

## Older Sarawakian Socioeconomic Determinants by Sex Disaggregation and Poverty Status

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### Abstract

This paper aims to identify the socio-economic determinants significantly predict poverty status of older respondents by sex disaggregation. A total of  $n=172$  respondents reported, and four Hos tested through Binary Logistic Regression Model 1-4, respectively. All Hos were rejected because all models fit and significant ( $p<0.05$ ). Through  $HO_1$  and  $HO_2$  testing respectively among male respondents, two predictors obtained – working status and district. In Model 1 and 2, working status predicts less than 88.6 percent and 8.784 times likelihood the respondents were in non-poor and poor category respectively. In Model 1, Miri Sibul, and Betong districts had significantly ( $p<0.05$ ) predict 9.439 times, 51.352-, and 26.402-time likelihood the respondents were in non-poor category. Whereas in Model 2, Miri, Sibul, and Betong districts had significantly ( $p<0.05$ ) predict less than 89.4 percent, 98.1 percent, and 96.2 percent likelihood the respondents were in poor category, respectively. Through  $HO_3$  and  $HO_4$  test respectively among female respondents, two predictors were obtained – strata and current transfer. Rural strata predict less than 79.1 percent (Model 3) and 4.789 likelihood (Model 4) the respondents were in non-poor and poor category respectively. Current transfer predicts less than 99.1 percent (Model 3) and 113.44-time (Model 4) likelihood the respondents were in non-poor and poor category respectively.

**Keywords:** Poverty, Gender, Older People, Consumer, Household Income

### Introduction

According to Abd Hamid (2015), the economic status of the elderly can be measured by their socioeconomic background and the economic opportunities achieved at a productive age. Financial status in old age depends on how they manage their finances. However, as individuals' life expectancy increases and the cost of living becomes high, retirement age and uncontrolled circumstances (for example pandemic) may cause their financial resources to fall below the poverty line and are no longer sufficient to sustain life. The retirement age, and physical condition of the older people would limit their opportunities to get involve in

economic activities. In addition to poor financial security, older people are often affected by poverty, especially who run a household, and among older women. Women live longer than men (DOSM, 2019), and they are often associated with feminism poverty even during their productive age especially among rural women and low educated women (Zainaludin, 2012).

Poverty issues among older people is one of the aspects that the government is concerned about when formulating poverty reduction strategies. Poverty among the older person should be paid due attention because it can have social implications such as homelessness, crimes and various diseases due to depression, besides poor life wellbeing of older Malaysians. There is no doubt that Malaysia is currently undergoing a rapid development and globalisation process due to socio-economic factors that may affect the socio-economic status of older people. Nevertheless, there are less strategies and inclusive policy of older people in workforce with the most pressing issue facing the older person is financial security (Masud & Zainaludin, 2018; Yuliandi et al., 2018; Ahmad et al., 2016). Thus, they have less options to choose from other than to get involve in workforce or generate income through seniopreneurship activities. Again, less policies, business grant and program focus to older people to help them to generate income for their living.

In Malaysia, the changes in demographic profile show that 11.2 percent (year 2021) of the population is aged (DOSM, 2019). Life expectancy is also increased from 72.0 to 73.2 years old for men and from 77.0 to 78.3 years old for women (DOSM, 2019). With these changes, increasing life expectancy may affects the quality of life (Bourguignon & Chakravarty, 2019; Masud et al., 2015; Reardon 2011). Issues of sufficient financial security, inflation, the cost of living as older people, aged care services cost and many more may worry many people whether they can live in good wellbeing during their older ages. Despite the gains of a better life wellbeing, the problem of poverty in old age remains a worrisome issue. This is because poverty and income inequality in old age cause a person to experience failure due to considerations early in life (Phetsitong & Vapattanawong, 2022; Knickman & Snell, 2002). This can result in them being forced to live without adequate basic needs for a long period of time. This condition affects the overall health and quality of life of the older people. As a result, older people who do not have a fixed income live under pressure due to poverty and lack of financial resources. These life pressure seems too hard for poor older women who have longer life expectancy.

Therefore, this study aims to answer the following research question

RQ1: what are the backgrounds of the respondents by sex disaggregation?

RQ2: what are the socioeconomic backgrounds significantly predict older, poor, and non-poor male respondents?

RQ3: what are the socioeconomic backgrounds significantly predict older, poor, and non-poor female respondents?

The detailed objectives are as follows

RO1: to profile the socioeconomic backgrounds of the respondents by sex disaggregation.

