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# Gender Analyses on the Vulnerability Types Suffered by Poor and Older Freshwater Fisheries Community Members in Peninsular Malaysia

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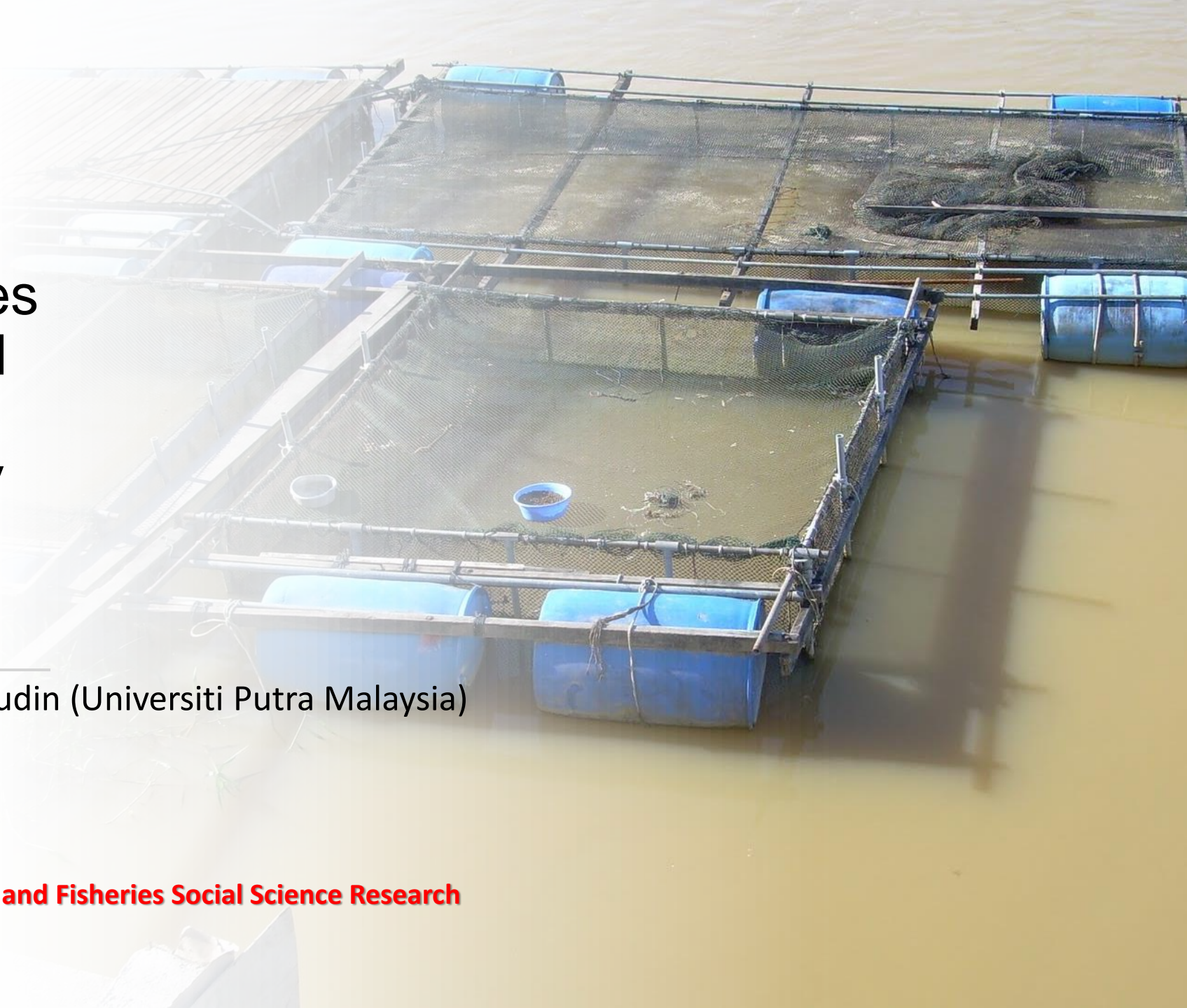
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**GAF101- : Gender Analysis in Aquaculture and Fisheries Social Science Research**

