, voice disorder by 50 percent and fluency disorder by 50 percent.

While there are no respondents for other sub-categories and motor speech disorders that require rehabilitation, counseling, and specialist doctor.

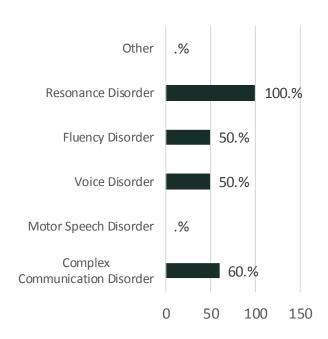
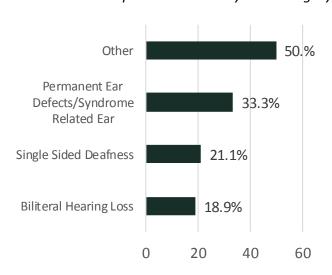


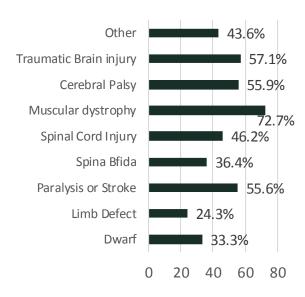
Figure 3.35: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Sub-category of The Hearing Disabilities Category



For the category of hearing impaired, respondents from other sub-categories are the respondents with the highest percentage of the number who need rehabilitation, counseling and specialist doctor which is 50 percent of the total number of respondents among those sub-categories.

Followed by respondents from the subcategory of permanent ear defects of 33.3 percent, single sided deafness of 21.1 percent and bilateral hearing loss of 18.9 percent.

Figure 3.36: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Sub-category of The Physical Disabilities Category



For the category of physical disability, respondents from sub-category of the muscular dystrophy is the highest percentage of respondents who need rehabilitation, counseling and specialist doctor which is 72.7 percent. Followed by respondents from the sub-category of traumatic brain injury of 57.1 percent, cerebral palsy of 55.9 percent, paralysis or stroke of 55.6 percent, spinal cord injury of 46.2 percent, others of 43.6 percent, spina bifida of 36.4 percent, dwarf of 33.3 percent, and limp defect of 24.3 percent.

Figure 3.37: The Percentage of Frequency of The Needs of Rehabilitation, Counseling and Specialist Doctor by Sub-category of The Visual Disabilities Category

For the visually impaired category, respondents from the sub-category of blind on both sides or one eye are the respondents with the highest percentage of total need for rehabilitation, counseling and specialist doctor which is 38 percent.

Followed by respondents from low vision partially sighted in both eyes or one eye which is 15.2 percent.

While there are no respondents from other subcategories that require rehabilitation, counseling, and specialist doctor.

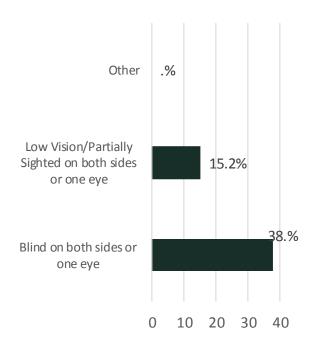
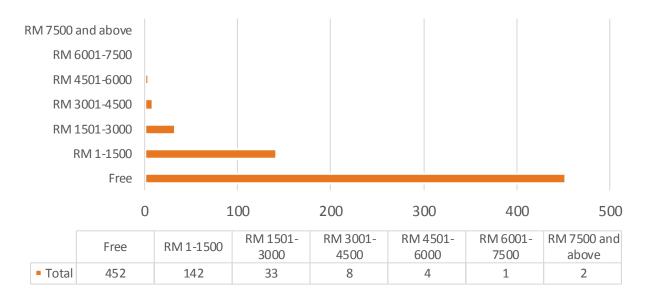


Figure 3.38: The Cost of Rehabilitation, Counseling and Specialist Doctor per Month Among Respondents



The total number of respondents who need rehabilitation, counseling, and specialist doctor services most of them are 452 people or 70.4 percent of respondents get these services for free, while other respondents get the services for a fee. 142 people or 22.12 percent of respondents get these services at a cost between RM 1 to RM 1500. 33 people or 5.14 percent of respondents get the service with a cost between RM1501 to RM 3000.

There are also among the respondents who need rehabilitation, counseling, and specialist doctor with a monthly cost of RM 3000 which is RM 3001-4500 for 8 people, RM 4501- 6000 for 4 people, RM 6001-7500 for 1 person, and RM 7500 and above for 2 persons.

A survey conducted on 1016 people with disabilities (OKU) from all seven categories found that most people with disabilities of 61 percent or 614 respondents did not depend on medicines. 305 respondents or 30 percent depend on medications due to disability experienced. Meanwhile, 97 respondents or 10 percent are likely to need continuous medication due to disability experienced.

Figure 3.39: The Need of Medication Among Respondents

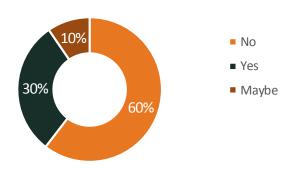
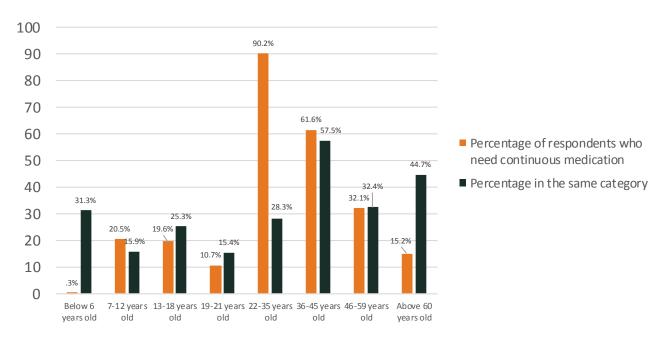


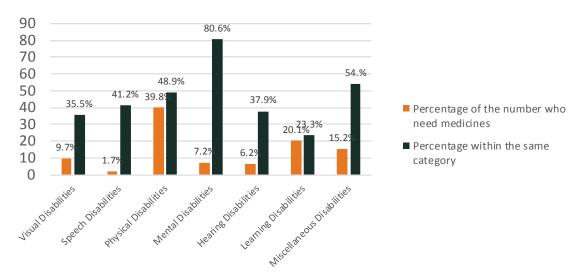
Figure 3.40: The Percentage of Respondents in Need of Medicines by Age



Based on the Figure above, respondents among the age group 36-45 years is the highest percentage of respondents who need continuous medication due to disability experienced which is 57.5 percent of the total number of respondents in his age group compared to respondents from other ages. This was followed by

respondents among the age group over 60 years of 44.7 percent, 46 to 59 years of age 32.4 percent, less than 6 years of age 31.3 percent, 22-35 years of age 28.3 percent, 13-18 years of age 25.3 percent, 7-12 years of age 15.9 percent and 19-21 year old by 15.4 percent.