RO2: to identify the socioeconomic backgrounds that significantly predicts older male respondents in non-poor and poor category of household income

RO3: to identify the socioeconomic backgrounds that significantly predicts older female respondents in non-poor and poor category of household income

**Literature Review***Older Person and Poverty*

The Department of Statistics Malaysia (2020) stated that there are 3.5 million (11.2% in 2021) elderly people in Malaysia, of whom 51.19 percent are women. The higher number of elderly women is a result of the higher life expectancy of women compared to men (77.0 to 78.3 years old for women and 72-73.2 years old for men) (DOSM, 2021; DOSM, 2019; Hamid, 2015). Based on the age structure of the population, the number of older people (60 years old and older) is increasing. The proportion of older people aged 60 years old and above has increased from 7.8 per cent in 2010 to 10.74 per cent in 2020 and 11.2 percent in 2021 (DOSM, 2020; DOSM, 2021). According to DOSM (2020), the state with the highest proportion of elderly is Perak with 13.4 percent while the state with the lowest proportion of elderly is Putrajaya with 2.7 percent. This could be due to many younger generations had migrated to urban areas (Ahmad & Ismail, 2014). The increasing number of older people will have an impact on the burden of aged care services to children or sandwich households (Phetsitong & Vapattanawong, 2022; Knickman & Snell, 2002), and to the government.

Generally older people are economically vulnerable. This may be due to poor financial security, and inability to generate income due to health reasons (Masud & Zainalaludin, 2018; Rasool & Salleh, 2012). Poverty is a major problem among older people in Malaysia, despite excellent economic development (Masud & Zainalaludin, 2018; Ahmad et al., 2016; Masud et al., 2015). Masud et al (2015) concluded that older people are highly associated with poverty, since they receive low income during their productive age, they experience financial stress in old age due to the consumption is exceeding their savings (Masud et al., 2015). Low monthly household income may not be enough to sustain the lives of older people as the prices of food and other essentials keep rising (Tacoli, 2020; Koball & Jiang, 2018), especially for older people with incomes below the poverty line of MYR980 (PLI, 2016) (DOSM, 2017). In addition, a low academic background of the household heads can push the household into poverty (Bourguignon & Chakravarty, 2019; Reardon 2011).

The fact that the Malaysian population is now an ageing nation has implications not only for the economic and social well-being of the country in general but also for the silver industry, community, older people and family and all household members. Consequently, more concrete steps need to be taken to ensure the development of silver economy and productive ageing – not only for the financial wellbeing but also all life wellbeing that are essential for human being.

*Feminization of Ageing*

Feminisation of ageing is a gender gap in aged population, with many older females than older males, or a phenomenon where a larger proportion of older women are found compared to older men (Cepellos, 2021; Sousa et al., 2018). This phenomenon shows that there is a gap in the number of older people by gender and that ageing takes longer for women because they live longer (United Nations, 2019; Hamid, 2015; Morris, 2007). It is a trend that the older female population are higher than those of older men (DOSM, 2020; Tuohy & Cooney, 2019; Hamid, 2015) especially in developing countries.

Generally women are poorer than men (Bradshaw et al., 2019), and the poverty scenario always sustain during their old age. Thus, for example in Malaysia many older women enter or remain in the workforce (Lee et al., 2021; Hamdan et al., 2021; Frank, 2016). They have less choice but to work to earn a living. The working conditions that these women face cannot be ignored. Formal employment rates for women decline between the ages of 25 and 55, with only 45.2 per cent of those aged 55-64 in employment in Malaysia, and this figure is particularly low for women (World Bank, 2020). However, there is no consensus in previous studies on the age at which women begin to experience difficulties with the labour market because they are considered old (Fineman, 2014; Moore, 2009).

In addition to the increasing number of older women in the labour force, the need for aged care planning will be an important agenda for the nation. Feminisation in ageing also refer to discrimination, marginalisation, and disadvantages face by older women. According to Fineman (2014), older women are potentially doubly harmed as they often suffer age discrimination at a younger age compared to men. Therefore, the feminisation of ageing also encompasses the inequalities faced by older women to ensure that the factors that make older people vulnerable are mitigated by policies. However, as women live longer than men, they experience more gender and age discrimination in society than older men (Fineman, 2014). Moreover, older people appearing to face more difficulties compared to younger people in workforce (Cicero, 2019). In addition, the feminisation of ageing affects social patterns, with women more likely to suffer from financial security (World Bank, 2020) and serious illness compared to men (Chia & Chan, 2008). For example, older women generally have higher care needs and medical expenses in old age (World Bank, 2020; Jacob, 2016; Chia & Chan, 2008). In addition, Jacob (2016) noted that the feminisation of ageing may result in many women remaining alone or having to care for their partner in old age, leading to challenges as their health declines, simply due to women who are living alone may not know how to access health services for themselves.

As women's life expectancy increases, they are also more likely to experience disadvantages in accessing education, food security, financial security, health care and social security compared to older men (Zainalaludin et al., 2020; Ismail et al., 2015; Chant, 2012). This means that older women are likely to be poor and face vulnerability and social disadvantage (Saidi et al., 2021; Zainalaludin et al., 2020). This is happening in Malaysia, which is currently experiencing a demographic shift among the elderly. Table 01 shows the challenges and opportunities of ageing according to (The World Bank, 2020). Thus, demographic trends urgently need to raise awareness, concern, and action to balance both the challenges and opportunities of ageing by both genders.