**22 NOVEMBER 2022**





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# Introduction

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- Fisheries and Aquaculture Economic Sector (FAES) involve **masculine activities** (Sataporvanit, 2018), **high work risk** and dangerous jobs (Stergiou-Kita et al., 2015)
- the concept of vulnerability as someone with **missing ability to work** (Zainalaludin et al., 2017), or **risk to generate income** for living (Qaisrani et al., 2018; Zainalaludin, 2010; Eriksen & O'Brien, 2007; Hilhorst & Bankoff, 2004), and **without social security – poor and marginalized**
- 15,719 aquaculture farmers in Malaysia (Department of Fisheries, Malaysia [DOF], 2020)
- There have been fishermen who are dead or **disabled** because of various accidents during fishing. They left behind many vulnerable **single mothers** (Zainalaludin, et al., 2017; Oginni et al., 2013)

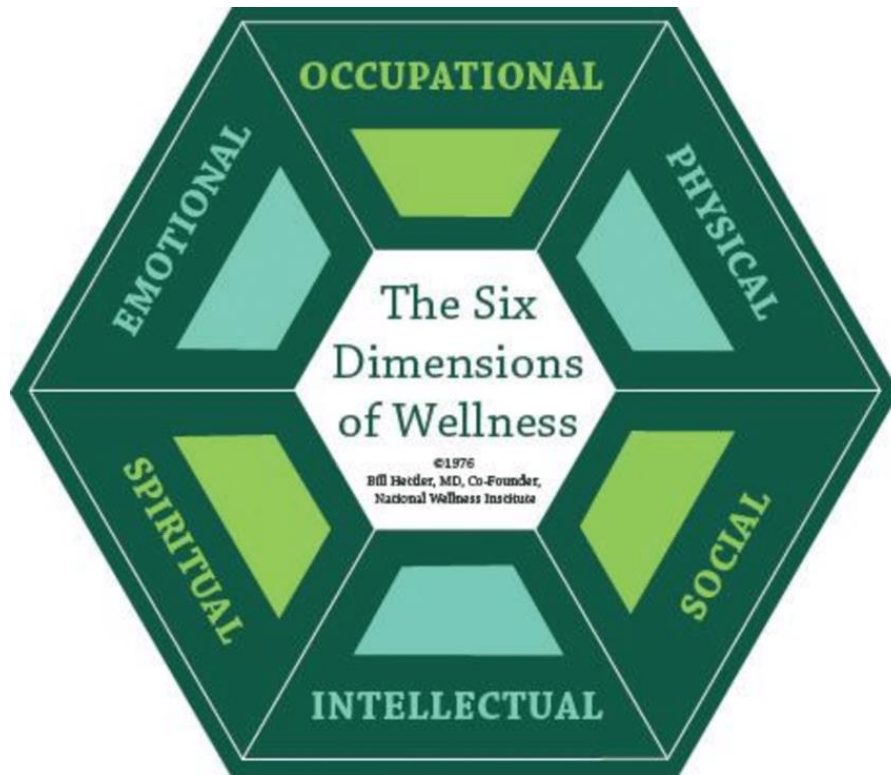




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## Theory on Vulnerability Type

## Six Dimensions of Wellness Model (1979)



Dimensions of Wellness Domain	Vulnerability Type (VuT)
Physical	<ol style="list-style-type: none"><li>1. Handicapped/ Disabled</li><li>2. Older People</li><li>3. Child Labour</li></ol>
Emotional	<ol style="list-style-type: none"><li>4. Single Parent</li><li>5. Serious Disease</li><li>6. Caretaker</li><li>7. Living Alone</li></ol>



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# Objective

- RO1: to profile the backgrounds of the respondents by sex disaggregation.
- RO2: to identify the distributions of the respondents by the types of vulnerability and sex disaggregation.
- RO3: to measure the vulnerability type that predicts the likelihood of the respondents in the poor category of household income by sex disaggregation.



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## Null hypotheses

- $H_{O_1}$ : there is no type of vulnerability that predicts the likelihood of male respondents in poor category of household income
- $H_{O_2}$ : there is no type of vulnerability that predicts the likelihood of female respondents in poor category of household income





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# Method – highlight on gender analyses

- **Respondents:** Poor and Vulnerable freshwater community members in Peninsular Malaysia
- **Equal distribution** between male and female – refer sampling table
- Malaysia **PLI=RM2208** (USD532.24) was used to classify the poor category of household income





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# Data Collection

- Data collected through a special developed questionnaire
- $n=400$  data collected in 2018-2020 (49.5% males and 50.5% females)
- $n=322$  (80.5%) poor households (household income  $\leq$  than USD532 a month) reported in this paper (46% males and 54% females)
- Descriptive data analyses (RO-1 & RO-2) Binary Logistic Regression Model (RO-3)