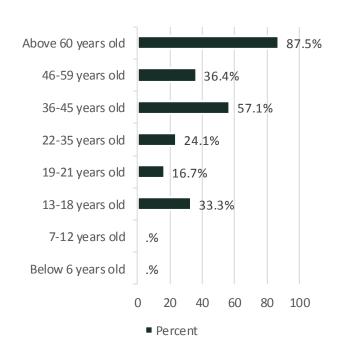
Figure 3.41: The Percentage of Respondents in Need of Medicines by Category



The number of respondents who need medicines, respondents from the category of mentally handicapped are the respondents with the highest percentage of the number who need medicines which are 80.6 percent of the total respondents in the same subcategory compared to other subcategories.

Followed by respondents from various categories of disabled persons as much as 54 per cent, physical disabilities 48.9 percent, speech disabilities 41.2 percent, hearing impaired 37.9 percent, visually impaired 35.5 percent and learning disability 23.3 percent.

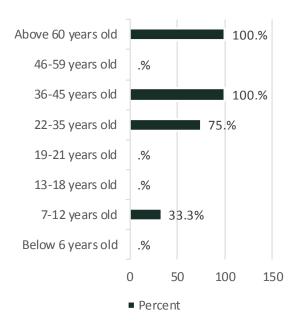
Figure 3.42: The Percentage of Respondents in Need of Medicines by Category and Age for Visual Disabilities Category



For the visually impaired category, respondents from the age group over 60 years is the highest percentage of respondents who need medication which is 87.5 percent of the total respondents among that age compared to respondents of other ages. Followed by respondents from the age of 36-45 years of 57.1 percent, 46-59 years of 36.4 percent, 13-18 years of 33.3 percent, 22-35 years of 24.1 percent, and 19-21 years of 16.7 percent.

Meanwhile, there are no respondents between the ages of 7-12 years and less than 6 years who need continuous medication due to disability experienced.

Figure 3.43: The Percentage of Respondents in Need of Medicines by Category and Age for Speech Disabilities Category



For the speech impairment category, respondents from the age group over 60 years and 36-45 years are the highest percentage of respondents who need medication which is 100 percent of the total number of respondents that group compared among age respondents in other age groups. Followed by respondents between the ages of 22-35 know as much as 75 percent and 7-12 years as much as 33.3 percent.

While there are no respondents among the ages of 46-59 years, 19-21 years, 13-18 years and less 6 years who need continuous medication due to disability experienced.

Figure 3.44: The Percentage of Respondents in Need of Medicines by Category and Age for Physical Disabilities Category

For the category of physical disabilities, among respondents aged less than 6 years old is the highest percentage of respondents who need medication that is 100 per cent of the total number of respondents among the age for this category. Followed by respondents among the ages of 7-12 years of 84.6 percent, 36-45 years of 71.6 percent, 13-18 years of 66.7 percent, 22-35 years of 62.2 percent, 19-21 years of 60 percent, 46-59 years by 55.7 per cent, and over 60 years by 46.2 percent.

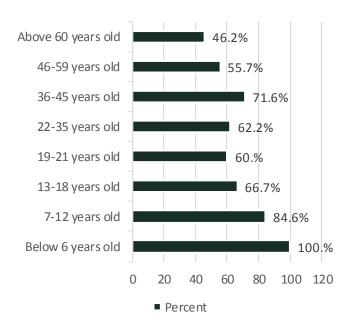


Figure 3.45: The Percentage of Respondents in Need of Medicines by Category and Age for Mental Disabilities Category

For the category of mental disabilities, respondents from the age group of 13-18 years and 19-21 years is the highest percentage of respondents who need medication, which is 110 percent of the total number of respondents in the age group for this category. Followed by respondents among the ages of 36-45 years of 71.4 percent, over 60 years of 50 percent, 46-59 years of 50 percent, and 22-35 years of 50 percent.

There were no respondents between the ages of 7-12 years and less than 6 years for the mental disabilities in this study.

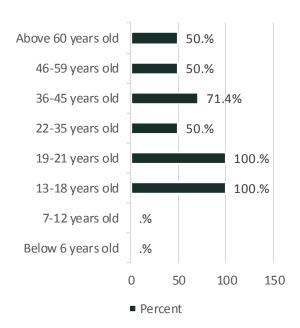
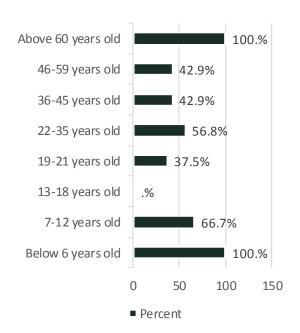


Figure 3.46: The Percentage of Respondents in Need of Medicines by Category and Age for Hearing Disabilities Category

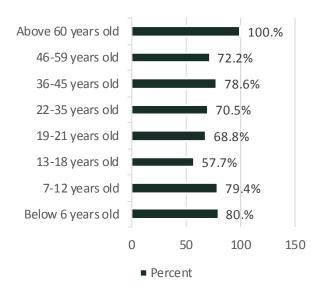


For the hearing impaired, respondents between the ages of less than 6 years and over 60 years are the highest percentage of respondents who need continuous medication which is 100 percent of the total number of respondents in that age group for this category.

Followed by respondents among the ages of 7-12 years of 66.7 percent, 22-35 years of 56.8 percent, 46-59 years of 42.9 percent, 36-45 years of 42.9 percent and 19-21 years of 37.5 percent.

While there are no respondents among the ages of 7-12 years who need continuous medication.

Figure 3.47: The Percentage of Respondents in Need of Medicines by Category and Age for Learning Disabilities Category



For learning disabilities, among respondents aged over 60 years is the highest percentage of respondents who need medication that is as much as 100 per cent of the respondents among the age. Followed by respondents in the age group of less than 6 years by 80 percent, 7-12 years by 79.4 percent, 36-45 years by 78.6 percent, 46-59 years by 72.2 percent, 22-35 years by 70.5 percent, 19-21 years by 68.8 percent, and 57.7 percent.

