



Families on the Edge, Penang

Mixed methods research on the impact of COVID-19 and the rising cost of living on children and women in low-income families in Penang.

Final Report



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EXECUTIVE SUMMARY

The Families on the Edge project was commissioned by UNICEF Malaysia and the Penang State Government and aims to evaluate how social welfare services have influenced the lives of those they serve, particularly women and children in low-income households in Penang. This assessment was conducted to provide informed policy recommendations. The project tracked the socio-economic status, welfare and overall well-being of beneficiary households. Additionally, it compared their current conditions to pre-pandemic standards, shedding light on the changes in living standards throughout the pandemic and post-lockdown periods. A primary focus of the assessment involved examining how relevant, adequate, accessible and impactful the assistance provided by both the Penang State Government and the federal government was. The research team conducted surveys among 433 low-income households across all five districts in Penang through two survey rounds. The first survey round took place from April to August 2022 while the second round was conducted from February to May 2023. The project also gathered insights through interviews and focus group discussions with recipients and providers of aid from March to July 2022 and from July to November 2023, in tandem with the respective survey rounds. Based on our findings, four main issues were identified, namely, inadequate resources, health concerns, childcare burden and education gaps.

Inadequate resources

There was a slight economic improvement for lower-income groups but the situation remained delicate, prompting families to cautiously rebuild savings. Limited aid and unstable informal sector jobs were causing hardships for many households, leading to struggles in meeting basic needs. Additionally,

lack of education, skills and experience restricted opportunities for the poor to find decent jobs, and inadequate social protection makes them vulnerable to future crises. Therefore, a comprehensive review and gap analysis of welfare policies and aid programmes at federal and state-levels are crucial to streamline support delivery to low-income communities, effectively and efficiently. Furthermore, it is imperative to implement training and development initiatives aimed at increasing employability, particularly for women and young people. It is also important to improve social security measures for individuals who are in the gig economy and the self-employed, assist low-income communities in managing and planning their finances, and enact policies to ensure equal opportunities and accessibility for persons with disabilities.

Employment

While there had been a modest increase in the hours worked by household heads since before the pandemic, unemployment among adults in these households was primarily because of retirement and family obligations, followed closely by health-related issues. In 2023, there was a decrease in the proportion of employed heads of households compared to the previous year, with persons with chronic illnesses contributing significantly to this development. Persons with disabilities were also one of the biggest groups who were unemployed. About a quarter of household heads held occupations in sales and services. Lack of education, skills and experience are prevalent barriers to securing satisfactory employment. Alarming, over a third of household heads lacked coverage under the social protection schemes, particularly female household heads with substantially less access to such safeguards.

Economic Welfare and Living Standards

Household finances have followed diverse paths despite an overall yearly increase of 2.9 per cent in real income since 2019. The most at-risk groups, especially households with the lowest incomes, experienced a noticeable drop in their actual spending. Concerns have arisen regarding significant increases in the prices of food and groceries compared to other goods. Surprisingly, even though more than 60 per cent of households said they had not saved any money from their monthly income, our calculations, based on their reported income and spending, suggested otherwise. There was a gap between what households claimed and what their expenses revealed.

Households with higher incomes and expenditures seemed to enjoy better living conditions, while households led by women or persons with disabilities reported a decline in their standards of living. These findings highlight the diversity and disparity of financial circumstances within households, emphasising the urgency for specific actions to assist the most vulnerable groups facing these challenges.

Aid

The average aid received by households had significantly increased compared to levels before the pandemic. Household heads were well-informed about the options for obtaining aid and accessing assistance. Households found the State Welfare Department (JKM) and elected state representatives helpful, although a minority found them unhelpful. Half of households perceived the aid they received as adequate and somewhat beneficial. Notably, federal government cash transfers emerged as the most favoured form of assistance. The aid received by households was mostly used for essential needs, particularly food and groceries, followed closely by rent-related expenses. These findings highlight both the positive impact of increased aid and

the preferences and challenges of households in accessing this support, emphasising the importance of strategies for effective aid distribution.

Health concerns

Physical and mental health challenges can lead to unemployment and financial difficulties. Financial stability was the main factor influencing the shifting concerns among household heads. A large segment of households reported increased anxiety levels, ranging from immediate worries to long-term uncertainties. Policies which prioritise proactive healthcare measures and ensure widespread access to mental health services contribute to general wellness and economic productivity. Additionally, it is crucial to align initiatives aimed at enhancing nutrition and ensuring food stability among low-income households.

Physical and Mental Health

The overall health of household heads and their children remained stable, with most reporting ideal weight levels. Some heads of households noticed a decline in their own health but an improvement in their children's well-being. Worries increased in 2022 compared to pre-pandemic times but slightly decreased by 1.6 per cent in 2023. Female household heads and those with chronic illnesses tended to experience higher levels of concern. Worries about future savings were more common in households with children, especially those led by women. Financial concerns, caregiving responsibilities and health anxieties were the key causes of negative changes in mental health. A small percentage of respondents reported positive changes, often due to having adequate finances. These findings underline prevalent physical and mental health challenges within households, necessitating focused interventions to address concerns, particularly among vulnerable groups.

Food and Nutrition

Following the pandemic, eggs replaced meat as the primary source of protein in diets, while the consumption of carbohydrates and vegetables consistently remained the top choices. Generally, households expressed contentment with both the quality and quantity of food consumed. The primary focus of food preparation was to address hunger in a sustainable manner and achieve satiety. Additionally, households predominantly favoured homemade meals over other options. These observations underscore the dietary preferences and priorities of households, emphasising a preference for home-cooked meals and a focus on sustenance and satiety in food choices and preparation. Results indicated that a majority of households may have reduced food consumption in the past year, possibly as a response to financial stressors.

Childcare burden

Access to affordable and convenient childcare posed a major challenge for individuals, especially from female-headed households, who wanted to return to work. Policies to encourage affordable and accessible childcare solutions play a pivotal role in enabling parents, particularly mothers from low-income families, to engage in economic activities and boost household earnings.

Care Work

Many households needed caregiving support, whether for children or elderly family members. Irrespective of the gender of the head of households, females took on the primary caregiving role in the majority of households (78.8 per cent). The number of household members involved in caregiving varied, and about 30 per cent of caregivers expressed feeling burdened by their responsibilities. These findings highlight the prevalence of caregiving responsibilities within households and the potential challenges faced by a large segment of caregivers, suggesting the need for support mechanisms to alleviate the burden

associated with caregiving roles. Moving forward, it is important to address the unequal burden of caregiving between male and female household members to promote fairness and reduce the overwhelming responsibilities often shouldered by females.

Education gaps

The disruption to education caused by the pandemic disproportionately affected children from underprivileged backgrounds due to limited access to technology and challenges in maintaining focus. Enhanced academic achievements and better emotional well-being observed in children attending in-person classes underscore the need for policies that address continuous efforts to keep schools operational while reducing disruptions from potential future outbreaks.

Schooling and Education

Student attendance remained consistently high, almost 100 per cent in both assessment periods. The students' academic performance was mostly stable, except for notable declines in 2022 followed by remarkable improvements in 2023. Academic achievements significantly surged in 2023, with over half of the children experiencing at least moderate progress. Challenges persisted during online schooling, primarily stemming from the lack of access to technology followed by difficulties in maintaining focus. While most households reported minimal issues with in-person schooling, a lack of pocket money and difficulty in grasping the syllabus emerged as commonly cited problems. Overall, students demonstrated better dispositions when attending school. Additionally, the majority of household heads prioritised their children's education over employment. These findings underscore the importance of addressing unequal access to technology and inadequate support systems to improve the students' academic performance and well-being, emphasising the need to prioritise education within households.



1. INTRODUCTION

Vulnerable families, already facing socio-economic challenges, were profoundly affected by two significant shocks in recent times: the COVID-19 pandemic and the subsequent surge in the cost of living. The shocks exacerbated existing socio-economic disparities and posed substantial challenges to the livelihoods and well-being of these families.

Impact of the COVID-19 Pandemic on Vulnerable Families

The COVID-19 pandemic wreaked havoc globally and Penang was no exception. Vulnerable families, who often rely on daily wages and informal employment, found themselves disproportionately affected. Lockdowns and movement restrictions resulted in widespread job losses, decreased income opportunities and limited access to essential services. In 2020, research by the Department of Statistics Malaysia (DOSM) revealed that 46.6 per cent of the self-employed and informal workers were unable to work at all when the pandemic began. Furthermore, a staggering 94.8 per cent of the self-employed experienced a decrease in their monthly income, with 35.5 per cent reporting an income reduction exceeding 90 per cent.

It is not unusual for low-income families to rely on a single earner. When the sole providers lose their job or engage in informal or daily wage work, the families encounter tough economic challenges. The B40¹ households had scarce savings, with their income barely covering housing, food and essentials. The aforementioned DOSM report highlighted that 71.4 per cent of the self-employed had less than a month's savings, while 43 per cent admitted that their savings would not sustain them for even two weeks. For many, the inability to work during the lockdowns led to financial distress, affecting their ability to afford basic necessities, including food,

healthcare, and education for their children.

Furthermore, the transition to online learning exacerbated the digital divide, as families without access to essential technology and the internet faced obstacles in their children's education. The mental health toll resulting from uncertainties and financial strain further compounded the already precarious situation of these vulnerable families.

The successful management of the pandemic, coupled with the progressive vaccination drives, contributed positively to economic recovery. Challenges, however, persisted, and there is a need to implement sustained support measures, address structural economic issues, and manage inflationary pressures so as to stabilise food prices and avoid a protracted recession.

Government interventions, including fiscal stimulus packages and policies aimed at mitigating the pandemic's economic impact, have been implemented. Efforts to support businesses, preserve jobs, and provide financial assistance to affected individuals are pivotal in cushioning the economic blow.

Although lockdowns due to the pandemic were gradually lifted and businesses reopened, other external factors such as geopolitical tensions, climate change and global food security concerns still affected the prices of goods and services. These factors disrupted supply chains, hampered global trade and constrained economic activities in Malaysia, affecting various sectors. Consequently, the country experienced fluctuations in food prices due to disruptions in production, distribution and logistics. Essential commodities such as rice, vegetables and meats saw escalating prices, largely influenced by disrupted supply chains, rising transportation costs and uneven global demand-supply dynamics.

¹ B40 or the Bottom 40 per cent of households refer to households with monthly income below RM4,850 (based on Household Income Survey Report 2020, Department of Statistics Malaysia).

Escalating Cost of Living

The aftermath of the COVID-19 pandemic brought another formidable challenge: a surge in the cost of living. The increased expenses further strained the already stretched budgets, forcing families to make difficult trade-offs, often compromising on essentials like nutritious food and healthcare. In 2022, Penang's inflation rate rose to 3.2 per cent, marking a notable uptick from the preceding year's rate of 2.1 per cent. The surge in inflation stemmed chiefly from heightened demand for food and services as COVID-19 restrictions eased, allowing a return to pre-pandemic routines. Nevertheless, worldwide hurdles, including labour shortages, supply chain interruptions and geopolitical tensions, created imbalances in the supply and demand dynamics, consequently driving prices upwards.

Malaysia's economic landscape has been significantly affected by various internal and external factors, leading to implications for food prices and likely recession. The nation's economy encountered challenges, particularly in the wake of the global economic slowdown triggered by the COVID-19 pandemic. Malaysia's economy, which heavily relies on exports and tourism, faced headwinds due to international travel reduction and trade restrictions to curb the spread of the virus. This led to decreased revenue from key sectors and contributed to economic contraction, raising concerns about the country's potential entry into a recession.

Between 2016 and 2019, Malaysia experienced higher household income growth rates compared to 2022, where the median income rose by 2.6 per

cent and the mean income increased by 2.4 per cent. Penang's purchasing power was adversely affected by the pandemic. For many vulnerable families, the combination of reduced income due to pandemic-induced job losses and the inflated cost of living created a cycle of financial instability. Families faced tough choices, often sacrificing basic needs to manage expenses, leading to increased debt, food insecurity and compromised health.

Penang's incidence of absolute poverty in 2022 was 2.0 per cent, 4.2 points lower than the national average, and the state experienced negligible change in the incidence of absolute poverty despite the poverty rate rising by 6 percentage points for Malaysia.² At the district levels in Penang, Northeast had the lowest absolute poverty rate (0.7%) while Seberang Perai Utara had the highest incidence of absolute poverty (3.7%). Seberang Perai Utara experienced a decline in the percentage of households living below the absolute poverty line (2019: 4.6%), while all other districts experienced an increase. Seberang Perai Selatan reported the most significant increase, rising by 1 point to 3.1 per cent.

Furthermore, the economic downturn and country's political instability during and after the pandemic exacerbated the situation, causing financial hardship in households, particularly those with lower income levels. Rising food prices, coupled with reduced income opportunities and job losses, heightened financial stress and food insecurity among vulnerable populations. For the low-income communities, this meant an increase in the cost of living, with the immediate impact felt through their purchase of daily necessities and groceries.



² Poverty in Malaysia 2022 (Department of Statistics, Malaysia, 2023)

Overview of the Study

This project aims to delve into the distinct yet interrelated impacts of these shocks on vulnerable families, highlighting their unique challenges and the compounding effects of the consecutive crises.

The first phase of this project took place from March to August 2022. At that time, the project investigated the impact of the COVID-19 pandemic on the low-income communities in Penang, particularly on women and children. It also aims to look at the effectiveness of aid mitigation policies and the perceived efficiency of the cooperation between the federal government and the state government in disbursing aid, from the perspective of the low-income communities.

As the world recovered from the pandemic and the project progressed to its second phase from February to November 2023, the focus shifted to the impact of the rising cost of living on the low-income communities in Penang, particularly on women and children. This shift in focus was decided to suit the current economic and social climate of Penang and Malaysia.

Research questions that we aimed to answer in the project include the following:

1. What were the overall socio-economic impacts of COVID-19 and the rising cost of living on Penang's low-income households, especially for women and children?
2. To what extent were the key social policy and service delivery responses by the Penang State Government and federal government relevant, adequate, accessible and effective in responding to the impact of COVID-19 and the rising cost of living on low-income families in Penang?
3. How did the affected households, particularly women, perceive the effectiveness, adequacy and the accessibility of service delivery responses (regular services as well as COVID-19 relief services) that they received?
4. What were the changes in the livelihood and well-being that were felt by low-income households in Penang since the COVID-19 outbreak?