Sampling Table

Zones	District	Male	Female	Total
Eastern	Pekan	50	50	100
Southern	Kuala Pilah	50	50	100
Middle	Lenggong	50	50	100
Northern	Padang Terap	50	50	100

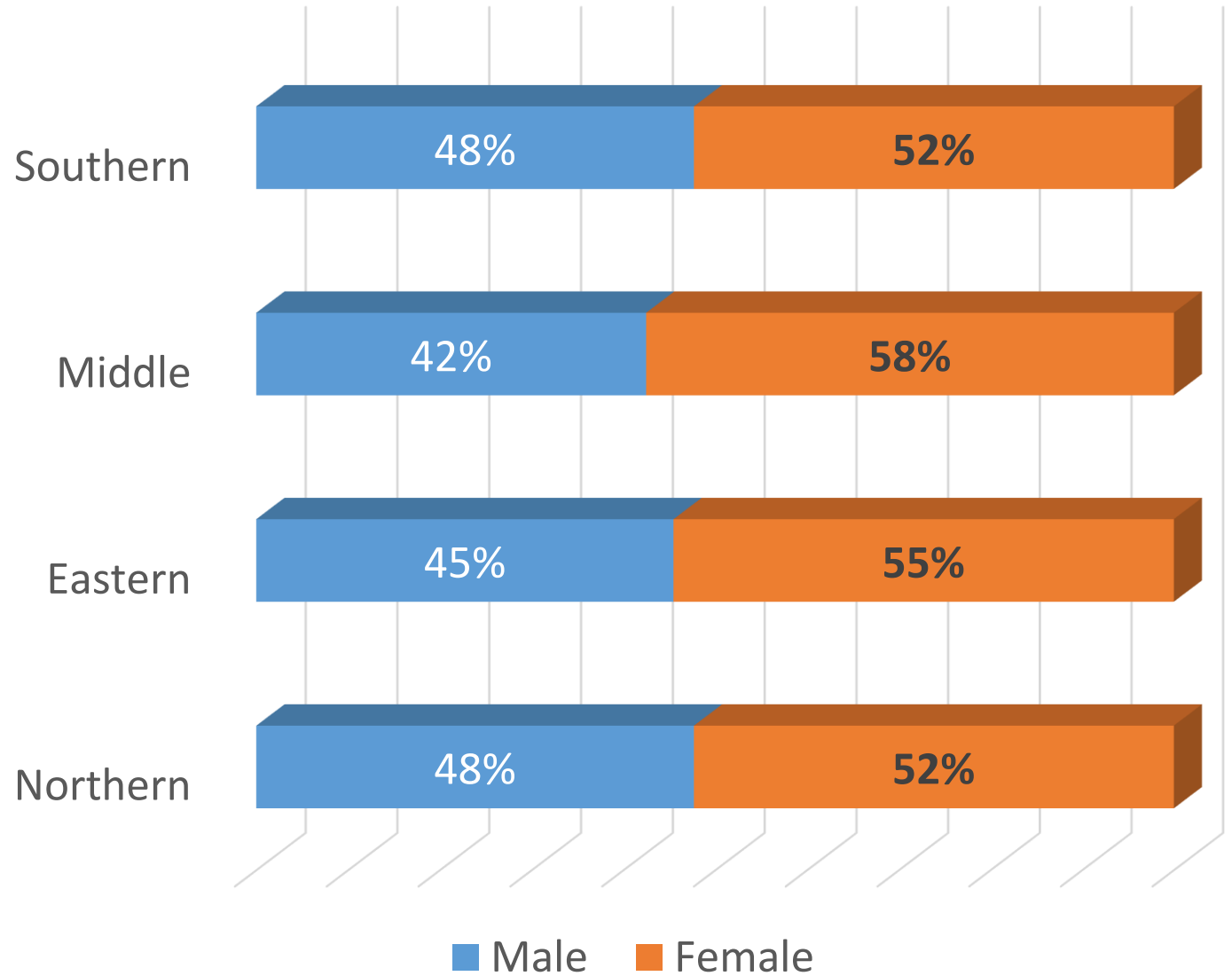




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RO1: to profile the backgrounds of the respondents by sex disaggregation  
(Distribution of Respondents by Zone and Sex Disaggregation)

n=322 (poor and vulnerable)