Figure 3.48: The Percentage of Respondents in Need of Medicines by Category and Age for Miscellaneous Disabilities Category

For various disabled people, respondents among those less than 6 years old are the highest percentage of respondents who need continuous medication which is 100 percent of the total number of respondents among that age. Followed by 7-12 years of 81.8 percent, 36-45 years old 19-21 years old 22-35 years old 19-21 years old 13-18 years old 21-12 years old 22-35 years old 19-21 years old 21-12 years old 36-45 years old 19-21 years old 18-18 years old 21-12 years old 36-45 years old 19-21 years old 36-45 years old 19-21 years old 18-18 years old 36-45 years old 19-21 years old 18-18 year

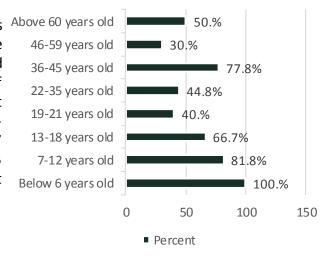


Figure 3.49: The Percentage of Respondents in Need of Medicines by Sub-category for Mental Disabilities Category

For the category of mentally disabled, were among subcategories mood disorder is the highest percentage of respondents who need medication that is as much as 100 per cent of the respondents in this subcategory. Followed by respondents from subcategory which are skizofrenia, schizotypal and delusional as much as 87.5 per cent, the other by 81.8 percent, severe anxiety disorder by 50 percent and organic mental disorder by 20 percent.

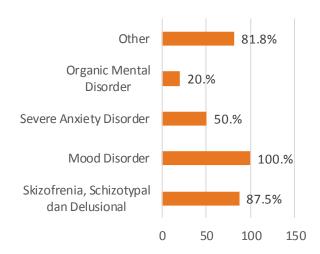
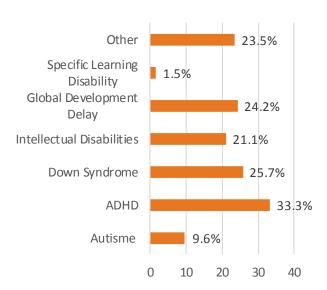
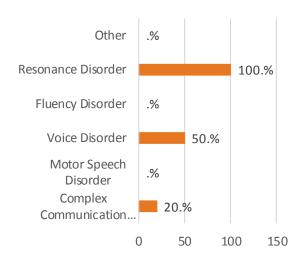


Figure 3.50: The Percentage of Respondents in Need of Medicines by Sub-category for Learning Disabilities Category



For the learning disability category, respondents from the ADHD is the highest percentage of respondents who need continuous medication which is 33.3 percent of the total respondents among the subcategory. Followed by respondents from down syndrome of 25.7 percent, global development delay of 24.2 percent, others of 23.5 percent, intellectual disability of 21.2 percent, autism of 9.6 percent and specific learning disability of 1.5 percent.

Figure 3.51: The Percentage of Respondents in Need of Medicines by Sub-category for Speech Disabilities Category



For speech impaired, respondents from the resonance disorder is the highest percentage of respondents in need of medicines, which is 100 percent of the total respondents in this subcategory. Followed by respondents from the voice disorder by 50 percent, and complex communication Disorder by 20 percent.

Meanwhile, there were no respondents from other subcategories such as fluency disorder and motor speech disorder who needed medication due to the disability experienced.

Figure 3.52: The Percentage of Respondents in Need of Medicines by Sub-category for Hearing Disabilities Category

For the category of hearing impaired, respondents from single side deafness/profound unilateral hearing loss were the respondents with the highest percentage of the total need for continuous medication which is 52.6 percent of the total respondents among this subcategory. Followed by respondents from other of 25 percent, bilateral hearing loss of 18.9 percent, and permanent ear defects/hearing related syndrome of 16.7 percent.

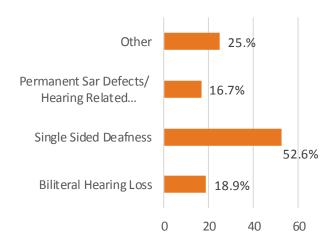
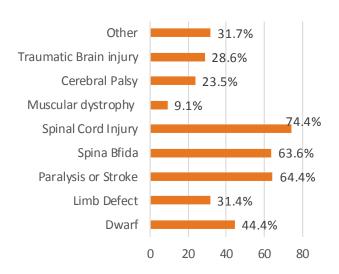


Figure 3.53: The Percentage of Respondents in Need of Medicines by Sub-category for Physical Disabilities Category



For the category of physical disabilities, respondents from among the sub-category of spinal cord injury is the highest percentage of respondents who need continuous medication which is 74.4 percent of the total respondents from this subcategory. Followed by respondents from the subcategory of paralysis and stroke by 64.4 percent, spina bifida by 63.6 percent, dwarf by 44.4 percent, others by 31.7 percent, limb defect by 31.4 percent, traumatic brain injury by 28.6 percent, cerebral palsy 23.5 percent and muscular dystrophy by 9.1 percent.

Figure 3.54: The Percentage of Respondents in Need of Medicines by Sub-category for Visual Disabilities Category

For the visually impaired category, respondents from other subcategories are the respondents with the highest percentage of total need for continuous medication which is 50 percent of the total respondents from this subcategory. Followed by respondents from subcategories of low vision/partially sighted in both eyes or one eye by 21.2 percent and blind in both eyes or one eye by 19.7 percent.

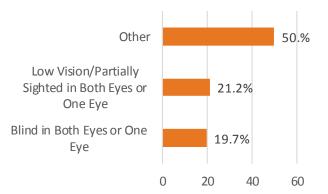
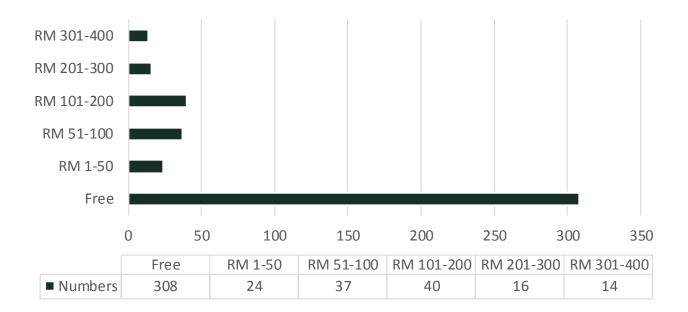


Figure 3.55: The Cost of Medicines Per Month Among Respondents



The cost of medicines per month among the respondents differs from one to another. However, most of the respondents, as many as 308 people or 70.16 percent of the respondents who need medication. Meanwhile, another 29.8 percent bear costs between RM 1 to RM 400 per month. Where the cost of

medicines per month between RM 101 to RM200 is the more costly among the respondents which is 40 people. Followed by RM 51 to RM 100 for 37 people, RM 1 to RM 50 for 24 people, RM 201 to RM 300 for 16 people and RM 301 to RM 400 for 14 people.