This report details the factors and consequences felt by low-income communities in Penang from the following angles:



The findings were gathered through quantitative and qualitative research methods, as detailed in the following section. The report ends with policy recommendations to alleviate and improve the lives of the respondents.

2. METHODOLOGY

This study used a mixed-methods approach to address the research questions. A combination of quantitative and qualitative research was chosen to enable the research team to broaden their investigation and to ensure breadth and depth in the study. The quantitative approach aimed to quantify relationships, patterns and trends, which provided a structured and objective framework for understanding the relationships between variables. On the other hand, the qualitative method used interviews, focus group discussions, observations and content analysis to explore the subjective experiences and perspectives of the target

group in relation to the research questions. Analysis and findings from the two methods were then used to compare evidence and findings in order to gain deeper insights and understanding of the research questions. Combining the two methods of research produced a holistic picture that allowed for the corroboration, convergence and confirmation of findings.

The key functions of each method are listed below (Table 2.1), and their methodologies are described in their respective sections.

Table 2.1: Key functions of quantitative and qualitative research methods

Key function	
Quantitative (descriptive/correlational research)	<ol style="list-style-type: none"> 1. Describe and track the current socio-economic situation of low-income households, in particular women and children (from the angles of employment, income, expenditure, financial well-being, health, nutrition, education, psychosocial well-being and care work). 2. Describe and track the social welfare programmes the households are enrolled in. 3. Measure the changes over time between the two rounds of surveys, where possible, in accordance with the above categories.
Qualitative	<ol style="list-style-type: none"> 1. Gain views from the community, decision-makers, community-based organizations and service providers to provide insights on stakeholder relationships, service access, relevance and adequacy at the community level. 2. Understand the impact of COVID-19 and the perception of service delivery on affected low-income communities, in particular women and children. 3. Understand the impact of increasing costs of living on affected low-income communities, in particular women and children.

■ 2.1 Quantitative Data Collection

Sampling methodology

The quantitative component of this study consisted of two rounds of computer-assisted telephone interviews (CATI), tracking 500 low-income households over a period of one year and one month.

A total of 500 existing and/or eligible aid recipients were drawn from the official list of aid recipients provided by the State Welfare Department (Jabatan Kebajikan Masyarakat (JKM) Pulau Pinang), using proportionate stratified sampling. Respondents were restricted to households earning less than RM4,850 in monthly household income, per the national B40 (bottom 40 per cent by gross household income) threshold as reported in the 2020 Household Income Survey Report. All respondents eligible for aid under household income parameters were included to identify the eligible households that did not receive aid and to understand the effectiveness and efficiency of social welfare schemes.

Sampling was stratified by district according to the distribution of B40 households in each of the five administrative districts in Penang, as reported in the 2019 Household Income Survey Report. Age was also a factor, ensuring that 10 percent of households above 60 years were represented in each district.

The original sample size calculation was as follows: Assuming 50 per cent non-response rates in the first survey round and 15 per cent attrition rate in the second round, a total of 1,200 respondents were selected. It was estimated that this would provide a sample size of 500 respondents at the end of the second round.

Using the following parameters, a sample size of 500 respondents would be enough for statistical analysis:

- Margin of error = 4.4 per cent
- Confidence level = 95 per cent
- Calculated sample size = $510 \approx 500$

Quantitative data collection procedures

Essential demographic and geographical variables (district, housing area) were obtained through information provided by the Penang State Government and state assembly representatives. The respondents were selected across all five districts in Penang, where efforts were made to adhere to the population distribution of each district.

Demographic information not available from pre-existing lists, socio-economic variables, and information about respondents' enrolment in social welfare programmes were collected during the surveys.

Variables

Financial aid

Financial aid received from social welfare programmes was measured by summing up financial aid from all government sources, including the Penang State Government and the federal government. Financial aid information was tracked across the two rounds, measured at the household level to understand how financial aid benefits households.

Socio-economic variables

The variables of interest are employment, income, expenditure, financial well-being, health, food and nutrition, education, psychosocial well-being and care work, tracked across both rounds. This is to:

- a. Understand the impact of COVID-19 on low-income households, particularly women and children;
- b. Understand the impact of the high costs of living on low-income households, particularly women and children; and
- c. Gauge the mitigating effects of financial aid received.

An inventory of items to measure these variables was developed and piloted upon gathering information from initial interviews with government officials and community leaders.

Data gathering methods

Owing to ongoing pandemic restrictions in 2021/2022 when the project commenced, data were collected using computer-assisted telephone interviews (CATI). Prior to the administration of the survey, respondents were given a description of the research and its importance and that it was supported by the Penang State Government. The respondents were also informed that the survey would take approximately an hour, and that an honorarium would be made available after the completion of the survey. The honorarium was offered to incentivise the respondents' participation in the survey and extend appreciation for their time.

Respondents could choose between a cash honorarium of RM100 (deposited into their bank accounts or collected personally) or a Lotus's voucher worth RM100. Households were also informed that participation was voluntary and they could withdraw consent at any point.

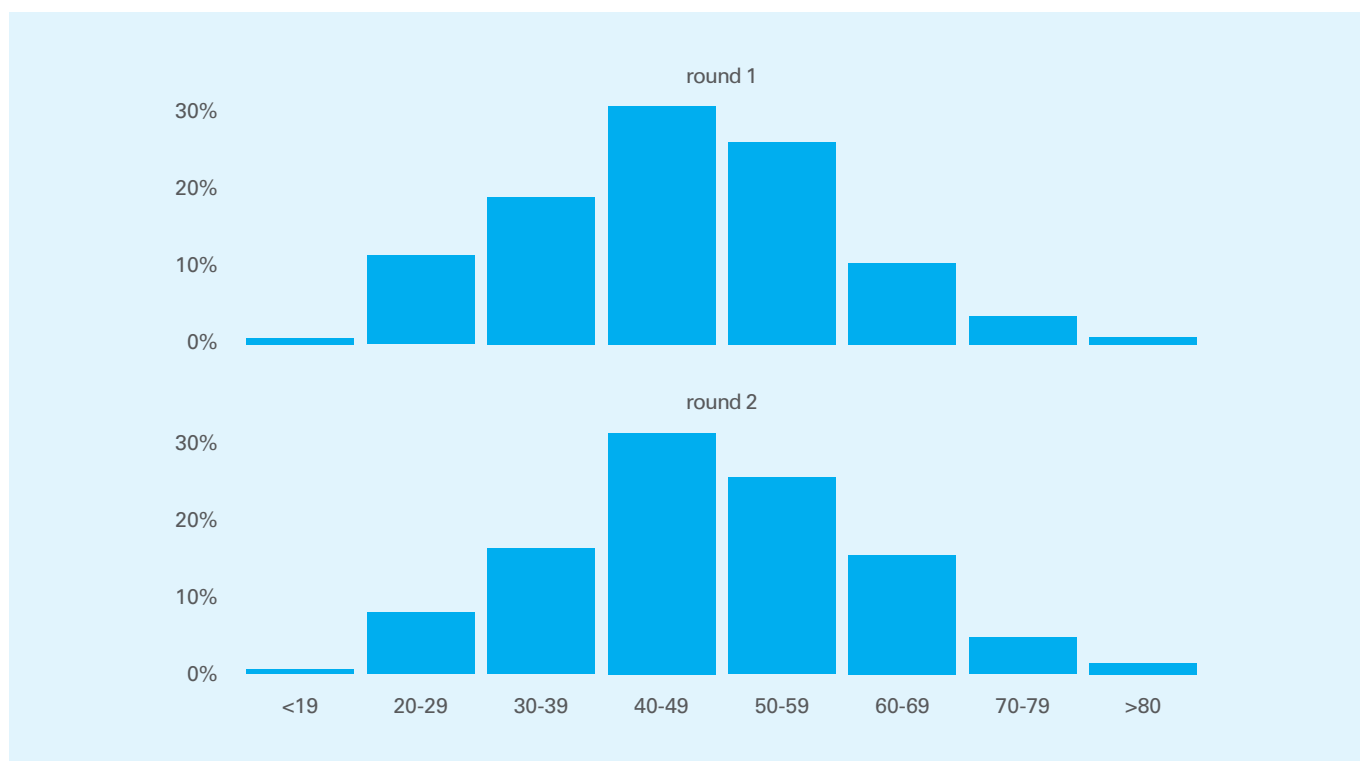
Enumerators for both rounds were trained in a three-hour session to administer the surveys and record answers in the survey software in an unbiased manner. The durations for data gathering through telephone surveys were as follows:

- First round: four months (April to August 2022)
- Second round: three months (February to May 2023)

The participants for the second round were drawn from the original pool of 632 respondents. No income restrictions applied in this round. Nevertheless, 75 per cent of the households sampled were in the bottom 10 per cent in 2019 (see Table 3.1). An attrition rate of 15 per cent was expected.

We encountered an attrition rate of 31 per cent, with 433 valid responses gathered at the conclusion of the second round of data collection. Nevertheless, this was still an acceptable sample size of Penang's low-income population, with a 95 per cent confidence level and a 4.71 margin of error. The age distribution of the heads of households for Round 1 and Round 2 was largely comparable, as illustrated in Figure 2.1.

Figure 2.1: Age distribution in Round 1 and Round 2



There was not enough evidence to show a relationship between having children and attrition: a household with an additional child was 6.3 per cent less likely to drop out ($p = 0.28$). However, a doubling of pre-pandemic household income decreased the odds of attrition by 28.4 per cent ($p = 0.003$), suggesting there was attrition in higher-income households.

Limitations

High attrition rate of respondents

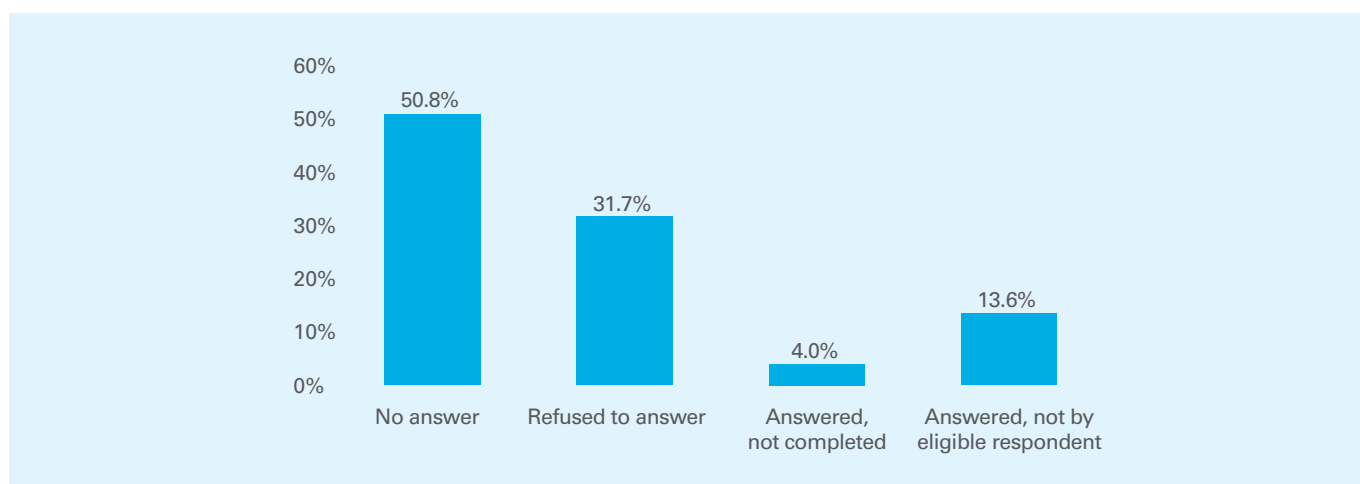
The frequent change of mobile phone numbers by the respondents was one of the limitations faced by the enumerators. The inability of the respondents to keep their phone lines active likely resulted in the discontinuation of their existing accounts. This rendered them unreachable by the enumerators if the respondents had not updated their new contact details with the State Welfare Department.

For the second round of data collection, the majority of unsuccessful attempts (50.8%) were due to unanswered calls (Figure 2.2). Reflecting the frequent

change of mobile numbers, 13.6 per cent of the calls were answered by a different person. Most of the time, the person who answered would claim not to know the person listed in the respondent sheet and they had no way of contacting the said person.

A further 31.7 per cent of the respondents refused to take part in the second round of the survey. Among the reasons cited was that they were no longer interested in participating. Some respondents also expressed discomfort in revealing private details, while others cited time constraints. Some participants expressed reservations regarding the nature of the calls, suspecting them to be scam calls, even though they had previously participated in the initial round.

Figure 2.2: Percentage of unsuccessful interviews by reasons



Limitations of the survey design

- **Employment:** Employed respondents were asked about their occupational sectors in accordance with the Malaysia Standard Classification of Occupations (MASCO). They were not asked about their specific industries; therefore the industries in which the respondents worked were not recorded.
- **Self-reporting:** The survey questionnaire incorporated self-perception scales to measure the respondents' perception of their health changes, weight, chronic illness, disability³ and the educational performance of their children. We intended to capture a more overall picture of their lived experiences, but we also acknowledge that not using standardised scales and constructs may complicate some of the interpretation.

³ The Persons with Disabilities Act (2008) recognises the following categories of persons with disabilities: hearing, visual, speech, physical, learning, mental and multiple.

<www.malaysia.gov.my/portal/content/30739>

Data analysis

Descriptive statistics of the sample include demographic and geographical information to provide a profile of respondents.