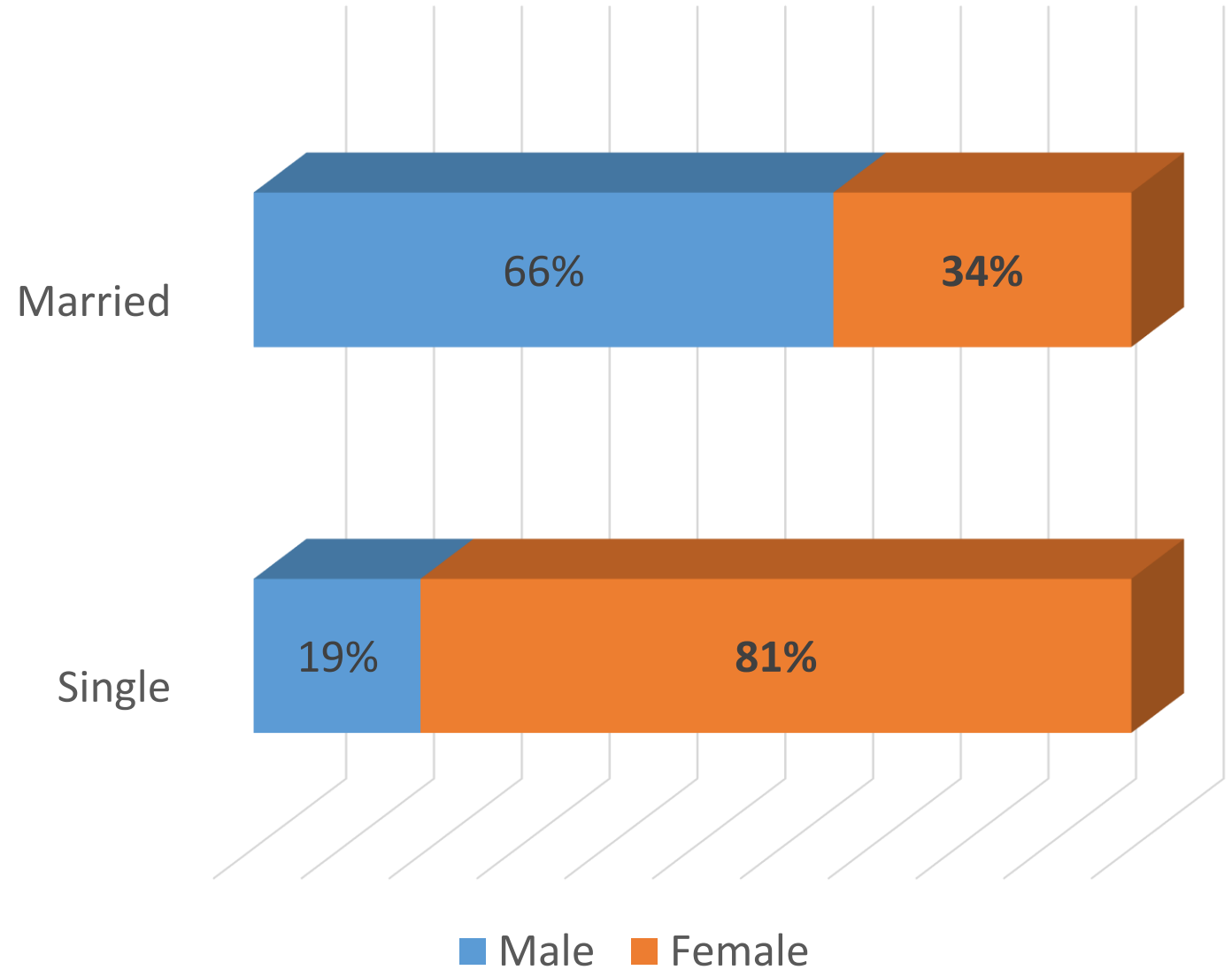




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RO1: to profile the backgrounds of the respondents by sex disaggregation  
(Distribution of Respondents by Marital Status and Sex Disaggregation)

n=322 (poor and vulnerable)