Table 01

*Challenges and Opportunities of Ageing*

Dimensions	Challenges	Opportunities
Demography	<ul style="list-style-type: none"> <li>• Disabilities and dementia</li> <li>• Demographic debt</li> </ul>	<ul style="list-style-type: none"> <li>• Healthier longevity and self-fulfillment</li> <li>• Demographic dividend</li> </ul>
Economy	<ul style="list-style-type: none"> <li>• Smaller workforce</li> <li>• Increasing public spending</li> <li>• Lower economic growth</li> </ul>	<ul style="list-style-type: none"> <li>• Human capital accumulation</li> <li>• Silver economy</li> <li>• Job creation and tax contributions</li> </ul>
Society	<ul style="list-style-type: none"> <li>• Old-age poverty</li> <li>• Burden to families and communities</li> </ul>	<ul style="list-style-type: none"> <li>• Resources and social capital</li> <li>• Social contributions and cohesion</li> </ul>

Sources: World Bank (2020)

**Feminisation of Poverty**

Feminisation of poverty is referring to any one of these following conditions: -

- i) more women live in poverty than men (Bradshaw et al., 2019; Pearce, 1988)
- ii) women are poorer than men (Bradshaw et al., 2019; Moghadam, 2005; Pearce 1978)
- iii) poor women are poorer than poor men (Bradshaw et al., 2019; Moghadam, 2005; Pearce, 1978)
- iv) women remain poorer than men in every country (Bradshaw et al., 2019; Moghadam, 2005; Pearce, 1978)
- v) the percentage of female poor or the percentage of poor families headed by women increase (McLanahan & Kelly, 2006; Veeran, 2000; Pearce, 1988; Fuchs, 1986)
- vi) poor women are older than older men due to increasing life expectancy (DOSM, 2021; Hamid, 2015)
- vii) risk of poverty increases for women at all ages compared to men (Klotz et al., 2021; Baltes & Jimon, 2018)

In most developing countries, there is an increasing trend towards poverty in women's households (McLanahan & Kelly, 2006; Veeran, 2000; Fuchs, 1986). Most women and vulnerable groups may fall into poverty due to changes in the global economy, as they lack sustainable forms of livelihood (McLanahan & Kelly, 2006). Women in rural areas are more affected by economic changes compared to men as women usually do not have equal opportunities in economic sectors (Bradshaw et al., 2019; Chulu, 2015; Veeran, 2000; Minkler & Stone, 1985), and rural women are always associated with low academic background (Zainalaludin, 2012). The chain effect of feminisation of poverty is gender inequality in terms of poor health, illiteracy, schooling, social exclusion, powerlessness, and gender discrimination. Therefore, to reduce feminisation of poverty, it is necessary to reduce the gender gap in the economic sector (Kabeer, 2021). Women tend to be neglected in the economic sector in every country, even though they play an important role in the economy (Bradshaw et al., 2019; Moghadam, 2005).

Feminism in ageing plus feminism in poverty may cause poor life wellbeing among older women and gender income gap among older people (Ritchie & Roser, 2019; Sirohi et al., 2017). Older women are twice as likely as older men to live in poverty (Ismail et al., 2015;

Masud et al., 2008; Minkler & Stone, 1985). Many studies have found that older women are more likely to be poor (OECD, 2019; Ahmad et al., 2016; Siegenthaler, 1996), especially female heads of households (Masud et al., 2015). Many studies show older women have more disadvantages compared to older men (Tuohy & Cooney, 2019; Hamid, 2015) and yet they live longer than men, participate in household chores, and work for low wages or no payment (Saidi et al., 2021; Zainaludin et al., 2020; Ismail et al., 2015; Chant, 2012; Masud et al., 2008; Cox, 1998; Pearce, 1978). They deserve good life wellbeing towards last years of their lives, live happily and productive at their old ages. Policy and program should give extra concern to these old and poor women, at least for their services as mother to Malaysians.

### Methodology

A main study was conducted among Malaysian consumers ( $n = 4428$ ). From this main study,  $n = 172$  older respondents (60 years old and above) in Sarawak were selected for this paper. A total of six districts in Sarawak met this criterion (>20,000 old ages population) and were therefore selected for the survey in main study. The 50 target respondents in each district were the heads of households of adult family members aged 40 years old and older in year 2016. The final respondents were identified by the community leaders. Selection was based on an equal distribution of male and female respondents aged 60 years old and older. Data were collected through a face-to-face interview with a standardised questionnaire.