Key socio-economic variables are disaggregated by characteristics of households to provide insights into how socio-economic situations vary across different groups. The following household characteristics were evaluated:

- Age of heads of households
- Sex of heads of households
- Health status of heads of households and/or household members (disabilities and/or chronic illnesses)
- Bottom 1 per cent by household income
- Employment status of heads of households
- Presence of children
- Location

For each round of cross-sectional data collected, the relationship between household characteristics, financial aid and socio-economic indicators was analysed, identifying trends and changes over time. We used appropriate statistical tests to test claims in this paper, where indicated. This will give a preliminary understanding of how households were doing across different socio-economic indicators to identify the areas in need of assistance and shape future policy directions. Data analysis was conducted using R Statistical Software (v 4.3.2, R Core Team 2023) with packages from the **tidyverse** (Wickham et al., 2019) for data wrangling and **ggplot2** (Wickham, 2016) for data visualisation.

Cross-sectional relationships were tested with classical regression methods using R Statistical Software (v 4.3.2, R Core Team 2023). Consider the bivariate linear regression specification⁴:

$$y_i = \alpha + x_{i1}\beta + \eta_i, \text{ for } i = 1, 2, \dots, n$$

where y is the response variable and x_i is the household characteristic being evaluated (typically an indicator variable). i indicates the entity of interest, i.e., households, or, where relevant, individual household members. β_i estimates the relationship between a household characteristic and the response variable of interest.

Where the response variable takes on only two possible values, y_i is substituted with the logistic link function, i.e., we fit a logistic regression

$$\text{Logit}(p_i) = \alpha + x_{i1}\beta + \eta_i, \text{ for } i = 1, 2, \dots, n$$

$$\text{where } \text{logit}(p_i) = \log\left(\frac{x}{1-x}\right).$$

Hypotheses involving the changes over time (cross-wave comparisons) were evaluated with balanced panels using appropriate multilevel models, including household random effects, using the R package **lme4**. We wished to estimate the change in the response variable over time ('within'); however, a classical (pooled) regression specification between repeated measurements does not distinguish between within-subject and between-subject variation.

We fit the following multilevel model specification

$$y_i = \alpha_{j[i]} + \beta_{j[i]}t_i + \eta_i$$

where t is an indicator variable for time, and the estimated parameters α and β of specific interest — β , are allowed to vary by households $j = 1, 2, \dots, n$:

$$\alpha_j = a_0 + b_0u_j + \epsilon_{j1}; \beta_j = a_1 + b_1u_j + \epsilon_{j2}$$

β is thus the change in the response variable over time for a given household. Inference is performed by estimating bootstrapped confidence intervals at the 5 per cent significance level.

For response variables with two possible values, a similar multilevel logistic regression specification is fitted:

$$\text{Logit}(p_i) = \alpha_{j[i]} + \beta_{j[i]}t_i + \eta_i, \text{ for } i = 1, 2, \dots, n$$

⁴ Notation follows Data Analysis using Regression and Multilevel/Hierarchical Models, Gelman and Hill (2007).

■ 2.2 Qualitative Data Collection

Qualitative methods, specifically interviews and focus group discussions, served as invaluable tools for understanding the nuanced impact of the confluence of COVID-19 and the rising cost of living on vulnerable groups in Penang. In researching this crucial topic, these methods provided an avenue to delve deeply into individuals' lived experiences, perceptions and emotions, thereby offering rich, contextualised insights to compare and complement the data from quantitative methods.

Firstly, interviews enabled researchers to establish rapport with participants, fostering a conducive environment for open dialogue. Through one-on-one conversations, researchers could explore personal narratives, allowing participants to express their experiences comprehensively. Vulnerable groups, such as low-income earners or marginalised communities, may have unique challenges exacerbated by the pandemic and economic shifts. Interviews facilitated the collection of nuanced data, uncovering hidden issues, coping strategies, and diverse perspectives on how these groups were navigating these intersecting challenges.

Furthermore, focus group discussions offered a platform for interaction among participants, encouraging the exchange of ideas and collective reflections. This method not only elucidated individual perspectives but also unveiled shared concerns, community dynamics, and social norms that influenced behaviours and decisions within vulnerable groups. The individual nature of focus groups allowed for the exploration of differing viewpoints, generating a holistic understanding of the multifaceted impacts of COVID-19 and the rising cost of living within the Penang community.

Key informant interviews and focus group discussions were supplemented by archival research of existing data on relevant state and federal social policy interventions. To review federal social policy interventions, we undertook a desk review and leveraged our contacts in various ministries to identify additional documents. Content analysis was also conducted to analyse electronic and printed media relevant to the topic.

An open coding process was adopted by identifying themes through recurring words, phrases, concepts

and ideas from the narratives of the interviews and focus group discussions. Through a systematic analysis of fieldwork notes from the interviews and discussions, researchers identified recurring patterns, sentiments and issues prevalent among Penang's vulnerable communities. Thematic analysis techniques helped in organizing and categorizing qualitative data, leading to the emergence of overarching themes. Themes included resilience amidst adversity, structural inequalities, limited access to essential services, and community empowerment strategies.

Employing an iterative process, researchers triangulated data from multiple sources, ensuring the validity and reliability of identified themes. This triangulation involved cross-referencing information obtained from key informants and focus groups, enriching the depth of understanding and reducing potential biases.

In the first round of the project, the team interviewed 24 representatives from the following:

- Women development and empowerment-based organizations: Penang Women's Development Corporation (PWDC) and Women's Centre for Change (WCC).
- State assembly representatives (ADUNs): Padang Lalang, Sri Delima, Bagan Dalam and Sungai Puyu.
- Government departments: State Welfare Department (Jabatan Kebajikan Masyarakat (JKM)), Department of Women's Development (Jabatan Pembangunan Wanita (JPW)).
- District offices: Northeast and Southwest district officers.
- Community leaders: Community leaders for PPR Sungai Pinang and PPR Taman Manggis; Women and Family Development Committee (Jawatankuasa Pembangunan Wanita dan Keluarga (JPWK) members for Teluk Bahang, Pantai Jerejak, Batu Maung, Pulau Betong, Bayan Lepas and Batu Uban.
- Non-governmental organizations: Buddhist Tzu Chi Charity Foundation.
- Government-linked organizations: Penang Education Council, Penggerak Komuniti Muda (PEKA).
- Councillors and ADUN's office: Councillor in Seberang Perai, representative from Sungai Acheh Service Centre.

In the second round, qualitative data were collected through a series of focus group discussions that we ran with communities living in Program Perumahan Rakyat (PPR) public housing complexes on Penang Island and Seberang Perai. Three focus group discussions were conducted between July and November 2023 in different districts, with six respondents in each discussion group.

The respondents were contacted through their respective community leaders whose contacts we obtained from key informant interviews from the first phase of the project, and also through contacts from relevant agencies. Each of the focus group discussions took approximately one and a half hours

and was done in common spaces of the PPRs, such as community activity rooms and near prayer halls (surau). These locations provided the respondents privacy in terms of noise level and protecting their identities.

The discussions were not recorded to protect the identities of the discussants and ensure they felt comfortable speaking to us. Notes were taken during the discussions and collated immediately after the meetings. The direction of the conversations was thematic, based on the same themes as the quantitative surveys to enrich data collection through anecdotal information.

Limitations of Focus Group Discussions

Limited representation

Focus group discussions are a valuable qualitative research method used to gather insights, opinions and perceptions from the low-income communities living in PPRs in Penang. We however acknowledge that focus group discussions from three out of the five districts in Penang, totalling 18 participants, were not representative of the low-income communities of the state. The districts covered were Northeast, Seberang Perai Tengah and Seberang Perai Utara. Bottlenecks occurred when we tried to reach the low-income communities in Southwest and Seberang Perai Selatan since our key contacts did not respond to us despite several efforts. Nevertheless, these discussions were used to enrich the findings from the quantitative surveys and to gather nuances that can only be gathered through in-person conversations.

Influence of context

Another limitation we encountered was the dominance of group dynamics. Certain participants may dominate the discussion, inhibiting others from expressing their viewpoints. This can skew the findings and lead to an incomplete representation of opinions. Group dynamics and interpersonal relationships among participants may influence the discussion. Hierarchies, conflicts or alliances within the group can affect the dynamics and steer the conversation in particular directions. Participants may feel hesitant to express personal or sensitive opinions in a group setting, fearing judgement or a lack of confidentiality. This could limit the disclosure of certain experiences or viewpoints. Especially concerning personal topics such as increased income within low-income communities, some participants may feel uncomfortable revealing their improved financial state while their neighbours experienced the contrary.

■ 2.3 Ethical Considerations and Safeguarding Principles/Guidelines

This study was approved by the HML Institutional Review Board (IRB) (HML IRB Review #539MALA22).

The research adhered to globally recognised ethical standards and followed the ethical considerations and code of conduct outlined in this section, as per the standard procedures of Penang Institute.

To ensure that respondents were not put at risk due to the research and were treated with respect, the following steps were taken:

Protocols to Ensure Subjects' Safety, Identities and Data

No physical risks were posed to participants and their involvement resulted in no more than discomfort. If any participant experienced discomfort, they had the option to withdraw from the study at any time and decline the use of their collected data for research purposes. All participants were informed of these options when seeking their consent.

Certain participants, such as NGOs, representatives from government departments, and state assembly representatives were identifiable due to their specific roles, while others, such as members of the public who engaged in the phone survey and focus group discussions, were kept in anonymity. Sensitive information was omitted and extensive efforts were made to shield identified individuals from negative consequences.

Participants retained the right to request access to the information derived from their data during the later stages of the research process.

Disclosure and Consent Process

All participants in the research were fully informed about the nature of the study, and informed consent was obtained.

Phone Surveys (for participants above 18): Participants implied their consent by continuing to participate in

the anonymous survey. They were notified both at the survey's onset and before its conclusion that their continued participation would be considered consent.

Focus group discussions and semi-structured interviews (for participants above 18): Consent was implied by participants if they chose to continue participating in the discussions or interviews. They were informed at the beginning and before concluding that their continued participation indicated consent.

Privacy and Confidentiality

Personal information was not used without the consent or knowledge of the research participants. The anonymity preferences of respondents in telephone surveys, focus group discussions and semi-structured interviews were respected, and their requests regarding the confidentiality of information and personal data were honoured.

Data Access and Security

The data was primarily stored on a shared Google Drive accessible only to key research personnel. Our Enumerator Coordinator underwent training to uphold the standard of conduct expected of researchers at Penang Institute, focusing on confidentiality and ethical behaviour.

The survey content, excluding any initial or final conversations with investigators that were not part of the data, underwent processing through SurveyCTO, an encrypted mobile data collection software. Access to this processed data was limited solely to the account owner (Penang Institute), with no access provided to any unauthorized individuals, including SurveyCTO employees. Files were deleted from SurveyCTO servers upon completion of the research project and expiration of our subscription.

Written data will be maintained for five years following project completion, after which both physical and electronic copies will be securely destroyed.

3. FINDINGS

Demography Survey/questionnaire

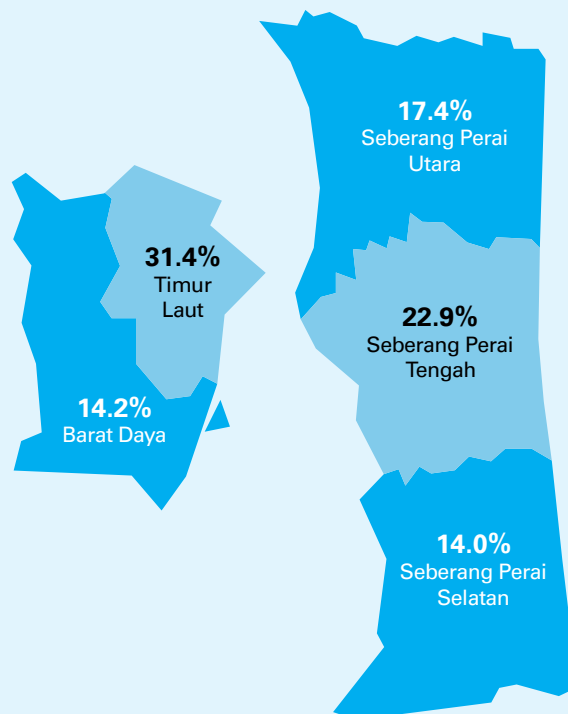
Round 1 (April to August 2022)

Surveyed households

Heads of households (HoH): 632
Number of children: 755
Total household members: 2,370
Average size of households: 3.8 persons
Average number of children: 2.2 persons
Average age of HoH: 46 years
Average age of child: 10 years

Head of household statistics

Sex of HoH: 58.6% male; 41.4% female
Ethnicity: 57.8% Malay; 21.9% Chinese; 19.7% Indian; 0.6% others
Marital status: 51.9% married; 21.1% not married; 13.3% widowed; 11.9% separated/divorced
Single parent households: 12.3% (89.7% of which were headed by women) 28.6% have a chronic illness
Education level: 58.6% upper secondary; 41.3% lower secondary and below



Round 2 (February to May 2023)

Surveyed households

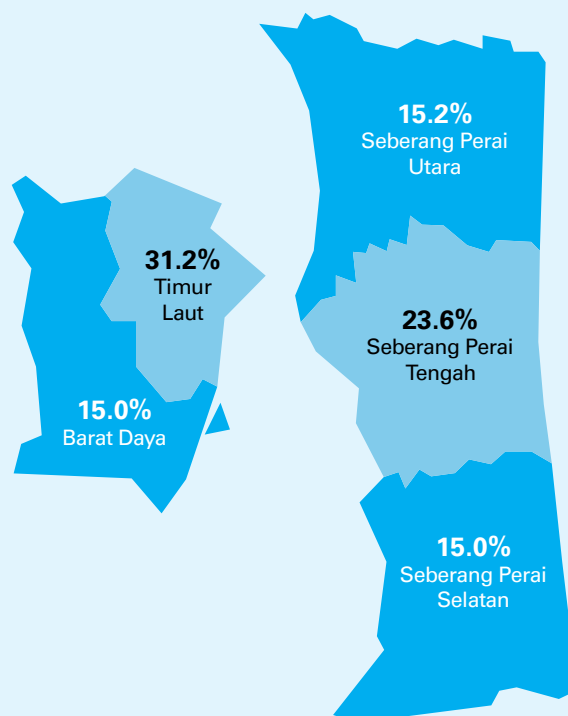
Heads of households: 433
Number of children: 602
Total number of household members: 1,697
Average size of households: 3.9 persons
Average number of children: 1.4 persons
Average age of HoH: 49 years
Average age of child: 10 years

Head of household statistics

Sex of HoH: 57% male; 43% female
Ethnicity: 59% Malay; 20% Indian; 21% Chinese
Marital status: 55% married; 15.9% not married; 14.5% widowed; 13.7% separated/divorced
Single parent households: 15.9% (76.8% of which were headed by women) 27% have a chronic illness; 6.5% are persons with disabilities
Education level: 41.1% upper secondary; 37.4% lower secondary and below

Household facts

Households with at least one person with:
disability: 20.0%; chronic illness: 47.8%



Key Informant Interviews & Focus Group Discussions

Round 1 (March to July 2022)

Organization/department	No. of interviewees
Women development and empowerment based organizations	3
State assemblypersons (ADUNs)	4
Government departments	2
District offices	2
Community leaders	8
Non-governmental organizations	1
Government-linked organizations	2
Councillors and ADUN's offices	2
Total	24

Round 2 (July to November 2023)

A total of 18 respondents were involved in the three focus group discussions we conducted.