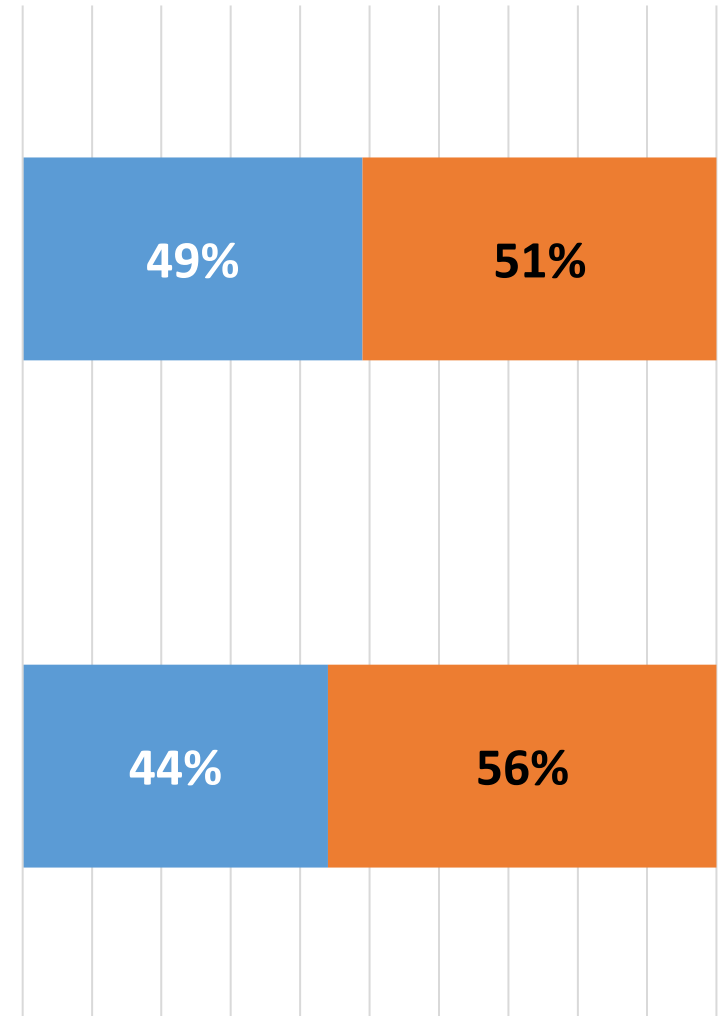


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RO1: to profile the backgrounds of the respondents by sex disaggregation  
(Distribution of Respondents by Marital Status and Sex Disaggregation)

n=322 (poor and vulnerable)