In this paper, 2-part of the data from a study on older Malaysian consumers was used - Part A (age and sex) and Part B (household income). The Malaysian Poverty Line (PLI, 2016) (RM980.00) was used to divide household income into two categories - poor and non-poor. Households with a total income of RM980 and below were classified as poor households, while households with a total income > RM980 were classified as non-poor households. Descriptive statistics were used to present RO1, while binary logistic regression was used to predict the variables to achieve RO2 and RO3.

### Null Hypotheses

Four null hypotheses tested in this study are as follows

HO<sub>1</sub>: no socioeconomic background significantly predicts older male respondents in non-poor category of household income.

HO<sub>2</sub>: no socioeconomic background significantly predicts older male respondents in poor category of household income.

HO<sub>3</sub>: no socioeconomic background significantly predicts older female respondents in non-poor category of household income.

HO<sub>4</sub>: no socioeconomic background significantly predicts older female respondents in poor category of household income.

### Binary Logistic Regression Model

A Binary Logistic Regression Model (Model) was used to test the Ho. Model 1-4 were used to test Ho<sub>1-4</sub> respectively. The Ho<sub>1</sub> and Ho<sub>2</sub> were used to identify the predictor variables among non-poor male and poor male respectively; the Ho<sub>3</sub> and Ho<sub>4</sub> were used to identify the predictor variables among non-poor female and poor female respectively. The Models are as follows

$$i) \quad \text{Model 1 - Ln } Y_{\text{older non-poor male respondents}} = a + b1_{\text{strata}} + b2_{\text{working status}} + b3_{\text{academic background}} + b4_{\text{district}} + b5_{\text{sources of income}} + b6_{\text{marital status}} + b7_{\text{ethnic}}$$

**Notes**

- Model 1 – older non-poor male respondents
- Dependent variable (DV) as follows: -
  - Older male respondents in non-poor category of household income (>RM980) = 1
  - Older male respondents in poor category of household income (≤RM980) = 0
- Predictors – strata, working status, sources of income, academic background, district, sources of income, marital status, ethnic
- Model significant ( $p < 0.05$ )

ii) Model 2 -  $\ln Y_{\text{older poor male respondents}} = a + b_1 \text{strata} + b_2 \text{working status} + b_3 \text{academic background} + b_4 \text{district} + b_5 \text{sources of income} + b_6 \text{marital status} + b_7 \text{ethnic}$

**Notes**

- Model 2 - older poor male respondents
- Dependent variable (DV) as follows: -
  - Older male respondents in poor category of household income (≤RM980) = 1
  - Older male respondents in non-poor category of household income (>RM980) = 0
- Predictors – strata, working status, sources of income, academic background, district, sources of income, marital status, ethnic
- Model significant ( $p < 0.05$ )

iii) Model 3 -  $\ln Y_{\text{older non-poor female respondents}} = a + b_1 \text{strata} + b_2 \text{academic background} + b_3 \text{marital status} + b_4 \text{working status} + b_5 \text{sources of income} + b_6 \text{house ownership}$

**Notes**

- Model 3 - older non-poor female respondents
- Dependent variable (DV) as follows: -
  - Older female respondents in non-poor category of household income (>RM980) = 1
  - Older female respondents in poor category of household income (≤RM980) = 0
- Predictors – strata, academic background, marital status, working status, sources of income and house ownership
- Model significant ( $p < 0.05$ )

iv) Model 4 -  $\ln Y_{\text{older poor female respondents}} = a + b_1 \text{strata} + b_2 \text{academic background} + b_3 \text{marital status} + b_4 \text{working status} + b_5 \text{sources of income} + b_6 \text{house ownership}$

**Notes**

- For older and poor female respondents
- Dependent variable (DV) as follows: -
  - Older female respondents in poor category of household income (>RM980) = 1
  - Older female respondents in non-poor category of household income (≤RM980) = 0

- Predictors – strata, academic background, marital status, working status, sources of income and house ownership
- Model significant ( $p < 0.05$ )

## Findings and Discussion

### *Socio-economic Background of the Respondent by Sex Disaggregation*

All findings on socio-economic variables are presented by sex disaggregation. Table 02 shows higher percentages of older males as compared to older female respondents in three districts - Sibuloh (male=64.3%; female=35.7%), Betong (male=56.5%; female=43.5%), Kuching (male=51.6%; female=48.4%). An equal distribution of older male and female respondents in Serian (male=50%; female=50%), Miri (male=50%; female=50%) and Bintulu (male=50%; female=50%). Looking at the distribution by strata, most of elderly male respondents are from rural areas (58.7%) and most of elderly female respondents are from urban areas (51.4%).