Districts	Northeast (PPR Sungai Pinang)	Seberang Perai Tengah (PPR Desa Wawasan)	Seberang Perai Utara (PPR Mak Mandin)
No. of focus group participants	6	6	6
Sex	67% female, 33% male	83% female, 17% male	100% female
Average age of HoH	53	48	67
Ethnicity	50% Malay 33% Chinese 17% Indian	66% Malay 17% Chinese 17% Indonesian	100% Malay
Marital status	83% married 17% widowed, single grandparent	66% married 17% separated, single parent 17% widowed	50% married 33% widowed 17% single



3.1 Employment

Key insights

- Heads of households were less likely to be employed in 2023 compared to 2022.
- Persons having chronic illnesses were much more likely to be unemployed. Persons with disabilities were also another major group likely to be unemployed.
- Older household heads, household heads with chronic illnesses or disabilities, and female household heads were less likely to work.
- A quarter of household heads were employed in sales and services occupations.
- Heads of households modestly increased the number of hours worked compared to pre-pandemic levels.
- Retirement and family responsibilities were the main reasons for adults in the households not working, followed by health issues.
- Lack of education, skills and experience were the most commonly cited reasons for not being able to secure a good job.
- More than a third of household heads were not covered by social protection schemes; female household heads were significantly less likely to have social protection.

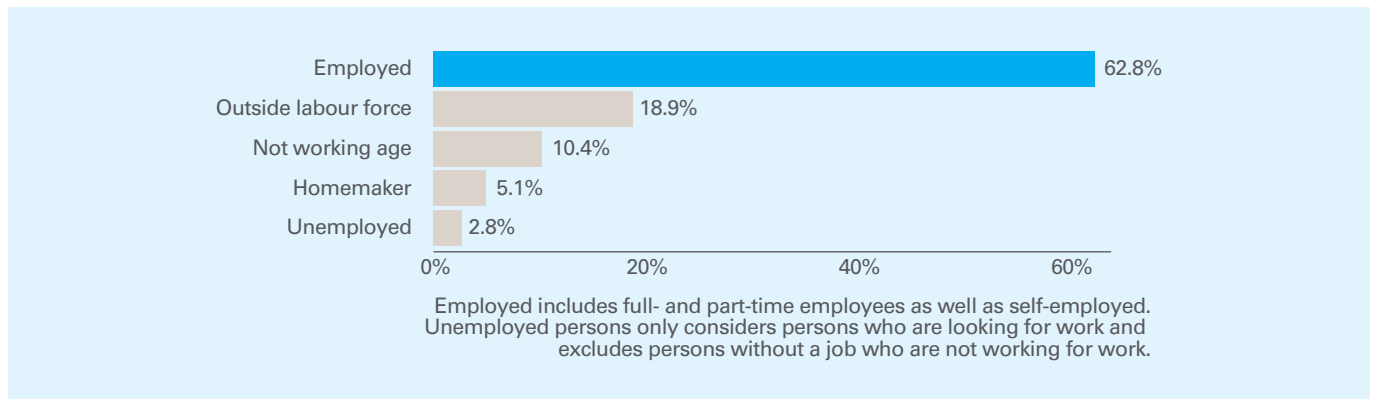
Employment status

Respondents were more likely to be unemployed compared to Penang’s population as a whole. A total of 62.8 per cent of household heads were employed, while 2.8 per cent were unemployed (Figure 3.1). Among working-age (15-64 years) household heads, the unemployment rate in Round 2 was 3.1 per cent, slightly above Penang’s unemployment rate (2023 Q1: 2.3 per cent; Q2: 2.1 per cent)⁵. Also, 26.8 per cent of working-age household heads were outside the

labour force⁶, slightly below Penang’s labour force participation rate of 29.7 per cent (2022), with a fifth of those (5.1 per cent overall) identifying as homemakers.

Of employed persons, 21.4 per cent were self-employed, slightly higher than Penang’s percentage as a whole (2023 Q1: 18.3 per cent; Q2: 18.4 per cent). Meanwhile, employees working under 30 hours constitute 4.8 per cent of working persons, almost three times the national rate (2023 Q1: 1.7.2 per cent; Q2: 1.7 per cent).

Figure 3.1: Share of heads of households by employment status and district



⁵ Labour Force Survey Report, Malaysia, Second Quarter 2023 (Department of Statistics, Malaysia, 2023).

⁶ Outside labour force consists of working-age persons other than those who are employed or unemployed.

Heads of households were less likely to be employed in 2023 compared to 2022. Compared to Round 1, household heads were 15 per cent less likely to be employed⁷. Additionally, 79 per cent of household heads employed in Round 1 remain employed in Round 2.

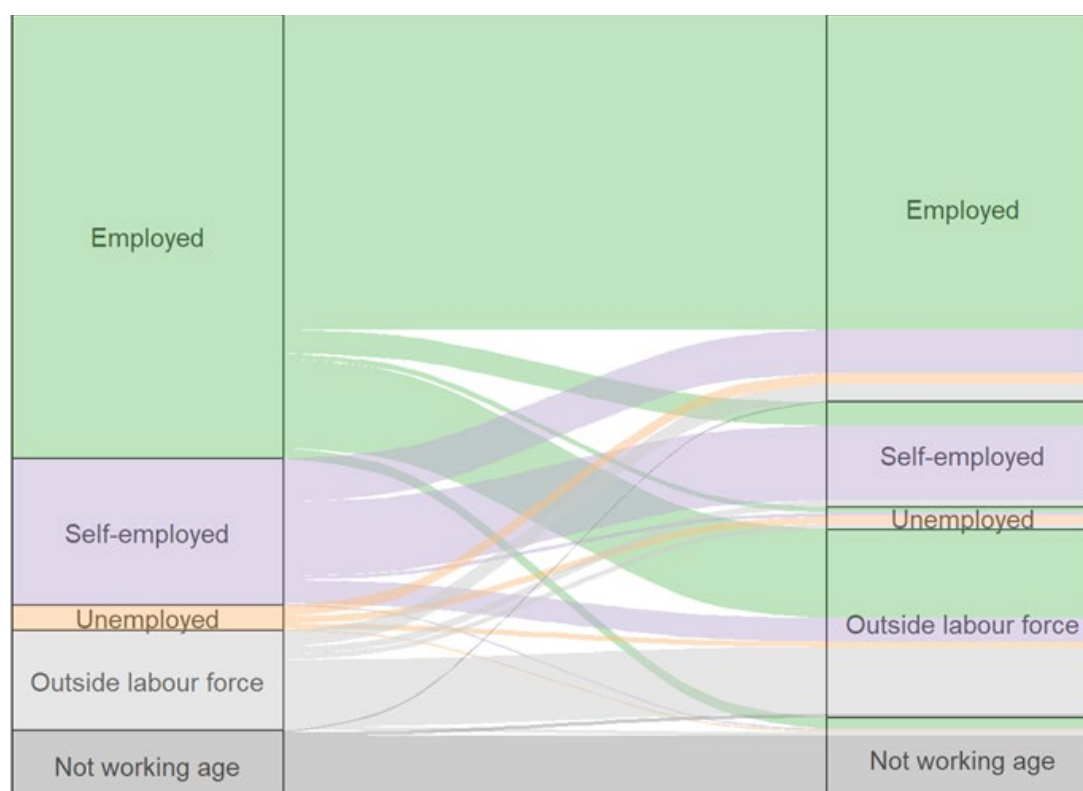
Table 3.1 and Figure 3.2 detail the changes in the employment status of household heads in Rounds 1 and 2. The panel on the left denotes the employment

status of household heads in Round 1, while the panel on the right denotes employment status in Round 2. A total of 71 per cent of employed persons remained employed in Round 2 whereas 1.2 per cent became unemployed, while 22.5 per cent have exited the labour force. Among previously self-employed household heads, 30 per cent were employed but no longer under self-employment. Additionally, 42.9 per cent of previously unemployed (i.e., job-seeking) household heads have gained employment.

Table 3.1: Share of respondents by current employment status according to employment status in Round 1

Round 2 employment status	Employed	Self-employed	Unemployed	Outside labour force	Not working age	Total
Round 1 employment status						
Employed	71.0%	5.3%	1.2%	20.0%	2.5%	100%
Self-employed	29.6%	50.6%	2.5%	16.1%	1.2%	100%
Unemployed	42.9%	-	28.6%	21.4%	7.1%	100%
Outside labour force	16.4%	7.3%	5.5%	67.3%	3.6%	100%
Not working age	2.6%	-	-	5.3%	92.1%	100%

Figure 3.2: Employment status of household heads in Rounds 1 and 2

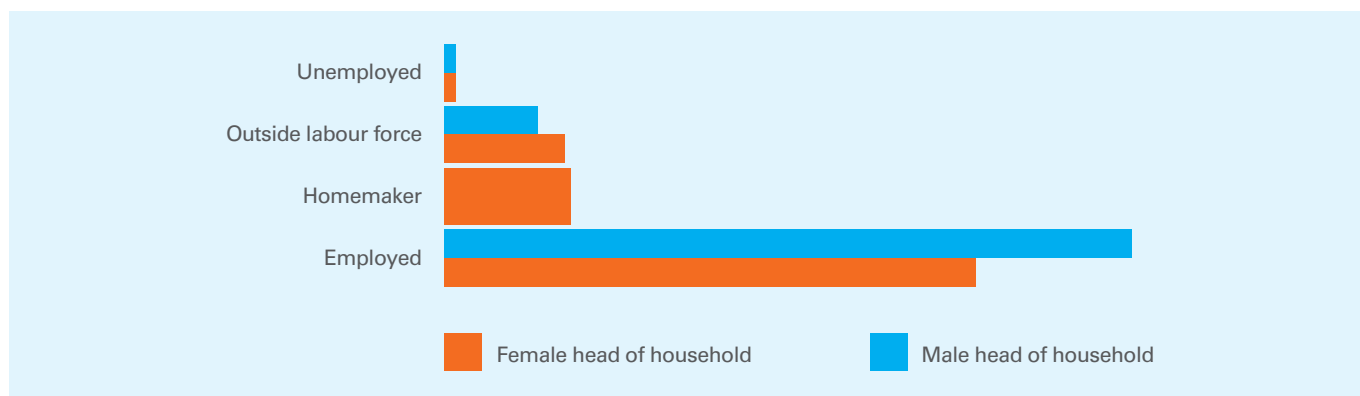


⁷ Household heads not of working age removed. A logistic regression (using lme4 in R) with random household slope and intercept estimated that the odds for employment in Round 2 declined by 74 per cent ($p < .001$).

Figure 3.3 depicts the Round 2 employment status of heads of households who were employed in Round 1. Altogether, 16.1 per cent of female heads of households employed in Round 1 became homemakers in Round 2 (Figure 3.3); no male household heads, however, left work because of homemaking responsibilities. Consequently, only 66.9 per cent of female household heads remained employed, compared to 86.6 per

cent of male household heads. A similar share of male (15.3%) and female (11.9%) household heads employed in the previous year reported leaving employment for reasons other than homemaking. Similarly, the share of previously employed household heads being unemployed (and seeking employment) in the second round was almost the same for both sexes (female, 1.6 per cent; male, 1.5 per cent).

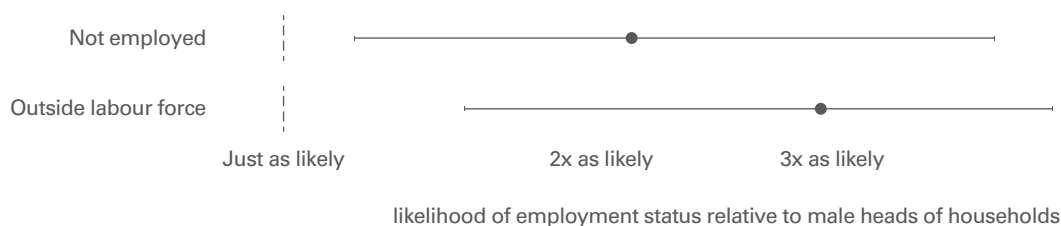
Figure 3.3: Round 2 employment status of employed persons in Round 1 (working-age)



Note: No male heads of households previously employed in Round 1 identified themselves as a homemaker in Round 2.

Stated differently, female heads of households employed in the first round were more likely to be not employed or outside of the labour force than their male counterparts. Figure 3.4 presents ‘odds ratios’, which measure how much more likely something is to happen in one group of people than in another, along with 95 per cent confidence intervals to quantify the statistical uncertainty accompanying our estimates. Previously employed female heads of households were twice as likely not to be employed, and thrice as likely to be outside of the labour force in the second round of the survey, compared to male heads of households.