Secondary/tertiary  
  
not schooling/primary school

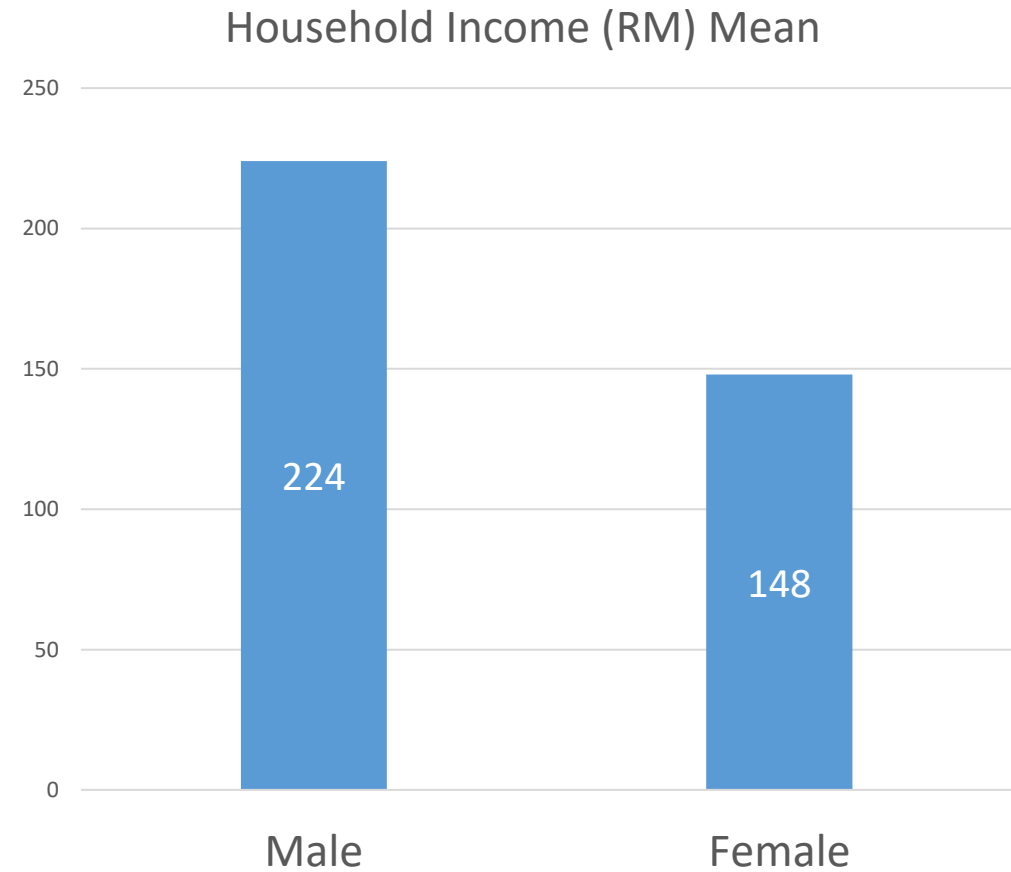
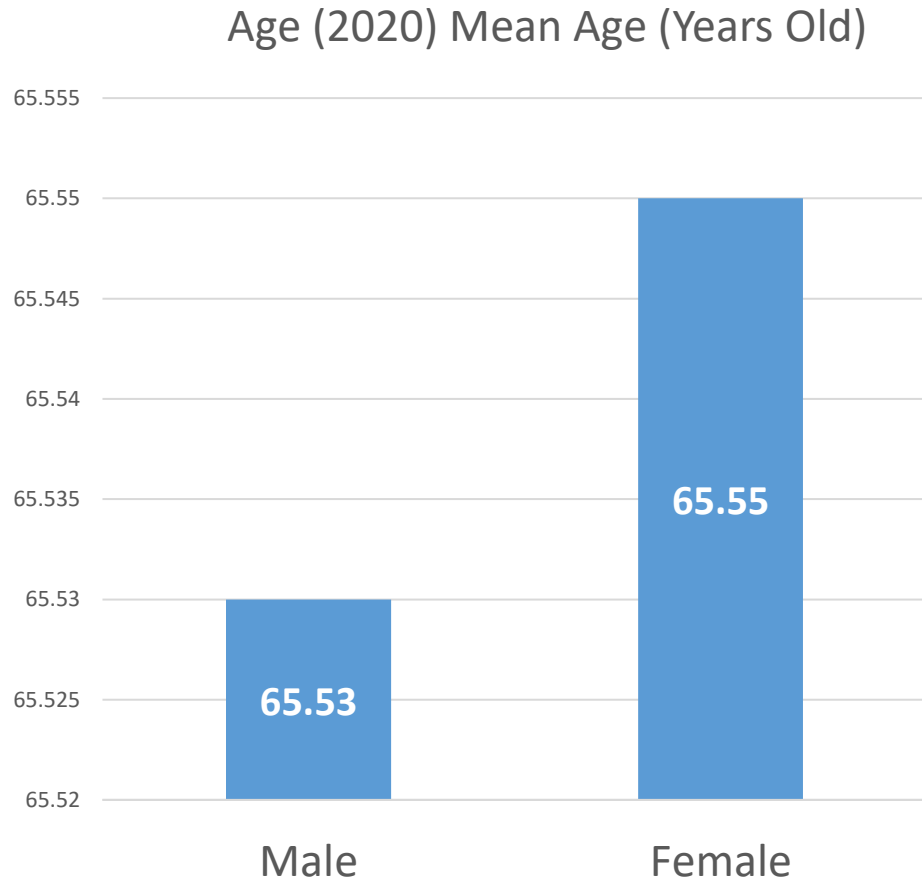