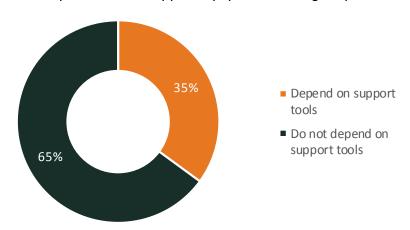


Figure 3.56: Dependence on Support Equipment among Respondents

A survey conducted on 1016 people with disabilities (OKU) from all seven categories found that most respondents 65 percent or

660 respondents did not depend on support tools. Meanwhile, only 35 percent or 356 rely on support tools for this time.

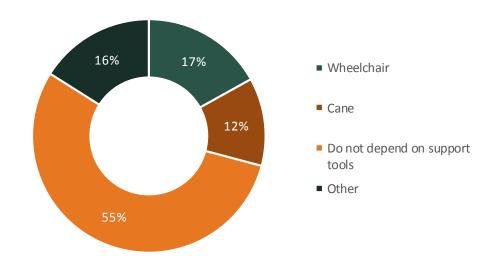


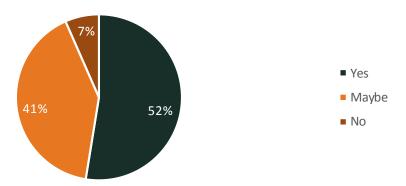
Figure 3.57: The Types of Support Tools Needed among Respondents

Meanwhile, a questionnaire conducted on 1016 people with disabilities (OKU) from all seven categories found that 17 percent or 172 respondents depended on wheelchairs. 12 percent or 124 respondents depend on

the walking stick/crutch. Meanwhile, 16 percent or 163 people depend on other support tools. However, most respondents do not rely on support tools which is 55 percent or 557 respondents.

PERCEPTION AND VIEWS OF PERSONS WITH DISABILITIES TOWARDS TAKAFUL PRODUCTS SPECIALLY FOR THE OKUS

Figure 3.58: Views of Respondents from Persons With Disability Towards The Offering of Takaful Products Specially for The OKUs



Based on the interviews and group discussions with the OKUs, almost all of them viewed positively towards the initiative to develop specific takaful products that suit the risks faced by them.

Surveys were conducted to identify the views of the OKUs from seven categories on takaful policies specifically for the disabled. Questionnaires were given to individuals with disabilities or caregivers representing the disabled under their care. The results of the survey conducted on 1016 respondents found that the majority of respondents, that is 93 per cent or 949 respondents, gave a positive response to this initiative. Half of the respondents that is 52 per cent or 534 respondents gave a "Yes" answer. While the other part of 41 per cent or 415 respondents gave the answer "Maybe" which gives the implication that they are inclined to subscribe if there is a specific takaful policy for the disabled segment.

The results of this survey also found that only a small number of respondents, that is 67 people or equivalent to 7 percent who are not interested in subscribing to takaful even though takaful companies provide takaful products specifically for this group.

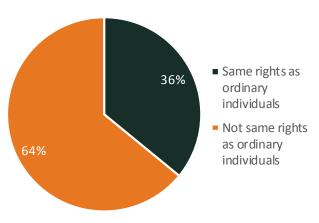
The results of this survey generally give the impression that the OKUs or their guardians require a specific takaful policy that is appropriate and meets the needs of the OKUs. This statement is also supported by group interviews and discussions with the OKUs or their caregivers.

There are even some OKUs who were interviewed expected only the same rights to be given to them as ordinary individuals. According to them, most of the takaful companies do not approve their application for a takaful policy due to their disabilities.

Therefore, based on this data and discussion, it can be concluded that there is support from the disabled or their caregivers if the takaful company wants to produce products specifically for the OKUs.

VIEWS AND PERCEPTIONS OF THE OKUS AND CAREGIVERS TOWARDS THE RISK THEY HAVE EXPERIENCED

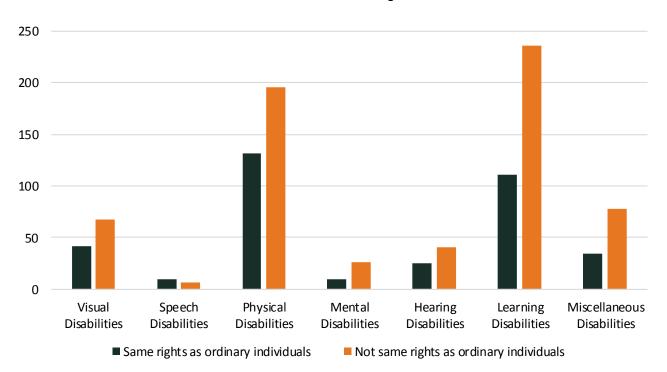
Figure 3.59: Views of The Disabled and Caregivers on The Risks Compared
To Healthy Individuals



Based on the questionnaire conducted on 1016 respondents among the disabled, most respondent 64 percent admitted that the risks faced are not the same as ordinary individuals. Only a small number of respondents, 36 percent think that the risks are the same as normal individuals.

However, informants from focused group discussions on visually impaired think the risks they face are the same as normal individuals and some even think their risks are lower because they do not drive cars.

Figure 3.60: Views of The Disabled and Caregivers on The Risks Compared To Healthy Individuals Based on Categories



TAKAFUL POLICY SUBSCRIPTION AMONG RESPONDENTS

Have a takaful policy
Do not have a takaful policy
81%

Figure 3.61: Takaful Policy Subscription Among Respondents

Based on the questionnaire conducted on 1016 respondents among the disabled, most of the respondents 826 people or 81 percent of the total respondents admitted that they do not have a takaful policy. Meanwhile, only 190 people or 19 percent of respondents admitted to having a takaful policy.

Based on interviews and focus group discussions with people with disabilities and guardian also found that majority of them did not participate in takaful, only a small percentage of them participate in takaful.

Among the reasons for not participating in takaful mentioned by the informant is because it is difficult to get certain products such as accidents (personal accident) and more expensive prices or lower protection that is different from normal individuals.



INTRODUCTION

THE FOURTH OBJECTIVE focuses on researching and analysing prices to subscribe to affordable takaful products for the OKUs. The price determinant is in line with the amount and type of protection that will be obtained by the OKU.

Through this survey, a study was conducted to look at the relationship between the household income of the OKU and the

takaful contribution chosen by them. This study is essential to identify whether there is a relationship between the two variables and see the extent to which household income affects the takaful price selected.

Below is a price list for some takaful products that can be subscribed by the OKUs.