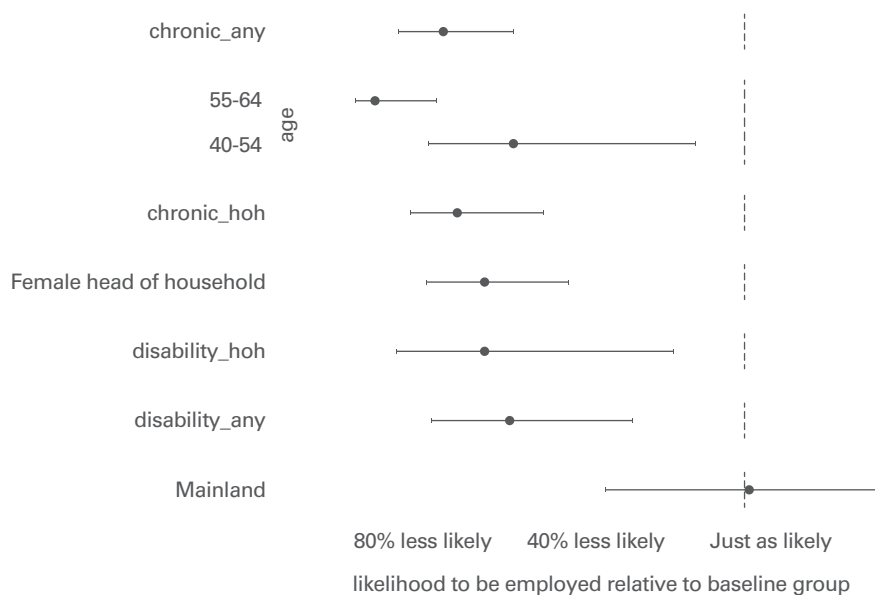
Figure 3.4 Odds ratios for likelihood of women head of households’ employment status relative to male head of households (Round 1 employed persons)



Note: Sample restricted to working-age household heads. The odds ratios are derived from separate logistic regression specifications to predict not employed status (including unemployed persons and persons outside labour force) and outside labour force status, with the sex of the head of household as the only predictor. Estimates for intercept omitted for brevity. x-axis truncated for readability.

Subsequently, we estimated risk factors for not working among working-age household heads using logistic regression (Figure 3.5).

Figure 3.5: Odds ratios and 95 per cent confidence interval for likelihood of heads of households not working, selected household characteristics



Note: Sample restricted to working-age household heads. The odds ratios are derived from separate logistic regression specifications for the predictors: age, sex of head of household, self-reported persons with chronic disease and persons with disabilities (head of household (HoH) and any member of the

household (any)) and location respectively. Estimates for intercept omitted for brevity. Baseline comparison groups are: 15-39 (age), heads of household are not persons with disabilities nor chronic diseases, and households residing on Penang Island (location). x-axis truncated for readability.

From the analysis:

- **Age:** Older heads of households were at greater risk of not working. Household heads aged 40 to 54 and 55 to 64 were 53.4 per cent and 87.2 per cent respectively less likely to be employed, compared to household heads under 40. Stated differently, 86.4 per cent of household heads below 40 were unemployed, compared to 74.7 per cent of household heads between 40 and 54 and 44.8 per cent of household heads above 55.

The same trend was observed among the focus group discussion participants where the older the heads of households, the less likely they were employed.

- **Sex:** The likelihood of female household heads working was observed to be 64 per cent less compared to male household heads. This was illustrated by the fact that respondents who identified as homemakers were overwhelmingly female.
- **Health:** Persons having chronic illnesses were likely to be unemployed. Only 51 per cent of household heads with chronic illnesses were employed. Estimates indicated that household heads with chronic illnesses were 67.2 per cent less likely to be employed. When extended to all household members, the likelihood of household heads with chronic illnesses not working was 73.4 per cent.

This situation was similar for persons with disabilities. Having a disability severely affects employment status. It was shown that 77.4 per cent of working-age household heads without disabilities reported being in employment. Only 48% of household heads with disabilities were employed. Estimates indicated that household heads who are persons with disabilities were 55.3 per cent less likely to be employed, but these estimates were; however these estimates were highly

uncertain due to the limited sample size. When extended to all household members, the likelihood of household heads having disabilities not working was 58.8 per cent. Similarly, among participants in focus group discussions, working-age household members with chronic illnesses were less likely to be employed. Two respondents lamented that their husbands, who had been diagnosed with kidney failure, quit their jobs as they needed to go for dialysis treatment regularly.

- **Location:** Households on the mainland were just as likely to not have employment as households on the island. The large confidence interval, however, implies substantial uncertainty in the estimate.

The heads of households have modestly increased the number of hours worked compared to pre-pandemic levels. While there is evidence indicating that household heads have indeed increased their work hours, they continue to maintain a mostly reasonable number of hours per week. Respondents generally logged more working hours in 2023 than in 2022 and the period before the pandemic. Before the pandemic, households worked on average 46 hours a week. Hours worked declined slightly in 2022 (44.7 hours); however, in 2023 they rose from pre-pandemic levels to 50 hours⁸.

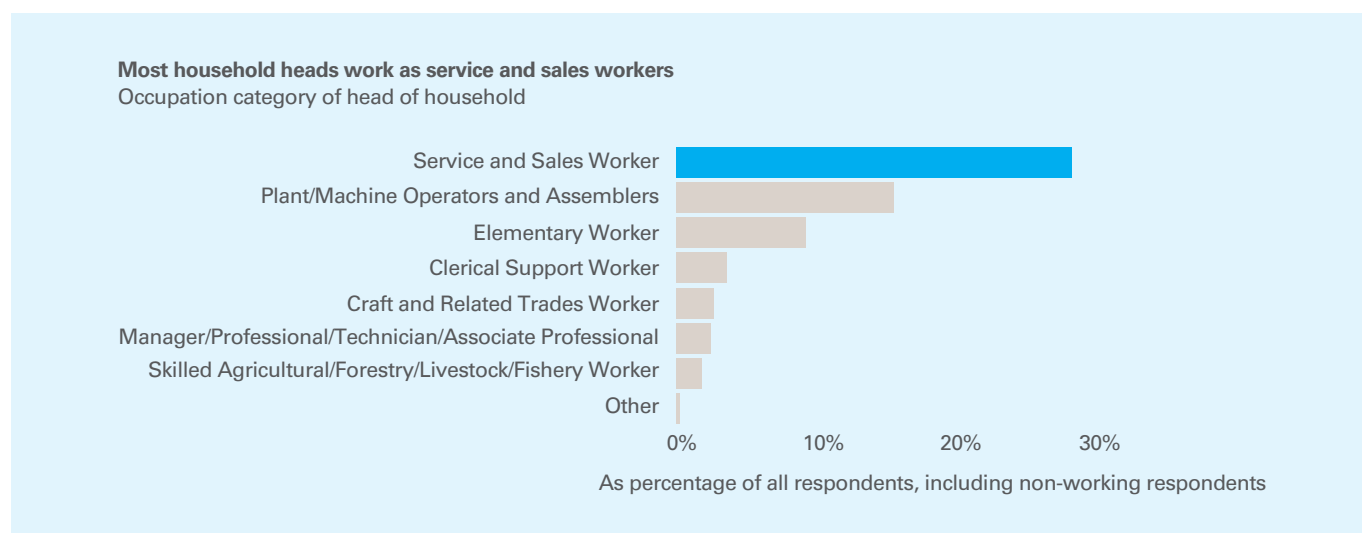
Focus group participants who were employed also reported an increase in working hours in 2023, especially because more ad-hoc work opportunities

arose that year. For instance, there was an increased demand for lorry drivers to deliver goods, a greater need for catering assistants as more events were being organized, and more business for those working as tailors and hawkers.

Occupation

Figure 3.6 shows that a quarter (28.6 per cent) of household heads surveyed were employed in the services and sales sector⁹. Another 15.7 per cent of the respondents worked in plant and machine operation and assembly roles¹⁰, while 9.5 per cent worked as elementary workers¹¹. Only 2.5 per cent of the respondents identified with higher-skilled occupations, such as technicians or associate professionals.

Figure 3.6: Occupation category of the head of household



⁸ Non-working age heads of household are excluded. A multilevel linear regression (using lme4 in R) estimated with random household slope and intercept did not find enough evidence for a decline in working hours in 2022 (95% CI: [-3.3, -0.2]); however, the estimated increase of 4.1 hours in 2023 was statistically significant at the 5 per cent level (95 per cent CI: [2.5, -5.9]).

⁹ Non-working age heads of household are excluded. The services and sales category includes hotel personnel, salesperson, customer service representative, cook, tour guide and security guard.

¹⁰ Machine operator, factory line assembler and car/taxi/van drivers are included under the plant and machine operation and assemblers category.

¹¹ Elementary workers category includes cleaners and labourers.

The majority of our focus group discussants worked part-time jobs as drivers, cleaners, odd-job workers and security guards. Those working as drivers, cleaners, traditional masseuses and odd-job workers do not enjoy stable employment, as they only earn whenever they are hired. They constantly promoted their services through word-of-mouth and personal contacts, hoping that the gaps between jobs are not too long. Those employed mostly worked on contract basis as security guards, factory operators, assistant nurses (in hospitals), janitors and store assistants, or were self-employed. Among the self-employed discussants were hawkers, a tailor, and a caterer. This group of participants have continuous income. Some of the discussants were professionals, including an engineer and a kindergarten teacher. Despite working stable and white-collar jobs, they too lived in the PPR flats and tried to make ends meet. Due to fluctuating times, they were worried about losing their jobs since they have to support their families.

Difficulties in finding work

Employment-related challenges were frequently highlighted, particularly in the focus group discussions conducted in the Northeast district on the island and Seberang Perai Tengah on the mainland. Participants expressed that the current job market presents significant obstacles for the younger generation, making it difficult for them to find employment. For instance, some respondents shared that their

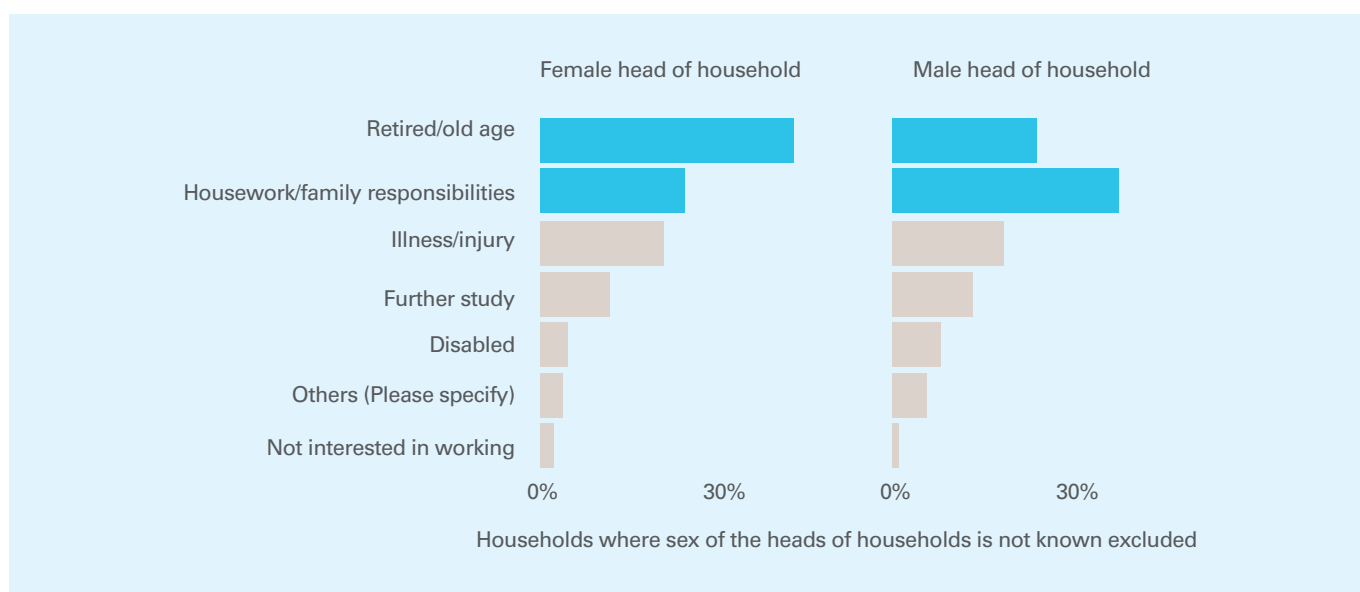
children and grandchildren were struggling to secure permanent jobs. Penang's youth unemployment rate has been elevated since the onset of the pandemic. In 2020, it reached 10.3 per cent and further rose to 17.4 per cent in 2021.¹² Despite moderating/declining to 9 per cent in 2022, the youth unemployment rate remains significantly higher than pre-pandemic levels (2019: 6.7 per cent).

In the survey, respondents cited retirement and family responsibilities as the main reasons for adults in the household not working, followed by health factors. Adult homemakers represented a smaller percentage. Illness and/or injury were other common reasons cited for the non-employment of adults in the household (Figure 3.7).

In households headed by women, a larger percentage of members were non-working, primarily due to retirement/old age, followed by family responsibilities. Meanwhile in male-headed households, family responsibilities emerged as the main reason for non-employment among members in male-headed households, likely related to their spouses.

Other reasons cited by respondents for household members not working included challenges in seeking employment, leading some to discontinue their job search. Additionally, a small percentage engaged in menial and/or temporary jobs. In some cases, household heads chose to start their own small business.