■ Male ■ Female





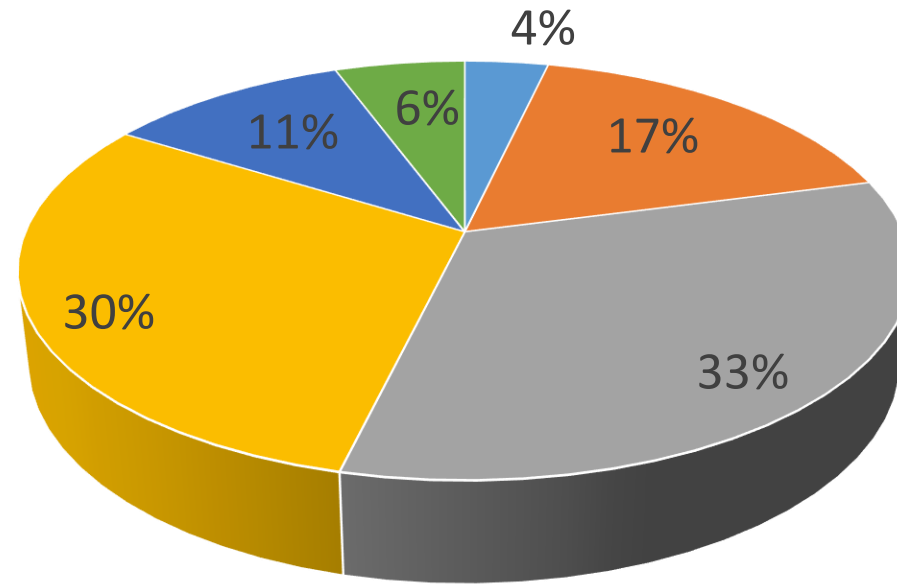
# RO1: to profile the backgrounds of the respondents by sex disaggregation (Mean of Age and Income of Respondents by Sex Disaggregation) – $n=322$





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Finding RO2:  
Distribution of  
Respondent by  
Vulnerability  
Type ( $n=322$ )