In terms of academic background (Table 02), as compared to older female respondents, the majority of older males have tertiary education (80%), followed by primary education (69.7%), secondary education (69.6%) and other education (27.9%). Among female respondents, most of them had other education (72.1%), than follows by secondary (30.4%), primary (30.03%) and tertiary (20%). Especially in rural areas, females usually associated with low academic background (Zainalaludin, 2012) which can cause poverty among them (Cahaya, 2015; Carlson & Buttram, 2004). Receiving adequate education among children is an important indicator to eradicate poverty in the future (Abdullahi et al., 2013; Mitra et al., 2008).

Table 02 shows older male respondents (67.2%) are married, while 75 percent of older female respondents are single. In many cultures, it is easier for male to marry than for female (Stutzer & Frey, 2006). Furthermore, in a patriarchal community, men can propose to women to get married, while women face gender stereotype when proposing to men with similar intention. Therefore, there are more married older men than married older women in the community (Njera et al., 2017).

Table 02 shows that the older male and female ethnic groups were Malay (male=54.2%; female=45.8%), Chinese (male=44.4%; female=55.6%), Indian (male=100%; female=0%), Bumiputera (male=56.7%; female=43.3%); and other ethnic groups (male=16.7%; female=83.3%). Employment status shows that a large majority (72.4%) of older male respondents are still employed, and 78.8 percent of older female respondents are not working (Table 02). Household ownership of the Sarawak community shows that a large majority (62.4%) of elderly male respondents own a house and while 61.9 percent of elderly female respondents do not own a house. The sources of income of the elderly female respondents show that the majority (52.3%) receive current remittances and a large majority (87.5%) are in paid employment. The average age=69 years old, equal to male and female respondents. A higher average age of older people reflects fast ageing process in an ageing country.

The mean household income of the elderly male respondents = RM2609.26 (SD =RM2621.49) was significantly ( $p < 0.05$ ) higher than that of the elderly female respondents (mean=RM2090.91, SD =RM2012.88) (Table 02). This could be due to older male respondents are still working while the older females have received an ongoing referral. Many studies also



support these findings that older women are poorer than older men (McWilliam et al, 2021; Zain et al, 2018; DOSM, 2017; Zainalaludin, 2010). There are many reasons why women fall into poverty. For example, when women are divorced or widowed, they lose direct access to household income (Zainalaludin et al., 2021; Zain et al., 2018; Rajaratnam et al., 2016).

Table 02

*Socio-economic background of the Respondents by Sex Disaggregation*

Socio-economic	Variables	Female		Male	
		n	%	n	%
District	Serian	15	50	15	50
	Miri	15	50	15	50
	Sibu	10	35.7	18	64.3
	Kuching	15	48.4	16	51.6
	Bintulu	15	50	15	50
	Betong	10	43.5	13	56.5
Academic Background	Primary	23	30.3	53	69.7
	Secondary	7	30.4	16	69.6
	Tertiary	1	20	4	80
	Others	49	72.1	19	27.9
Strata	Rural	38	41.3	54	58.7
	Urban	36	51.4	34	48.6
Marital Status	Single	42	75	14	25
	Married	38	32.8	78	67.2
Ethnic	Malay	44	45.8	52	54.2
	Chinese	5	55.6	4	44.4
	Indian			1	100
	Bumiputera	26	43.3	34	56.7
	Others	5	83.3	1	16.7
Working Status	Not working	52	78.8	14	21.2
	Working	8	27.6	21	72.4
	Retired	19	25	57	75
House ownership	No	39	61.9	24	38.1
	Yes	41	37.6	68	62.4
Sources of income	Paid employment	3	12.5	21	87.5
	Self-employment	8	50	8	50
	Property & Investment			1	100
	Current transfer	68	52.3	62	47.7
Age	Mean	68.86		68.91	
	SD	6.53		6.49	
Household income	Mean	2090.91		2609.26	
	SD	2012.88		2621.49	

**Socioeconomic Background Significantly Predicts Older Male Respondent by Poverty Level**

This subtopic discusses on RO2 (to identify the socioeconomic backgrounds that significantly predicts older male respondents in non-poor and poor category of household income). Two

null hypotheses were tested -  $HO_1$  (no socioeconomic background significantly predicts older male respondents in non-poor category of household income), and  $HO_2$  (no socioeconomic background significantly predicts older male respondents in poor category of household income). Model 1 was used to test  $HO_1$  and Model 2 was used to test  $HO_2$ . The dependent variable (DV) in Model 1 is non-poor older male respondents=1, and poor older male respondents=0. The DV in Model 2 is poor older male respondents=1, and non-poor older male respondents=0, which both are dichotomous variables.