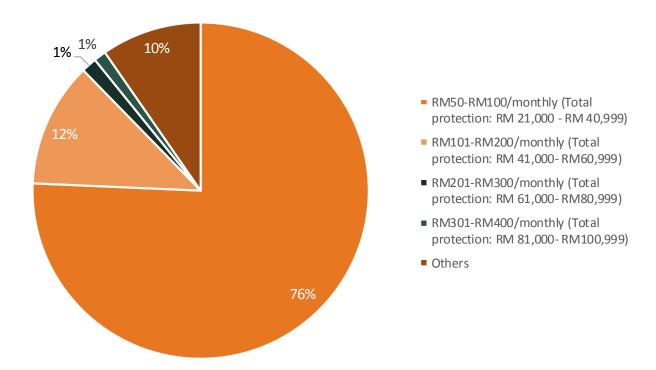


At this point of time, the insurance or takaful products issued by takaful or insurance companies that can be subscribed by the OKUs are generally not many. Most of the takaful policies on the market are not as diverse as regular individual takaful policies.

The price of takaful policy that can be subscribed by the OKUs available in the market is between RM 55 / year to RM 750 / month.

However, this policy is only partially limited to specific categories of OKUs and does not cover all persons with disability.

Figure 4.1: Price Review Following What OKUs and Their Caregivers Can Afford
To Subscribe Takaful



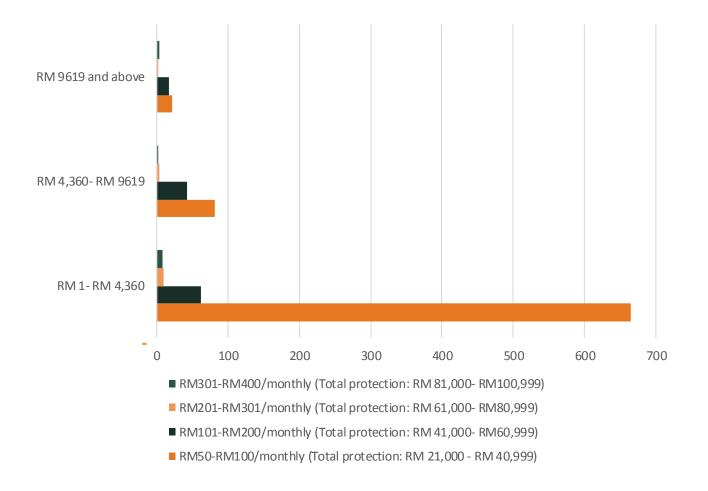
To get the views of the disabled regarding the price and amount of protection appropriate to their ability, a questionnaire was distributed to 1016 OKU respondents and caregivers of OKU from all categories of OKU to get the views of the OKUs regarding the price and amount of protection appropriate to their ability. The results of the questionnaire found that most of the respondents, that is 76 percent or 769 respondents agreed with a price between RM 50 to RM 100 per month with total coverage of between RM 21,000 to RM 40,999.

Meanwhile, 12 percent or 122 respondents agreed with the price between RM 101 to RM 200 and with the total coverage between RM 41,000 to RM 60,999.

Some respondents choose the price between RM 201 to RM 300 per month with the total coverage between RM 61,000 to RM 80,999, and the price between RM 301 to RM 400 per month with coverage between RM 81,000 to RM 100,999.

The selection may be influenced by household income and the economic position of the OKUs who are mostly among B40.





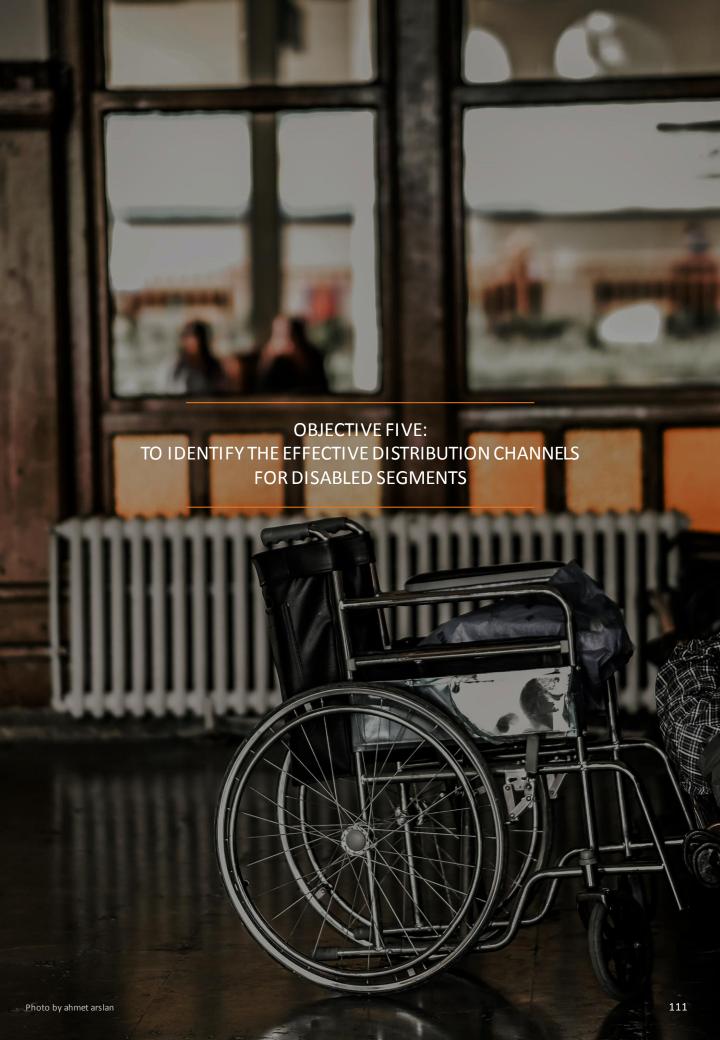
The figure above compares the price of the policy chosen by the respondent with the household income. Most of the respondents who decide on the price between RM 50 and RM 100 are from respondents who earn between RM 1- RM 4,360 or B40. However, some respondents from B40 choose the policy price between RM 201 to RM 300, RM 101 to RM 200 and RM 301 to RM 400 per month.

Meanwhile, all respondents with an income of RM 9,619 and above or T20 selected the price of RM 50 to RM 100 and RM 101 to RM 200. Respondents from this group are seen not to choose a higher policy price

despite their higher income.

Respondents who earn between RM 4,360 to RM 9,619 or M40 mostly choose a policy that costs between RM 50 to RM 100 per month. It is followed by a policy that costs RM 101 to RM 200 and a policy that costs RM 101 to RM 200 per month.

Based on this, it can be concluded that there is no significant relationship between the price of the selected takaful policy and household income among the respondents.