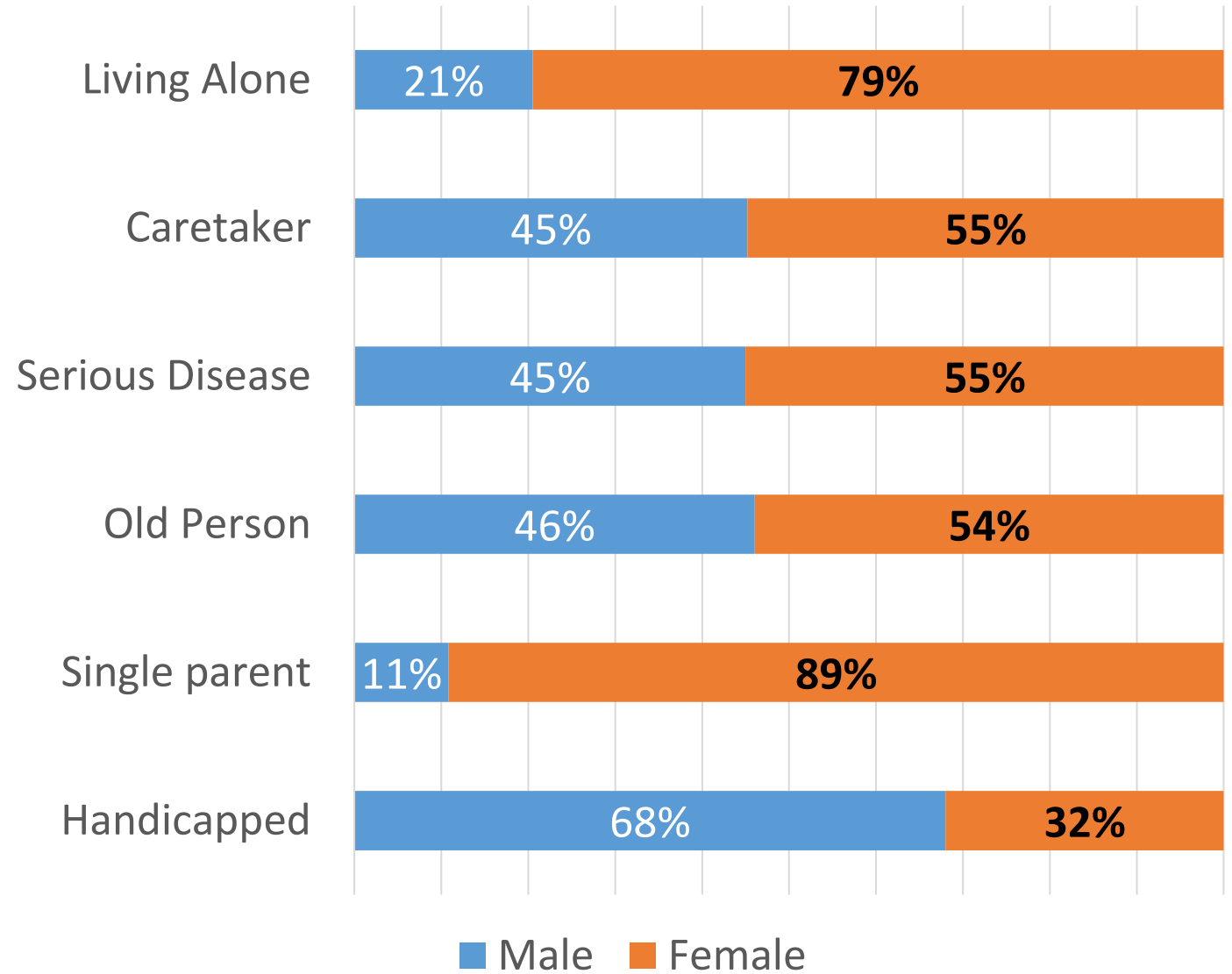


- Handicapped
- Single parent
- Older Person
- Serious Disease
- Caretaker
- Living Alone



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RO2: to identify the distributions of the respondents by the types of vulnerability and sex disaggregation (n=322)







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# Finding RO3: to measure the vulnerability type that predicts the likelihood of the respondents in the poor category of household income by sex disaggregation.

BLR Model 1

## Wald Chi Square Statistics Predict Male Vulnerable Respondent in Poor Category of Household Income (*n*=322)

Type of Vulnerability	B	S.E.	Wald	df	Sig.	Exp(B)
<b>Handicapped</b>	<b>1.281</b>	<b>.553</b>	<b>5.365</b>	<b>1</b>	<b>.021</b>	<b>3.600</b>
<b>Single Parent</b>	<b>-2.795</b>	<b>.346</b>	<b>65.187</b>	<b>1</b>	<b>.000</b>	<b>.061</b>
Living Alone	-.362	.522	.481	1	.488	.696
Constant	.634	.155	16.826	1	.000	1.885

Note: -

Multiple response (*n*=694)

Significant ( $p < 0.05$ ), reject  $H_0_1$

DV:-

Male respondents in poor category of household income (<RM2208 – USD532.34) = 1

Female respondents in poor category of household income (<RM2208 – USD532.34) = 0



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Finding RO3: to measure the vulnerability type that predicts the likelihood of the respondents in the poor category of household income by sex disaggregation.

BLR Model 2  
Wald Chi Square Statistics Predict Female Vulnerable Respondent in Poor Category of Household Income (*n*=322)

Type of Vulnerability	B	S.E.	Wald	df	Sig.	Exp(B)
<b>Handicapped</b>	<b>-1.290</b>	<b>.552</b>	<b>5.463</b>	<b>1</b>	<b>.019</b>	<b>.275</b>
Living Alone	.354	.522	.459	1	.498	1.424
<b>Single Parent</b>	<b>2.782</b>	<b>.347</b>	<b>64.443</b>	<b>1</b>	<b>.000</b>	<b>16.145</b>
Constant	-.617	.155	15.857	1	.000	.539

Note: -

Multiple response (*n*=694)

Significant ( $p < 0.05$ ), reject  $H_0$

DV:-

Female respondents in poor category of household income (<RM2208 – USD532.34) = 1

Male respondents in poor category of household income (<RM2208 – USD532.34) = 0



# Conclusion

## RO1&2:

- The **vulnerable respondents** in this paper are poor males and females with low academic background and **older people** on average

## RO3:

- **Handicapped and Single Parent** VuT had significantly predicted male and female respondents respectively in the poor category of household income
- Handicapped VuT had **positively predicted male** and **negatively predicted female** in the poor category of household income.
- Single Parent VuT had **negatively predicted male** and **positively predicted female** in the poor category of household income.
- Policy and program development, especially in poverty eradication in freshwater fisheries community should focus on the **elderly, handicapped men and single mothers**

## General:

- vulnerability involves **gender and poverty-related issues**, in which **vulnerable women are poorer than vulnerable men**
- **Support** FAES is a **masculine** economic sector which is more suitable for men. Thus, female and vulnerable individuals may not be able to work directly in FAES
- Support **feminism poverty**
- Support **GAP** – gender, ageing and poverty





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**Thank You**

Approved by Ethic Committee for Research Involving Human Subject Universiti Putra Malaysia  
(JKEUPM-2018-409)

Citation Paper Published: Saidi, N., Zainalaludin, Z., & Jamaluddin, A. (2021). Gender Analyses on the Vulnerability Types Suffered by Poor and Older Freshwater Fisheries Community Members in Peninsular Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 11(12), 2060–2083