Model 1 fits and significant ( $p<0.05$ ) in predicting non-poor older male respondents. Thus,  $HO_1$  was rejected. The IVs in Model 1 explain 45.6 percent of the variance in the DV (Table 03). Miri, Sibuluan and Betong (Table 03) had significantly ( $p<0.05$ ) predict non-poor older male respondents. Six independent variables (IVs) which are strata, academic background, marital status, working status, sources of income and house ownership in Model 1 have significant relationship respectively with the DV and no relationship with each other. Two significant ( $p<0.05$ ) predictors (IVs) obtained which are district and working status. Older male respondents in Miri, Sibuluan and Betong as compared to Serian respectively predicts 9.439 times, 51.352 times and 26.402 times likelihood to be in non-poor category of household income (Table 03). In other words, Miri, Sibuluan and Betong are associated with non-poor older males. The working status of older male respondents explain less 88.6 percent likelihood for them to be in non-poor category.

Model 2 fits and significant ( $p<0.05$ ) to predict poor older male respondents. Thus,  $HO_2$  was rejected. In 45.6 percent variance in the DV can be explained by the IVs in Model 2 (Table 03). A similar set of IVs in Model 1 is in Model 2, and two significant ( $p<0.05$ ) predictors (IVs) obtained which are working status and district. Working status predicts 8.78 times likelihood that the respondent were in poor category of household income. Respondents from Miri, Sibuluan and Betong have less 89.4 percent, less 98.1 percent, and less 96.2 percent likelihood were in poor category of household income compared to male respondents from Serian. In other words older and poor males are still working for a living and working status predict poverty among older males in Sarawak.

According to Sinring and Govindasamy (2018), Sarawak is currently ranked as the poorest state in Malaysia along with Sabah, with the average population at the highest level of poor and hardcore poor status in Malaysia. Based on statistics, Sarawak recorded 59,964 heads of households in hardcore poor and poor status (ICU, 2017). This is due to the disproportionate development in Sarawak compared to the states in West Malaysia (Sinring & Govindasamy, 2018) because Sarawak is the biggest state in Malaysia. Thus, males from poor household must work to earn a for-a-living. This supports findings on older people are associated with poverty (UNDESA, 2015). Though they are working, their older ages may cause low income (Masud & Zainaludin, 2018; Masud et al., 2015; Walker, 1980). Older people tend not to have sufficient income to ensure their income security for the rest of their lives (MacIntyre, 2018; Gorman, 2017; UNDESA, 2015). This makes them particularly vulnerable to economic insecurity as well as to poverty without choice.

Table 03

*Wald Chi Square Statistics Predict Predicts Non-poor Older Male Respondent (n=92) – Model 1*

	B	S.E.	Wald	df	Sig.	Exp(B)
Strata (Rural=1)	1.178	1.438	0.671	1	0.413	3.247
Not Working			5.618	2	0.06	
<b>Working</b>	<b>-2.173</b>	<b>0.917</b>	<b>5.61</b>	<b>1</b>	<b>0.018</b>	<b>0.114</b>
Retired	-0.402	0.925	0.189	1	0.664	0.669
Academic Background (High=1)	0.276	1.014	0.074	1	0.786	1.317
Serian			6.899	5	0.228	
<b>Miri</b>	<b>2.245</b>	<b>1.086</b>	<b>4.276</b>	<b>1</b>	<b>0.039</b>	<b>9.439</b>
<b>Sibu</b>	<b>3.939</b>	<b>1.818</b>	<b>4.695</b>	<b>1</b>	<b>0.03</b>	<b>51.352</b>
Kuching	1.62	1.115	2.112	1	0.146	5.055
Bintulu	23.435	9287.39	0	1	0.998	15057028115
<b>Betong</b>	<b>3.273</b>	<b>1.521</b>	<b>4.63</b>	<b>1</b>	<b>0.031</b>	<b>26.402</b>
Paid Employment			1.44	3	0.696	
Self-employment	-0.736	1.009	0.531	1	0.466	0.479
Property and Investment	1.038	1.355	0.587	1	0.444	2.824
Current Transfer	19.381	40193	0	1	1	261289568.9
Not Married			0.658	3	0.883	
Married	-1.904	2.511	0.575	1	0.448	0.149
Divorcee/separated	-0.539	0.915	0.347	1	0.556	0.583
Widow	20.146	40193	0	1	1	561335330.6
Malay			0.698	3	0.874	
Chinese	0.717	0.858	0.698	1	0.403	2.048
Indian	20.999	15622.5	0	1	0.999	1317434644
Others	21.087	40193	0	1	1	1438437945
Constant	-1.905	1.973	0.933	1	0.334	0.149

Note: Significant ( $p < 0.05$ )

Older male respondents in non-poor category=1; Older male respondents in poor category=0

Table 04

*Wald Chi Square Statistics Predict Predicts Older and Poor Male (n=92) – Model 2*