Figure 3.7: Reasons for not working among adults in the household



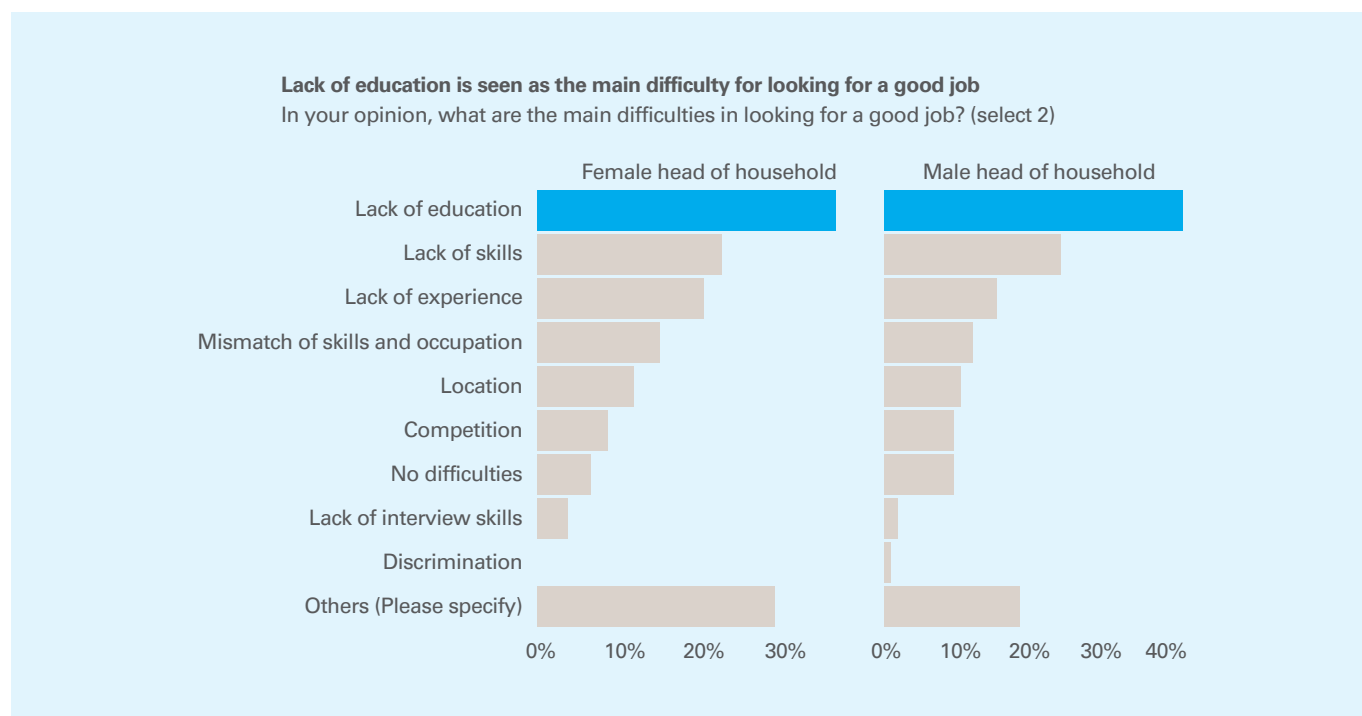
¹² Labour Force Surveys 2020-2022, Department of Statistics Malaysia.

Lack of education, skills and experience were the most commonly cited reasons for not securing a good job. Figure 3.8 shows that lack of education (39.4 per cent) and skills (23.8 per cent) were the most frequently cited challenges for household members to find gainful employment. Three of the focus group discussants highlighted the difficulty for school leavers to secure jobs, even with a Sijil Pelajaran Malaysia (SPM) qualification, Malaysia's high school certificate. As recently as 10 years ago, an SPM certificate holder could at least secure a job as an operator in factories but this is no longer the case, leaving many school leavers jobless. This situation has created social issues arising from youths being idle and unproductive. While survey findings and focus group discussants concurred that unemployment is more likely for the older segment of the population, the observation that school leavers have difficulty

securing jobs shows that there is stiff competition for young jobseekers too. As the discussants have direct relationships with these school leavers who were looking for employment, such as their relatives, the issue was raised. This does not however contradict survey findings that older people are the more likely group to be unemployed.

A significant obstacle cited was the lack of experience (17.8 per cent). Female household heads generally perceived greater difficulties relating to lack of experience, with a markedly higher percentage citing this as a challenge (20.2 per cent) compared to their male counterparts (16.0 per cent). Other barriers to seeking suitable employment, according to the respondents, included housework, family responsibilities, illness and injury.

Figure 3.8: Perceived difficulties in obtaining good jobs by sex of head of household



Labour protection

More than a third of household heads were not covered by social protection schemes; female household heads were considerably less likely to have social protection. A small majority of household heads had access to some form of labour protection¹³ through their employment (Figure 3.9). Also, 39.2 per cent of the household heads surveyed reported having no labour protection schemes, and a very small percentage indicated that they did not know whether they were protected.

¹³ SOCSO/PERKESO: provides social security protections to employees in Malaysia such as medical benefit, temporary disability benefit, and permanent disability benefit.

Pension scheme: designed for old age protection for public sector employees, which provides employees with a lifelong monthly payment.

EPF: provides retirement benefits to private sector employees and non-pensionable employees.

The findings from focus group discussions revealed that several participants are beneficiaries of labour protection. The most frequently cited forms of labour protection among the participants were the Employees Provident Fund (EPF) and the Social Security Organisation (SOCSO).

Participants employed in occupations such as engineer, nursing assistant and security guard confirmed their coverage under both EPF and SOCSO. A retiree who participated in the discussion also reported having EPF benefits.

It was, however, noted that one participant tried applying for SOCSO benefits twice and was rejected on both occasions. Despite suffering from a chronic disease, her claims were denied because of her outwardly healthy appearance.

Male household heads were generally more likely to be enrolled in labour protection schemes. However,

the difference is not statistically significant (Figure 3.9; $p = 0.09$). Only 35.5 per cent were not covered by the schemes compared to 46.2 per cent of female household heads. Three quarters of household heads working over 30 hours had access to some form of labour protection, while four in five household heads under the Plant/Machine Operators and Assemblers job category reported receiving some form of labour protection (Figure 3.10). In contrast, only a quarter of self-employed household heads and household heads working under 30 hours had labour protection. A simple majority of service and sales workers reported having some form of labour protection, whereas just over a quarter of elementary workers have labour protection.

Furthermore, the discussions revealed that not all retirees have EPF benefits. One retiree disclosed that she does not have EPF and mostly relies on her savings and financial support from her children. This highlights the diverse experiences and challenges faced by individuals in securing labour protection.

Figure 3.9: Labour protection schemes available to heads of households

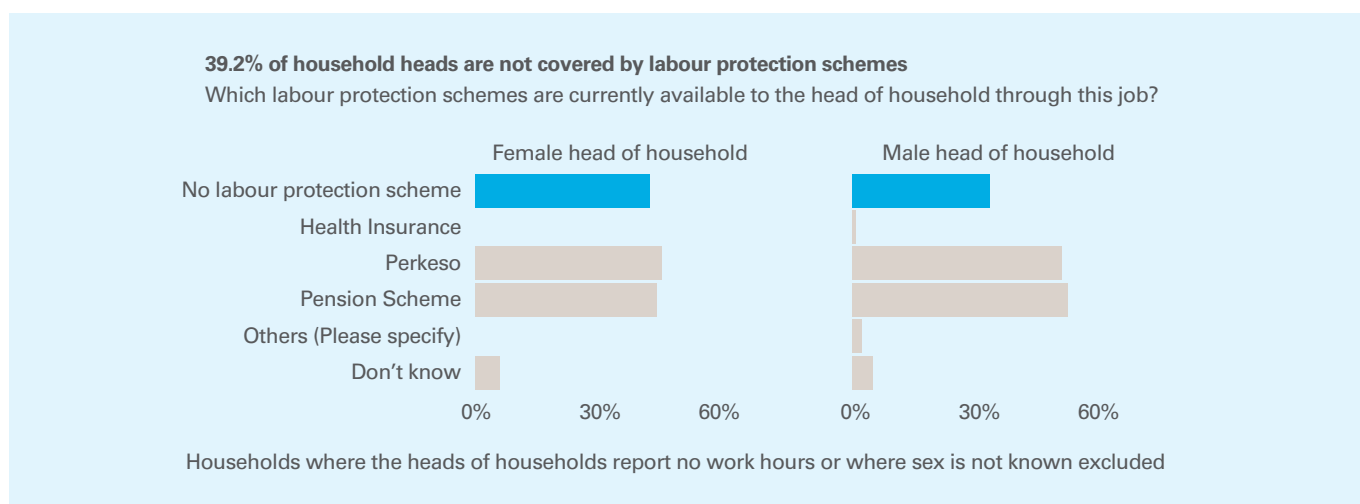
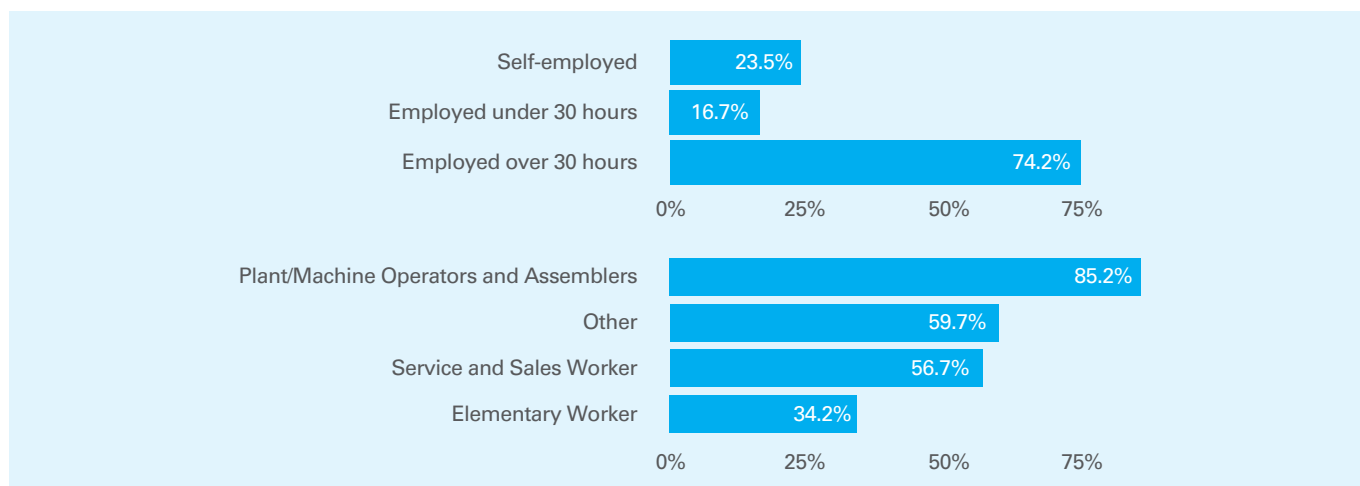


Figure 3.10: Percentage with any social protection by employment status, occupation category





3.2 Economic Welfare and Living Standards

Key Insights

- Even though real household income had grown by 2.9 per cent per annum since 2019, households reduced their spending by 10.4 per cent in the past year alone.
- The share of households in the bottom 10 per cent had decreased compared to pre-pandemic times, although the percentage had increased in 2022.
- The poorest households registered the largest decline in real expenditure.
- The prices of food and groceries were perceived to have increased substantially, more so than other items in the basket.
- More than 60 per cent of households reported zero savings from monthly income; however, gross savings calculated from self-reported income and expenditure seemed to dispute this.
- A higher percentage of female-headed households reported no savings or low savings.
- Households with higher income and expenditure levels reported higher living standards.
- Female-headed households and households with persons with disabilities were more inclined to report declining living standards.

Income¹⁴

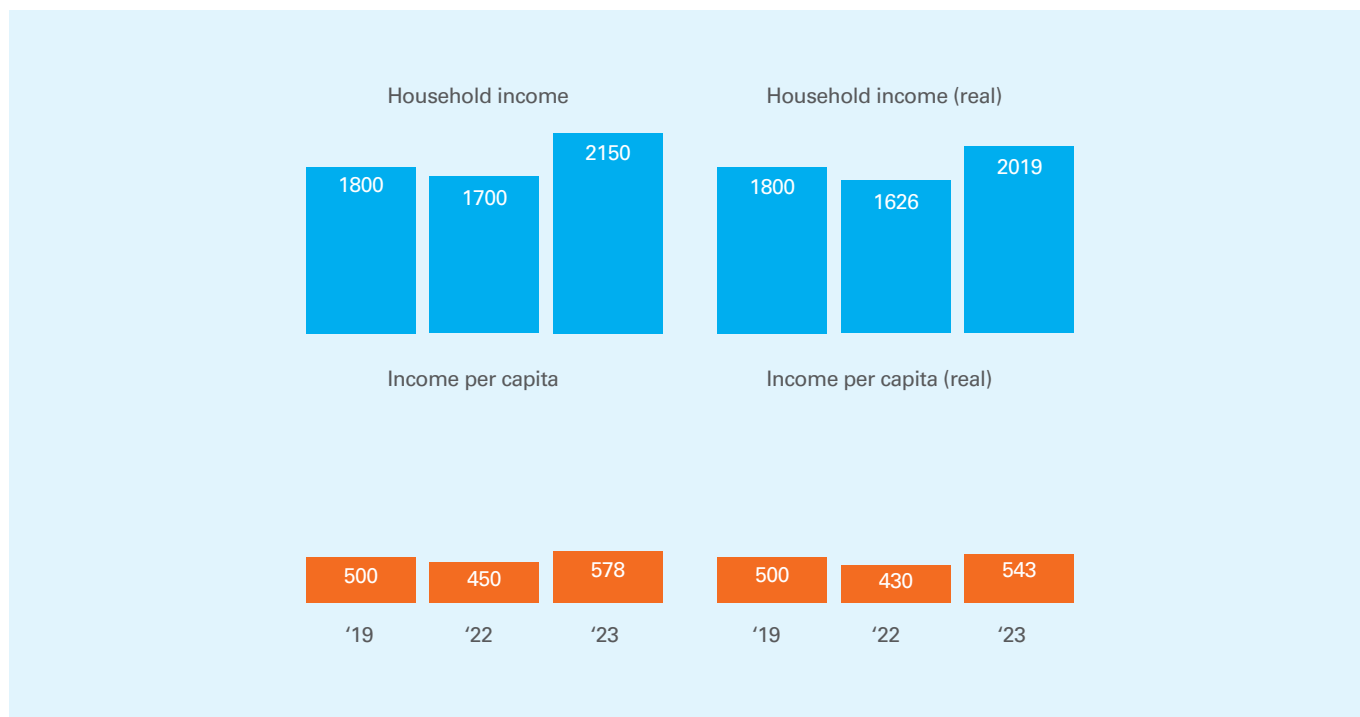
Real household income had risen by 2.9 per cent per annum since 2019. In 2022, household incomes were slightly lower than 2019 levels. The median household income in 2022 amounted to RM1,700, representing a 5.6 per cent decrease from the income recorded in 2019, or 9.7 per cent in real terms (Figure 3.11), as households were still recovering from the impact of the pandemic amidst growing inflation concerns. Similarly, the Household Income Survey Report found that while Penang's median household income rose by 5.4 per cent (1.8 per cent per annum) from 2019

to 2022, it fell by 1.02 per cent in real terms. Income for Penang's B40 households rose by a mere 0.45 per cent, while median income for the bottom 10 per cent dropped by 4.1 per cent in the same period.