INTRODUCTION

The fifth objective focuses on identifying the channel or method that is effective for OKUs to obtain and subscribe to takaful product.

There are six channels or methods outlined in this study, namely, online, through the Association of Persons with Disabilities (OKU), through the Social Welfare Department (JKM), through individuals (takaful agents), through telemarketing and through takaful applications.

Under this objective, research was conducted on the category of OKUs and its relevance to the methods to obtain takaful products. This is because every category of OKUs has different disabilities. This disability is likely to have an impact on the selection of methods or channels to obtain policies, as acknowledged by some OKUs who have been interviewed.

Takaful Application
Telemarketing
Individuals (Takaful Agent)
Jabatan Kebajikan Masyarakat (JKM)
Association of Persons with Disabilities (OKU)
Online

0 100 200 300 400 500 600 700

Figure 5.1: Channels Selected By The OKUs To Get Takaful Policy

A survey was conducted on 1016 respondents. For this question, respondents were given the option to select more than one option. The results from this survey found that most of the respondents, a total of 656 respondents tend to choose to obtain a takaful policy through JKM.

Next, the method or channel to obtain the highest takaful policy chosen by the respondents is through the Association of Persons with Disabilities (OKU), which is a total of 377 respondents. It is followed by methods or channels through individuals, online (online) and through the takaful Application, which is a total of 260 people, 265 people and 112 people.

The lowest and fewest or least popular option chosen by the respondents is through telemarketing which is only 13 people who tend to choose this method or channel.

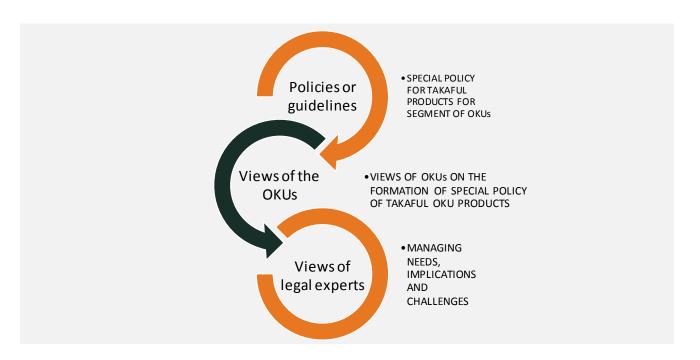


INTRODUCTION

The sixth objective focuses on the legal aspects required to operate and provide takaful products specifically for the OKUs.

Under this objective, the views of legal experts have been obtained to understand the needs, implications and challenges in providing a specific guideline that regulates takaful products for the OKU to be issued by Bank Negara Malaysia (BNM) or other relevant authorities.

The views and confidence of the OKUs and their caregivers on this specific policy which will regulate takaful products for the OKUS are also obtained through the survey that conducted on some of the individual Persons with Disabilities (OKUs) and their caregivers.



Interviews with legal experts found that there was a need to establish a guideline or policy that regulates takaful products for the OKUs.

However, according to the legal expert, there are advantages and disadvantages to create this policy. The downside of this policy is that it is likely to limit product innovations in the future. In comparison, the advantage is that this policy will ensure that OKUs will be able to access takaful products in the future.

Therefore, according to the legal expert, the process of creating these guidelines should involve OKUs. It is to ensure that the guidelines or policies that will be issued meet the needs of the group and at the same time, do not constrain the innovations that will be made in the future.

THE VIEW FROM REPRESENTATIVE REGULATOR OF TAKAFUL COMPANY / CENTRAL BANK OF MALAYSIA (BNM)

The regulator of takaful companies Bank Negara Malaysia (BNM), provides support for the provision of takaful to the disabled segment through the Implementation Guide for Value Based Intermediation (VBI) to takaful companies in the country (interview BNM, 2020). For the need to issue specific guidelines and policies for the provision of takaful to this segment there is no need and takaful companies can adopt existing guidelines. BNM also stated that there is a knowledge gap and information for the implementation of specific guidelines and policies for the supply of takaful products to the disabled.

THE VIEW FROM REPRESENTATIVE MALAYSIAN TAKAFUL ASSOCIATION (MTA)

The Malaysian Takaful Association (MTA) states that there is a need to establish guidelines and policies specifically for the provision of takaful to the disabled. Among the problems faced by takaful companies to offer takaful products to the disabled is the lack of data and statistics related to the disabled in the country. Therefore, takaful companies are not able to make accurate calculations due to the lack of data and information of this group (Interview MTA, 2020).

THE VIEW FROM DEPARTMENT OF SOCIAL WELFARE MALAYSIA (JKM)

The Department of Social Welfare (JKM) at the OKU Development Department states that takaful participation by OKU can be done mandatory by the government by making amendments in the OKU ACT (Interview OKU Development Department JKM, 2020). Based on the experience of offering existing takaful products to the disabled by takaful companies is not well

received by the disabled is due to the financial aspects faced by this group. Therefore, there is a need to amend the OKU ACT so that there are contributing parties on their behalf (Interview OKU Development Department JKM, 2020).

THE VIEW FROM ACADEMICS

Management and Takaful

There is a need to establish specific guidelines and policies so that the supply of takaful products to the disabled so that they can be offered by protecting the interests of the disabled to obtain takaful protection (Interview Amirul Afif Muhamat, 2020). However, there is a shortage of takaful products that have specific guidelines and policies that cause companies to offer the same product (standardized), less creativity, less competition, not much difference between takaful companies. Meanwhile, the advantage of having specific guidelines and policies is that the product will be an safeguarding affordable product, interests of the disabled and a basic guide for takaful companies (Interview Amirul Afif Muhamat, 2020).

Takaful and Insurance

The provision of takaful to the disabled requires specific guidelines and policies among its benefits is to ensure that the products offered comply with shariah aspects and quality of products as well as reducing the misuse of these products (Interview Noryati Ahmad, 2020).

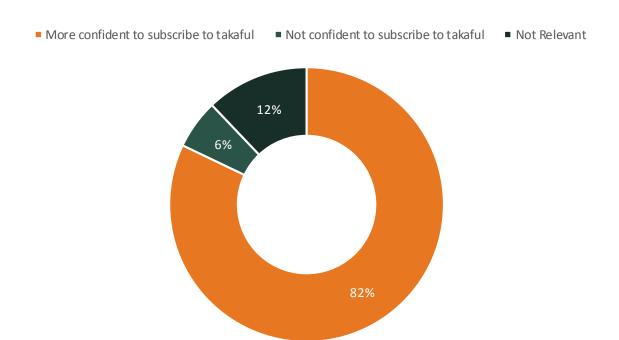
Law and Takaful

Takaful offer to the disabled do not need guidelines and policies specifically by BNM. The legal framework needs to be done by the government such as the Ministry of Women, Family and Community Development. Then, BNM can play a role

based on the laws set by the government (Interview Safinar Salleh, 2020). As long as there is no specific law by the government for the supply of disabled takaful, takaful companies can apply the existing guidelines and laws issued by BNM for the provision of disabled takaful (Interview Safinar Salleh, 2020).