	<b>B</b>	<b>S.E.</b>	<b>Wald</b>	<b>df</b>	<b>Sig.</b>	<b>Exp(B)</b>
Strata (Rural=1)	-1.178	1.438	0.671	1	0.413	0.308
Not Working			5.618	2	0.06	
<b>Working</b>	<b>2.173</b>	<b>0.917</b>	<b>5.61</b>	<b>1</b>	<b>0.018</b>	<b>8.784</b>
Retired	0.402	0.925	0.189	1	0.664	1.495
Academic Background (High=1)	-0.276	1.014	0.074	1	0.786	0.759
Serian			6.899	5	0.228	
<b>Miri</b>	<b>-2.245</b>	<b>1.086</b>	<b>4.276</b>	<b>1</b>	<b>0.039</b>	<b>0.106</b>
<b>Sibu</b>	<b>-3.939</b>	<b>1.818</b>	<b>4.695</b>	<b>1</b>	<b>0.03</b>	<b>0.019</b>
Kuching	-1.62	1.115	2.112	1	0.146	0.198
Bintulu	-23.435	9287.39	0	1	0.998	0
<b>Betong</b>	<b>-3.273</b>	<b>1.521</b>	<b>4.63</b>	<b>1</b>	<b>0.031</b>	<b>0.038</b>
Paid Employment			1.44	3	0.696	
Self-employment	0.736	1.009	0.531	1	0.466	2.087
Property and Investment	-1.038	1.355	0.587	1	0.444	0.354
Current Transfer	-19.381	40193	0	1	1	0
Not Married			0.658	3	0.883	
Married	1.904	2.511	0.575	1	0.448	6.711
Divorcee/separated	0.539	0.915	0.347	1	0.556	1.714
Widow	-20.146	40193	0	1	1	0
Malay			0.698	3	0.874	
Chinese	-0.717	0.858	0.698	1	0.403	0.488
Indian	-20.999	15622.5	0	1	0.999	0
Others	-21.087	40193	0	1	1	0
Constant	1.905	1.973	0.933	1	0.334	6.72

Note: Significant ( $p < 0.05$ )

Older male respondents in poor =1

Older male respondents in non-poor =0

Moreover, achieving SGD-1 (poverty eradication) is crucial among older people. The specificities of old-age poverty must be recognised, and the policies and program should focus to clear target group, as the risk of poverty rates will increase in old age if policies for older people are not changed (United Nations, 2015; UNDESA, 2015). Older men who are working in the informal sector in Sarawak tend to have inadequate or no social protection, so they may face income insecurity in their old age (Masud & Zainaludin, 2018; Kee, 2009). Moreover, men usually migrate to find work because there are less economic activities with sufficient income in rural Sarawak (Kelabu & Fadzil, 2019). In other words: When people reach retirement age, their income decreases because they cannot work or simply cannot actively participate in the economy (Kee, 2009), in addition to their vulnerable physical and health condition.

### Socioeconomic Background Significantly Predicts Older Female Respondent by Poverty Level

This subtopic discusses the RO3 (to identify the socioeconomic backgrounds that significantly predicts older female respondents in non-poor and poor category of household income). Two null hypotheses were tested HO<sub>3</sub> (no socioeconomic background significantly predicts older female respondents in non-poor category of household income), and HO<sub>4</sub> (no socioeconomic background significantly predicts older female respondents in poor category of household income). Model 3 was used to test HO<sub>3</sub> and Model 4 was used to test HO<sub>4</sub>. The DV in Model 3 is non-poor older female respondents=1, and poor older female respondents=0. The DV in Model 4 is poor older female respondents=1, and non-poor older female respondents=0, which are dichotomous variables. Model 3 fits and significant ( $p < 0.05$ ) in predicting non-poor older female respondents. Thus, HO<sub>3</sub> was rejected. The IVs in Model 3 explain 45.3 percent variance in DV (Table 5). Six independent variables (IVs) which are strata, academic background, marital status, working status, sources of income and house ownership in Model 3 have significant relationship respectively with the DV and has no relationship with each other. Two significant ( $p < 0.05$ ) predictors (IVs) obtained which are strata and current transfer (Table 05). Strata (rural=1) predicts less 79.1 percent likelihood that the older female respondents were in non-poor category of household income. Older women receiving current transfer explain less 99.1 percent likelihood were in non-poor category of household income in Sarawak (Table 03).

Table 05

*Wald Chi Square Statistics Predict Predicts Older and Non-poor Female (n=80) – BLR Model 3*

	B	S.E.	Wald	df	Sig.	Exp(B)
<b>Strata (Rural =1)</b>	<b>-1.566</b>	<b>0.771</b>	<b>4.126</b>	<b>1</b>	<b>0.042</b>	<b>0.209</b>
Academic Background (High=1)	2.016	1.918	1.105	1	0.293	7.507
Not Married			1	3	0.801	
Married	-23.031	26473.5	0	1	0.999	0
Divorce/Separated	0.01	0.699	0	1	0.989	1.01
Widow	-2.549	2.578	0.977	1	0.323	0.078
Not Working			2.659	2	0.265	
Working	0.419	0.785	0.285	1	0.593	1.521
Retired	2.854	1.751	2.655	1	0.103	17.355
Paid employment			8.015	2	0.018	
Self-employment	-2.482	1.735	2.047	1	0.153	0.084
<b>Current transfer</b>	<b>-4.731</b>	<b>1.675</b>	<b>7.976</b>	<b>1</b>	<b>0.005</b>	<b>0.009</b>
House Ownership	0.536	0.714	0.564	1	0.453	1.71
Constant	1.602	0.999	2.573	1	0.109	4.962