Household income improved substantially in 2023. Median income increased by 26.5 per cent to reach RM2,150, or 12.2 per cent in real terms, equivalent to an average annual growth rate of 2.9 per cent. On a per capita basis, income rose by 8.6 per cent in real terms versus pre-pandemic levels, equivalent to an average growth rate of 2.1 per cent per annum.

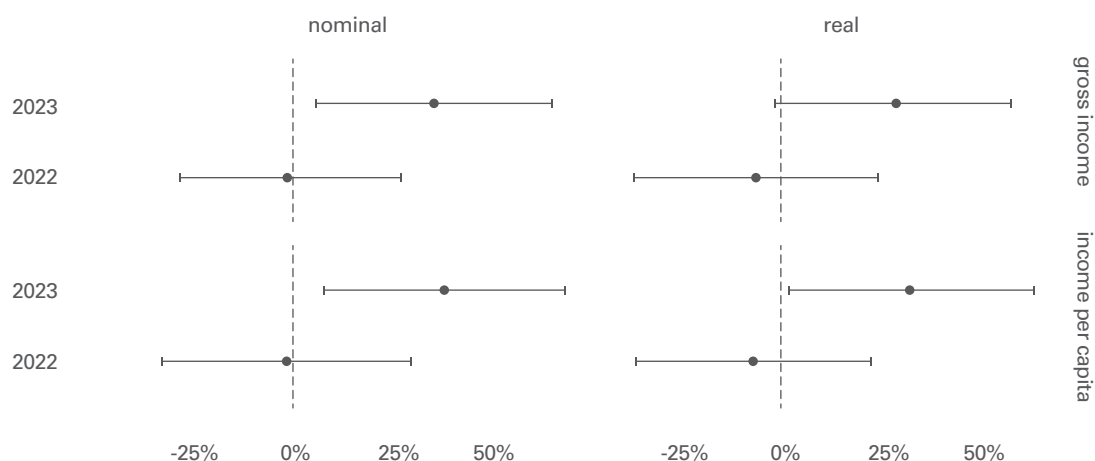
¹⁴ The enumerators had reported observations where they felt there were instances of both over-reporting and under-reporting with regard to household income and expenditure. This should be considered in the interpretation of the households' income and expenditure.

Figure 3.11: Median household income and income per capita, real and nominal; 2019, 2022 and 2023



Change in income was estimated with a multilevel linear model, using a log-linear specification of household income on time indicator variables and household random effects. Figure 3.12 reports coefficient estimates and 95 per cent confidence intervals. While the difference between 2023 and pre-pandemic household income was statistically significant, there is not enough evidence for increased real incomes. Similar conclusions were obtained for per capita income. Although the 2023 indicator variable is statistically significant, the confidence interval is too wide to preclude a practically insignificant rise in real income in 2023.

Figure 3.12: Percentage difference in income in 2022 and 2023 compared to 2019, estimates and 95 per cent confidence intervals



Note: Estimates derived from bivariate log-linear multilevel models.

Self-reported income was matched against poverty thresholds and gross household income percentiles for Penang, derived from the Poverty in Malaysia Report and Household Income and Expenditure Survey. Going by the poverty thresholds, low-income households did slightly better in 2023 even when compared against pre-pandemic times:

- The rate of hardcore poverty¹⁵ —the share of households that do not have adequate income to cover essential food needs—declined by a quarter compared to pre-pandemic rates. One in five households (21.5 per cent) were classified as hardcore poor in 2019, rising modestly to one in four in 2022 (25.4 per cent) and subsequently falling to 15.2 per cent in 2023.
- The rate of absolute poverty¹⁶ —the share of households that do not have adequate income to meet basic needs—slightly rose (2023: 19.9 per cent) since pre-pandemic (2019: 18.7 per cent) times. Although the rate of absolute poverty doubled in 2022 (32.3 per cent), it has since reverted to one in five respondents.
- The rate of relative poverty—the share of households that earn less than half the median

household¹⁷ —declined from just over four in five (82.5 per cent) households to three in four (75.8 per cent) households, a reflection of slower income growth at the state- level.

It is crucial to highlight that even the most generous threshold of poverty —relative poverty (RM3,251) that affects three in four households in our sample—fell short of meeting the living wage estimate of RM6,370 for a typical household in our sample (married couple with two children) living in George Town (2022/2023: EPF & Social Wellbeing Research Centre, 2023).

Further, we examined the share of households in the sample by their position in the income distribution of Penang’s households, as captured by the Household Income Survey. Before the pandemic, 36.3 per cent of respondents fell under the bottom 1 per cent¹⁸ of households by household income in Penang (Table 3.2), rising to 39 per cent in Round 1; this fell to 25.4 per cent in Wave 2. Just over three quarters of the sample fell within the bottom 10 per cent of Penang households in 2019; this rose to four in five in 2022 and fell to 64.7 per cent in 2023.

Table 3.2: Share of respondents falling within Household Income Survey (HIS) income thresholds

Income quantiles	2019 (Pre-pandemic)	2022 (Round 1)	2023 (Round 2)
Bottom 1%	36.3%	39.0%	25.4%
Bottom 5%	68.8%	70.9%	53.6%
Bottom 10%	75.1%	79.2%	64.7%
Poverty thresholds			
Hardcore poverty	21.5%	25.4%	15.2%
Absolute poverty	18.7%	32.3%	19.9%
Relative poverty	82.5%	86.1%	75.8%

Note: Balanced panel used for analysis. 2019 uses HIS 2019 thresholds; 2022 and 2023 use HIS 2022 thresholds.

¹⁵ Hardcore poverty is defined by the food Poverty Line Income (PLI), which quantifies the minimum income necessary for a household to cover essential food needs. Households with incomes falling below the food PLI are classified as experiencing hardcore poverty. The food PLI for Penang was RM1,036 in 2022, which is 13.5 per cent lower than the national food PLI.

¹⁶ Absolute poverty: A measure of poverty where the household income falls below the non-food PLI (RM1,213) and encounters difficulties meeting basic needs such as food, shelter, clothing etc. Penang’s non-food PLI is RM1,213, 12.9 per cent lower than the national threshold.

¹⁷ The median household in Penang earned RM6,502 in 2022, consistent with a relative poverty threshold of RM3,251.

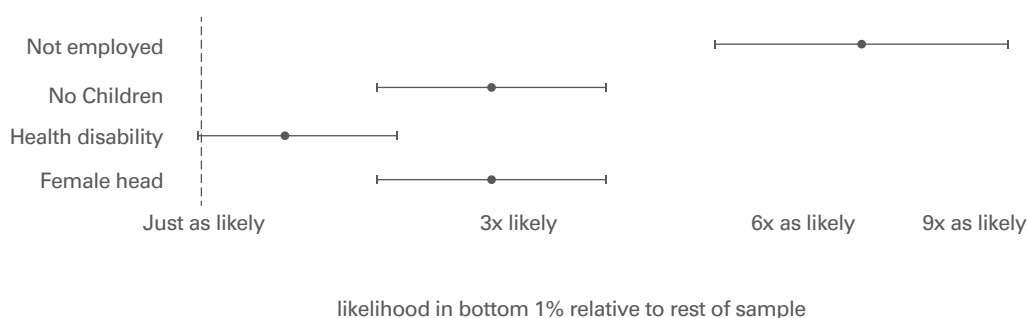
¹⁸ Upper threshold for gross household income percentiles of Penang households:

- Bottom 1 per cent: RM1,458 (2019); 2022: RM1,496 (2022).
- Bottom 5 per cent: RM2,357 (2019), RM2,258 (2022)
- Bottom 4 deciles: RM2,769, RM3,632, RM4,459, RM5,309 (2019); RM2,735, RM3,678, RM4,634, RM5,582 (2022).

Some characteristics of household heads were evaluated to determine risk factors for low-income households. The analysis revealed that households with members facing disability challenges were equally likely to be in the bottom 1 per cent, relative to other households (Figure 3.13). Within the sample, female-headed households and households without

children were nearly three (i.e., 2.71) times more likely to fall into the bottom 1 per cent (compared to male-headed households and households with children). Unemployment is the most critical risk factor, as unemployed household heads were approximately seven (i.e., 6.73) times more likely to be in the bottom 1 per cent when compared to employed households.

Figure 3.13: Odds ratios and 95 per cent confidence interval for the likelihood of earning within bottom 1 per cent of households relative to comparison group, selected household characteristics



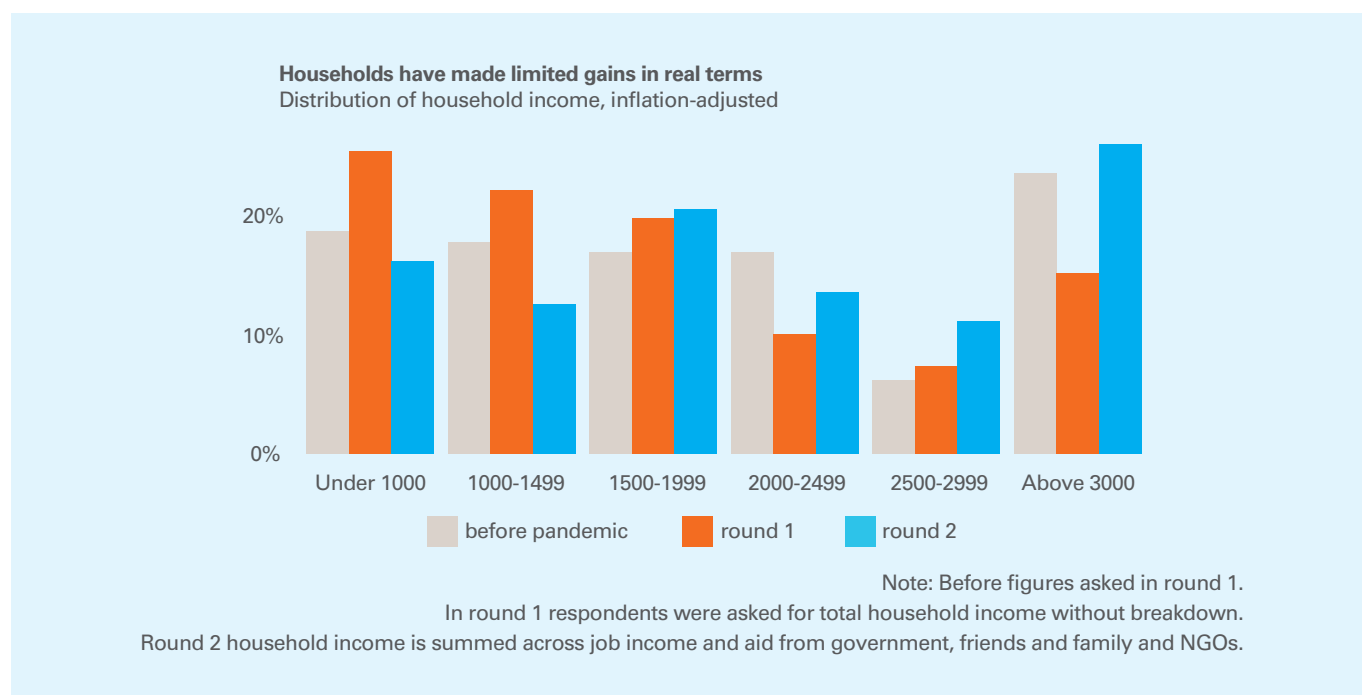
Note: The odds ratios are derived from logistic regression specifications which predict whether the household's income reported in Round 2 is within the threshold for the bottom 1 per cent of households reported in the Household Income Survey 2022. Separate regression specifications are estimated using the predictors: head of household not employed, no children in the household, persons with disabilities in the household and female head of household. Estimates for intercept omitted for brevity. Baseline comparison groups are: employed head of household, children in the household, no persons with disabilities in the household and male head of household respectively. x-axis truncated for readability.

To account for inflation, we adjusted reported incomes against Penang's Consumer Price Index (CPI). The resulting distribution of real income is reported in Figure 3.14. The bottom two household groups represented households earning the equivalent of what the bottom 1 per cent of households earned in 2019¹⁹. While Round 1 registered a steep increase in the share of the poorest households (2019: 36.5 per cent; 2022: 47.6 per cent) due to the impact of inflation

on real incomes, the following round registered a modest decline in the share of the poorest households, even compared to pre-pandemic levels (2023: 28.9 per cent). The share of households earning RM3,000 and above in real terms had remained similar to pre-pandemic levels (2019: 23.6 per cent; 2023: 25.9 per cent), indicating that households have made limited, if any, gains in real income due to inflation.

¹⁹ The upper threshold for the bottom 1 per cent of Penang's households was RM1,458 in 2019.

Figure 3.14: Distribution of household income, inflation-adjusted; before pandemic, Round 1 (2022) and Round 2 (2023)



Income growth was strongest for elementary workers. Service and sales workers, plant and machine assemblers, and elementary workers had markedly lower median income in 2022 compared to the pre-pandemic period (Table 3.3). Among these, service and sales workers experienced the largest decline at -4.9 per cent. However, by 2023, median household income per occupation exhibited positive growth, with household heads earning more than their 2019 income levels. Elementary workers had the highest growth rate at 6.4 per cent.