Perspektif Peserta/Pelanggan di Kalangan OKU

Figure 6.1: Views of the OKUs on the Needs of Specific Policy / Guidelines by the Industry for Product Offerings for the OKUs



A survey was conducted to examine the views of the OKUs regarding the guidelines by Bank Negara Malaysia (BNM) for takaful products specifically for the OKUs. The results of a survey conducted on 862 OKU respondents from seven categories found that most respondents, that is 81 per cent or 700 respondents agreed that they are more confident to subscribe to takaful if Bank Negara Malaysia (BNM) issues specific guidelines for takaful products for the OKUs.

Meanwhile, only a small fraction, that is 6

per cent or 47 respondents who still do not feel confident to subscribe to takaful if Bank Negara Malaysia (BNM) issues a joint guideline for takaful products for the OKUs. However, when compared to the percentage of respondents who expressed confidence in the proposal to create this policy which is a more significant number and percentage, the number of respondents who do not feel confident is insignificant. It does not even have a substantial impact if it is implemented in the future.

Advantages and Disadvantages Analysis has Specific Guidelines and Policies

The supply of takaful products to the disabled has advantages and disadvantages based on the analysis of views from various parties to create specific guidelines and policies for the provision of takaful to this segment. Listed below are the advantages and disadvantages of creating specific guidelines and policies for the provision of takaful to the disabled.

Figure 6.2: Analysis of advantages and disadvantages of creating specific guidelines and policies

Advantages	Disadvantages
1. Affordable	1. Products on the market look the same (standardized) with each other.
2. The importance of the disabled is maintained	2. Lack of creativity
3. Takaful companies get clear and structured guidance	3. Lack of competition

Source: Analysis by Researchers

The advantages of having specific guidelines and policies include being affordable, the importance of the disabled being taken care of and takaful companies getting clear and structured guidance. Meanwhile, the lack of

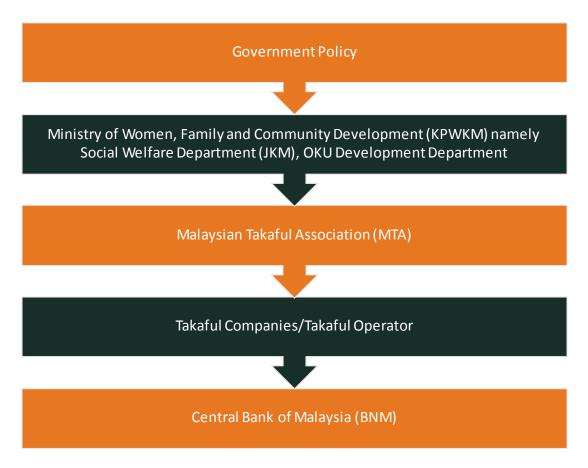
specific guidelines and policies such as products in the market look standardized (standardized) with each other, less creativity and less competition.

Conclusion

In conclusion, the researchers are of the view that the need for specific policies / guidelines for the supply of OKU products should start from government policy to OKU to encourage the private sector to also play a role for OKU in this country. In this regard, the Ministry of Women, Family and Community Development (KPWKM), the Social Welfare namely Department (JKM), OKU Development

Department which manages the disabled in the country must play a role in the collection of data and information related to the disabled. Next, the parties involved such as the Malaysian Takaful Association (MTA), takaful companies and Bank Negara Malaysia (BNM) can formulate specific guidelines and policies for the provision of takaful to the disabled in the country. The following is an overview of the formation of specific guidelines / policies for the supply of takaful products to the disabled.

Figure 6.3: Peringkat Pembentukan Garis Panduan/Polisi Khusus bagi Penawaran Produk OKU



Source: Research Overview



OBJECTIVE SEVEN:
TO DESIGN A SUITABLE TAKAFUL PRODUCT FOR THE
OKU SEGMENT

Photo by Marcel Strauß 119

INTRODUCTION

THE SEVENTH OBJECTIVE focuses on designing appropriate takaful products for the disabled segment. This objective is a reflection of the overall objectives that have been discussed in the previous sections. Therefore, all the proposed products are based on the findings obtained from this study.

In general, there are two types of takaful products for the OKUs proposed in this study, namely family takaful (family) and General takaful (general). The recommended products are as below.

PROPOSED FAMILY TAKAFUL PRODUCTS



Pre-Birth (in pregnancy - 14 days @ 35 days)

Manfaat

- Rehabilitation
- Hospital Allowance
- Death
- Support Equipment (at certain ages)
- Death of caregivers
- **Total Permanent** Disability (TPD)

Jenis OKU

All Categories OKU * Mostatrisk physical disability - refer to riskrelated reports

Harga

* Refer to data from the survey about the price.



Postpartum (before being confirmed as an OKU)

Manfaat

- Rehabilitation
- Hospital Allowance
- Death
- Support Equipment (at certain ages)
- Death of caregivers
- **Total Permanent** Disability (TPD)

Jenis OKU

All Categories OKU * Mostatrisk physical disability - refer to riskrelated reports

Harga

* Refer to data from the survey about the price.

Manfaat

- Rehabilitation
- Hospital Allowance
- Death
- Support Equipment (at certain ages)
- Death of caregivers
- **Total Permanent** Disability (TPD)

Jenis OKU

All Categories OKU * Most at risk physical disability - refer to riskrelated reports

* Refer to data from the survey about the price.

Harga

being confirmed as an OKU)

Postpartum (after



General Institutional Takaful

Manfaat

- Rehabilitation
- Hospital Allowance
- Death
- Support Equipment (at certain ages)
- Death of Caregivers
- Total Permanent Disability (TPD)

Jenis OKU

All Categories OKU

* Most at risk physical
disability - refer to riskrelated reports

Harga

* Refer to data from the survey about the price.

General Institutional Takaful

Manfaat

- Rehabilitation
- Hospital Allowance
- Death
- Support Equipment (at certain ages)
- Death of caregivers
- Total Permanent Disability (TPD)
- Accidents (24 hours, worldwide)

Jenis OKU

All Categories OKU

* Most at risk physical disability - refer to risk-related reports

Harga

* Refer to data from the survey about the price.