Note: Significant ( $p < 0.05$ )

Older female respondents in non-poor =1

Older female respondents in poor =0

Model 4 fits and significant ( $p < 0.05$ ) to predict poor older female respondents. Thus,  $H_{04}$  was rejected. In 45.3 percent variance in the DV can be explained by the IVs in BLR Model 4 (Table 04). Six independent variables (IVs) which are strata, academic background, marital status, working status, sources of income and house ownership in Model 3 have significant relationship respectively with the DV and has no relationship with each other. Two significant ( $p < 0.05$ ) predictors (IVs) obtained which are strata and current transfer (Table 06). Rural strata predict 4.79 times likelihood, and current transfer predict 113.45 likelihood that the older female respondents were from poor category of household income in Sarawak. Findings from  $H_{03}$  and  $H_{04}$  can conclude rural women staying in rural strata and receiving current transfer are most likely from poor category of household income.

Table 06

*Wald Chi Square Statistics Predict Predicts Older and Poor Female (n=80) – BLR Model 4*

	B	S.E.	Wald	df	Sig.	Exp(B)
<b>Strata (Rural =1)</b>	<b>1.566</b>	<b>0.771</b>	<b>4.126</b>	<b>1</b>	<b>0.042</b>	<b>4.789</b>
Academic Background (High=1)	-2.016	1.918	1.105	1	0.293	0.133
Not Married			1	3	0.801	
Married	23.031	26473.5	0	1	0.999	10046823683
Divorce/Separated	-0.01	0.699	0	1	0.989	0.99
Widow	2.549	2.578	0.977	1	0.323	12.791
Not Working			2.659	2	0.265	
Working	-0.419	0.785	0.285	1	0.593	0.658
Retired	-2.854	1.751	2.655	1	0.103	0.058
Paid employment			8.015	2	0.018	
Self-employment	2.482	1.735	2.047	1	0.153	11.968
<b>Current transfer</b>	<b>4.731</b>	<b>1.675</b>	<b>7.976</b>	<b>1</b>	<b>0.005</b>	<b>113.449</b>
House Ownership	-0.536	0.714	0.564	1	0.453	0.585
Constant	-1.602	0.999	2.573	1	0.109	0.202

Note: Significant ( $p < 0.05$ )

Older female respondents in poor =1

Older female respondents in non-poor =0

Sarawak is the largest state in Malaysia and the total population of Sarawak is estimated at 2.8 million (DOSM, 2020). The World Bank (2018) reports that Sarawak has the highest rural population at around 48 per cent, while the Malaysian rural population is 24 per cent. Because of this, the proportion of household income in rural areas in Sarawak is below RM2,000 (Household Income Survey, 2014). Older women living in rural areas in Sarawak are therefore affected by poverty as they may have difficulty accessing necessary information and finding employment due to geographical isolation. According to the Sarawak Multimedia Authority (2017), the Sarawak government is committed in improving and providing rural infrastructure to enhance connectivity, facilities and improve the quality of life in rural areas, especially for older people.

The results on current transfers among elderly and poor women have significant implications for poverty; they rely only on current transfers (Masud & Zainalaludin, 2018; Masud et al., 2008). This may be due to poor women in rural areas are less involved in the labour force compared to non-poor women (Masud et al., 2008). Therefore, it is distressing for older women to depend solely on income transfer especially from their children, as they rely on others to meet their daily needs (Muis et al., 2020; Fang & Feng 2018; Masud et al. 2008) and hard to be independently.

### **Conclusion**

This paper comes to two important conclusions. First, poor older females are still working for a living and relying on ongoing current transfers from children. Thus, working at old age and relying on current transfer for a living are indicators of poverty of older people in Sarawak. Second, Miri, Sibuluan, and Betong are associated with non-poor older males in Sarawak. Third, rural strata are associated with poor older females in Sarawak. This study suggests that gender, ageing, and poverty are linked. Older people are not only associated with the feminisation of poverty, but also with feminisation of ageing. Therefore, supporting an older people to generate income may help to prevent them from slipping into poverty. This paper proposes gender-specific programmes and policies in Sarawak that focus on eradicating poverty among older people. It also proposes to improve the needs of older males and females to maintain social security at later ages. This paper also proposes the introduction of a silver economy in Sarawak to benefit all older people to generate income as well as to competitive cost of aged care services.

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