PROPOSED GENERAL TAKAFUL PRODUCTS



Support Tools Takaful

Manfaat

Damage to support tools

Jenis OKU

All categories of the disabled depend on support tools

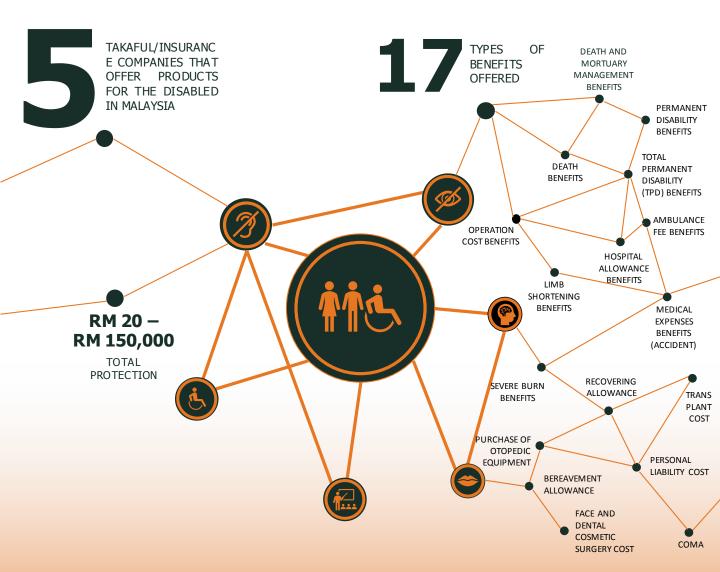
* Refer to risk-related data.

Harga

* Refer to data from the survey about the price.

PRODUCTS AND OKU INSURANCE AVAILABLE







AGE

16 - 65 YEARS OLD

BENEFITS

DEATH. DISABILITY, MORTUARY MANAGEMENT, EXPENSES BENEFITS (ACCIDENT) AMBULANCE FEE

OKUs CATEGORY

ALL CATEGORIES

BENEFITS)

ZURICH

AGE

0 - 60 YEARS OLD (TAKAFUL MUMTAZ) MIN: 35 YEARS OLD
PERMANENT MAX: 80 YEARS
DEATH AND (TAKAFUL SURECOVER) OLD

AND DEATH AND PERMANENT DISABILITY (TAKAFUL (TAKAFUL -MUMTAZ)
DEATH (TAKA FUL SURECOVER)

TOTAL PROTECTION

RM 20 - RM 30,000 (DEPENDS

ON THE PLAN AND TYPE OF
BENEFITS)

CATEGORY OKU

BOTH OF THESE PRODUCTS ARE

NOT SPECIALLY FOR THE
DISABLED, BUT THE DISABLED CAN STILL PARTICIPATE BECAUSE

THEY DO NOT NEED A HEALTH

TOTAL PROTECTION

BASIC PROTECTION FOR 1 UNIT - RM 5,000 - RM 3,000 (TAKAFUL MUMTAZ) BASED ON AGE -RM33,243 -

Allianz (II)

AGE

16 - 70 YEARS OLD (ALUANZ ABILITY LIFE)
3 – 70 YEARS OLD (ALIJANZ CARE INDIVIDUAL)

30 DAYS - 70 YEARS OLD (ALLIANZ INDIVIDUAL PA)

- DEATH (ALLIANZ ABILITY LIFE)
- HOSPITAL ALLOWANCE AND OPERATION COST (ALLIANZ CARE INDIVIDUAL)
 - DEATH, TOTAL PERMANENT DISABILITY AND MEDICAL (ALLIANZ

ALL CATEGORIES LEARNING AND MENTAL DISABLED (ALLIANZ ABILITY LIFE AND ALLIANZ CARE INDIVIDUAL)
NOT STATED (ALLIANZ

RM 200 -RM 125,000 (DEPBNDS ON THE PLAN AND TYPE OF BENEFITS)

18 - 75 YEARS OLD (ABC PA) 16 – 65 YEARS OLD (INDIVIDUAL PA) 18 – 65 YEARS OLD (BODYGUARD PA) 15 - 55 YEARS OLD (HEALTHCARE INTERNATIONAL)

16 - 65 YEARS OLD (MINI PA)

- DEATH, TOTAL PERMANENT DISABILITY, HOSPITAL ALLOWANCE, MEDICAL EXPENSES, COMA, FACE AND DENTAL COSMETIC SURGERY COST
- FUNERAL EXPENSES, AMBULANCE FEE, SEVERE BURN BENEFITS, BEREAVEMENT ALLOWANCE AND LIMB SHORTENING (ABC PA)
- DEATH, TOTAL PERMANENT DISABILITY, RECOVERY ALLOWANCE, HOSPITAL ALLOWANCE, MEDICAL EXPENSES FUNERAL EXPENSES, AMBULANCE FEES, BEREAVEMENT ALLOWANCE, PURCHASE OF OTOPEDIC EQUIPMENT AND PERSONAL HABILITY COM-PERSONAL LIABILITY
 (INDIVIDUAL PA)

MSIG

DEATH, TOTAL PERMANENT DISABILITY, RECOVERY ALLOWANCE, HOSPITAL ALLOWANCE, MEDICAL EXPENSES, BEREAVEMENT ALLOWANCE, AND TRAVELING

ALLOWANCE (BODUGUARD PA)
HOSPITAL ALLOWANCE, MEDICAL
EXPENSES, AMBULANCE FEES AND
TRANSPIANT COST. (HEALTHCARE INTERNATIONAL)

PERMANENT DISABILITY AND BEREAVEMENT ALLOWANCE (MINI PA)

ALL CATEGORIES EXCEPT MENTAL DISABILTY AND MISCELLANEOUS DISABILITY OKU

TOTAL PROTECTION

- RM 50 RM 50,000 (DEPBNDS ON THE PLAN AND TYPE OF BENEFITS) -INDIVIDUAL PA,
- BO DYGUARD PA)
 RM 500 RM 24,000 (DEPENDS ON THE PLAN AND TYPE OF BENEFITS) -(MINI PA)

 RM 150,000 MAX/YEAR

(INTERNATIONAL HEALTHCARE)

AIA PUBLIC TAKAFUL

GESTATION/14 DAYS MAX: 15 YEARS OLD

BENEFITS

DEATH, PERMANENT DISABILITY, MEDICAL EXPENSES, HOSPITAL ALLOWANCE (NICU AND HDU)

MIN: MORE THAN 35 WEEKS

OKUs CATEGORY

AUTISME AND ATTENTION
DEFICIT HYPERACTIVITY DISORDER (ADHD)

TOTAL PROTECTION

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