Table 3.3: Average annual growth in median real household income by occupational category

By occupational category of head of households	2019 vs 2022	2019 vs 2023
Service and Sales Workers (n = 104)	-4.9%	4.2%
Plant/Machine Operators and Assemblers (n = 61)	-3.3%	3.5%
Elementary Workers (n = 38)	-1.5%	6.4%

From the focus group discussions, income remained the same for those working permanent jobs. While the discussants were grateful that they have a steady stream of income, their income had not increased proportionally with the rising cost of living. As for contract or temporary job workers, their income stream remained unstable, as they only get paid as and when they are employed. Examples of such jobs include postpartum masseuse, lorry driver, cleaner and caterer helper. A common concern expressed by senior citizens in these discussions was that they cannot expect their adult children to support them because their children also need to provide for their growing families. Hence, beneficiaries of zakat (obligatory form of charity in Islam) rely completely

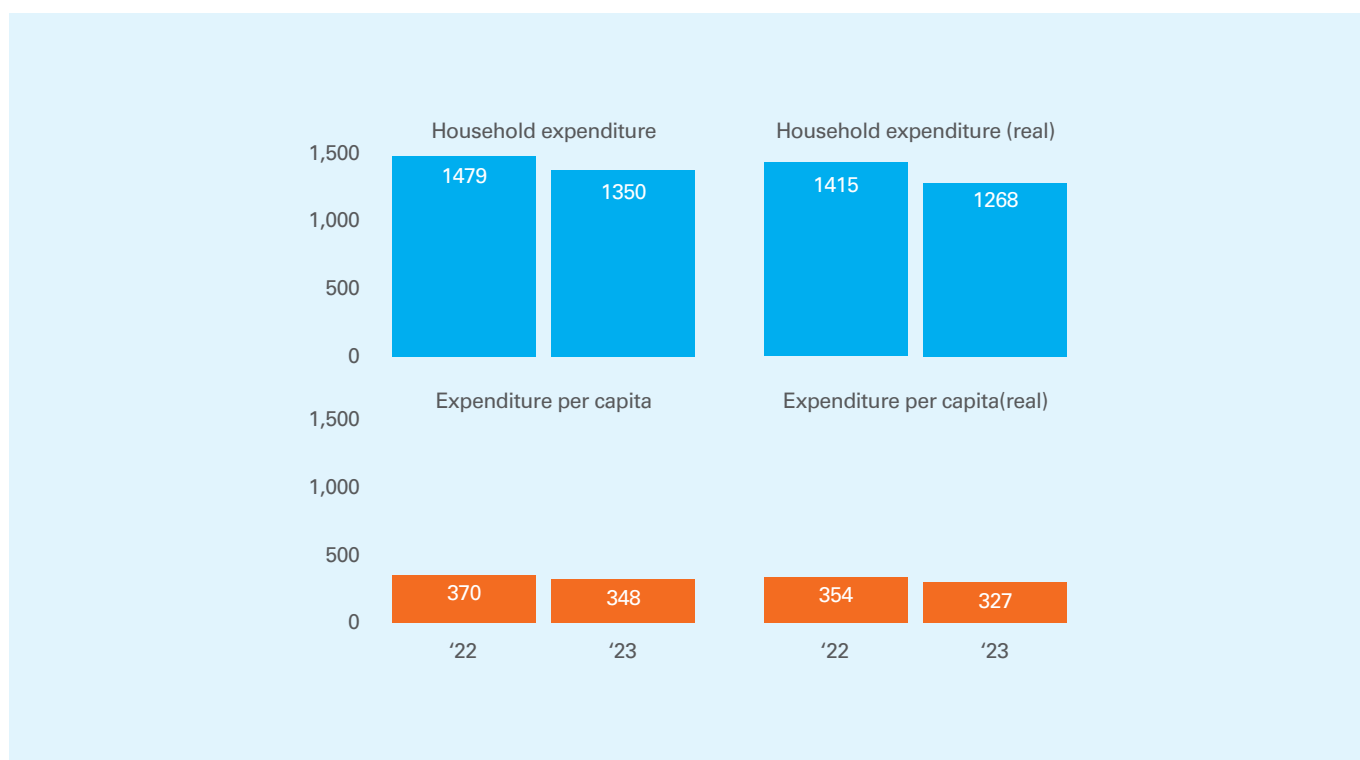
on this aid. This disparity in findings can be attributed to the collective perception that they must spend sparingly, even if they may have more earnings. The misalignment of findings on income growth between quantitative surveys and qualitative focus group discussions is possibly because: participants in focus group discussions may avoid disagreeing and rather go along with the group's opinions or ideas to fit in; the topic of income growth is considered confidential, especially when the other participants are neighbours. This issue of group dynamics and social pressures which hinders expression of diverse viewpoints is discussed as a limitation in focus group discussions in the Methodology section.

Expenditure²⁰

Median household expenditure per capita declined by 7.6 per cent from 2022 to 2023²¹. The median household's overall monthly expenditure in 2023 amounted to RM1,350²² (Figure 3.15). Between Rounds 1 and 2, the median household's expenses decreased by 8.7 per cent²³, or 10.4 per cent in real terms. On a per capita basis, households spent RM348 per person, a decline of 5.9 per cent from the previous year, or 7.6 per cent in real terms.

Nevertheless, 10 per cent of households registered an increase in their expenses of more than RM665.20, while another 10 per cent of households managed to cut their costs by more than RM934. The median change in household expenditure showed a decline of RM106, while expenditures for the middle half of households fell within the range of RM495 to RM225.

Figure 3.15: Median household expenditure and expenditure per capita, real and nominal; 2019, 2022 and 2023



Households earning under RM2,000 spent on average RM1,196, which is a third less than the subsequent income group (RM2,000-2,999; Table 3.4). Households earning from RM2,000 to RM3,999 did not, however, spend significantly more comparatively and were spending notably less than the Household Expenditure Survey (HES) 2022 estimates.

From focus group discussions, respondents told us that they had to change their spending habits to cope with the rising cost of living by only purchasing what they need for the day, instead of buying more for future use. This is particularly true for food items; our respondents gave us the example of only buying two eggs a day instead of buying a tray of eggs for a week. For other groceries such as laundry detergent, toiletries and other cleaning agents, they only buy more if there was a discount.

²⁰ In Round 1, respondents were asked about their average current household spending. In Round 2, respondents were asked about their household spending in the current month. Given the difference in definitions, decline in expenditure from Round 1 to Round 2 could be reflective of large month-to-month variation in expenditure for a household.

²¹ The decline is statistically significant at the 5 per cent level (95 per cent CI: [-21.2per cent, -4.9 per cent]).

²² For comparison, the 2022 Household Expenditure Survey Report reports that the bottom 40 per cent of Penang's households (by household income) spend on average RM3,172, up from RM2,686 in 2019 (CAGR 5.7 per cent); while households earning under RM2,000 spent RM1,777 on average. The HES may overstate monetary expenditure due to the inclusion of imputed rent as a household expense.

²³ For comparison, the Household Expenditure Survey records a growth of 5.7 per cent per annum in total expenditure for the bottom 40 per cent of households (by gross income) between 2019 and 2022.

Table 3.4: Average expenditure by household income group, 2022 (RM)

Household income group (as of 2022)	Survey estimates	HES 2022
Under 2000 (n = 251)	1,196	1,777
2000-2999 (n = 101)	1,856	2,442
3000-3999 (n = 55)	1,976	3,081

Households mostly registered a decline in average real expenditure in 2023, with the level of spending in proportion to the different income levels (Figure 3.16). From 2022 to 2023, the poorest households experienced the largest decline in real expenditures (-12.7 per cent) (Table 3.5). The percentage change

in expenditure decreased with higher incomes, and the income group above RM4,000 observed the lowest decline of -4.7 per cent. The lowest decline in expenditure for the highest income group was in line with expectations as households with higher incomes are inclined to spend more.

Figure 3.16: Average real expenditure, 2022 and 2023 (RM, 2019 = 100), by household income group

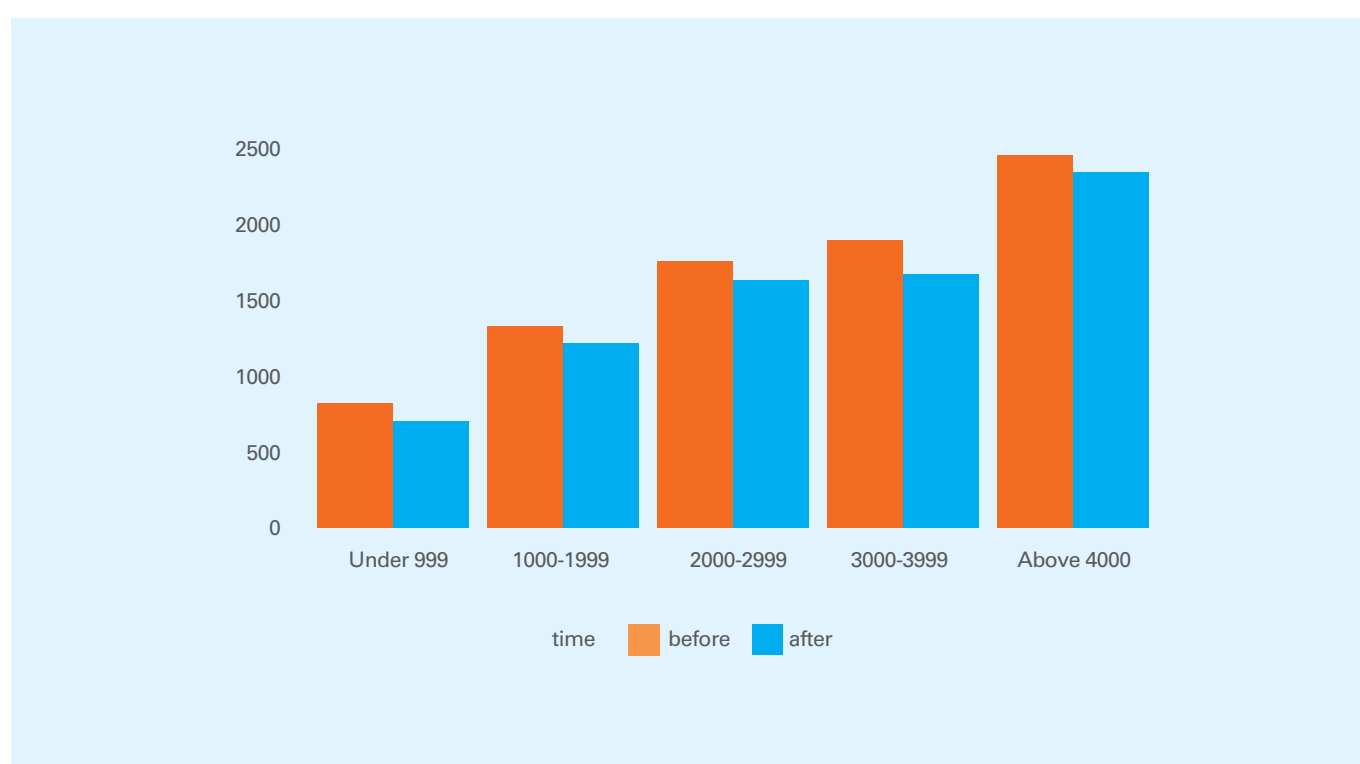


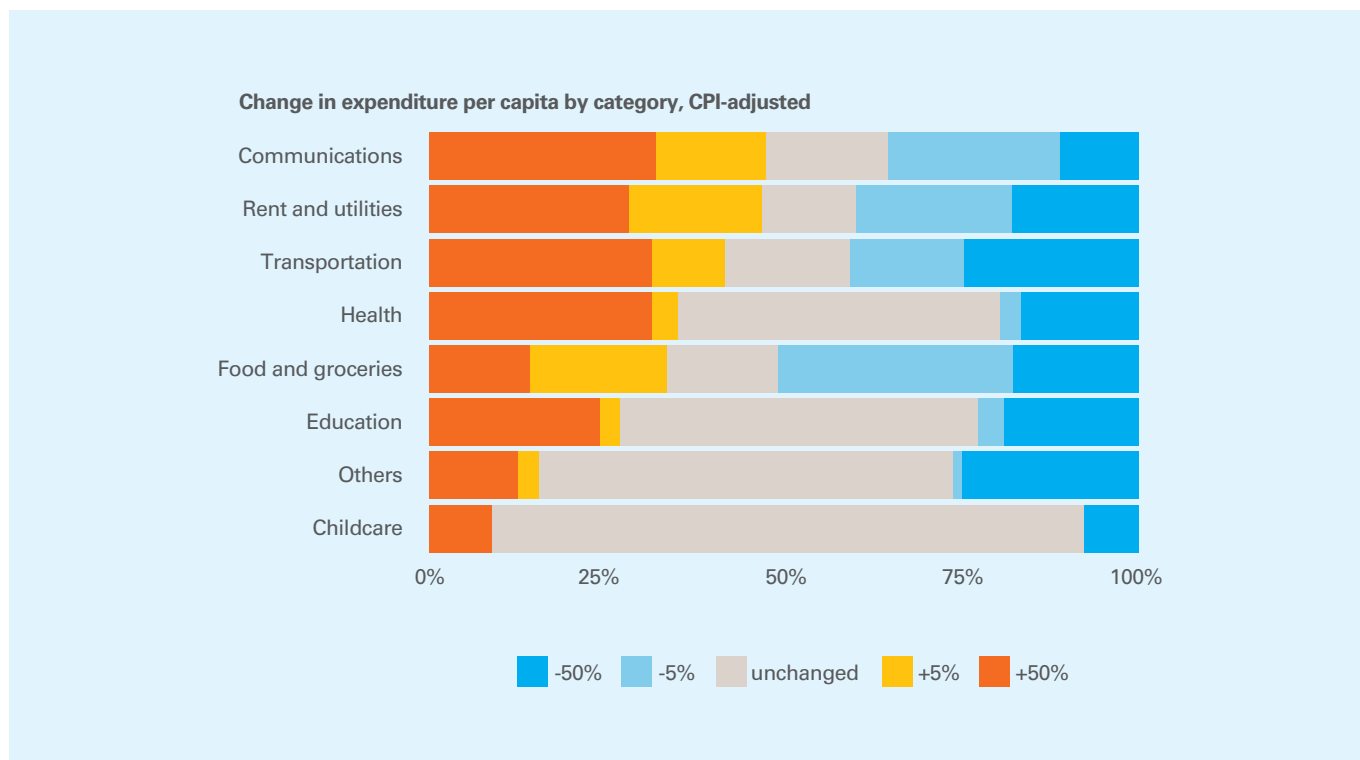
Table 3.5: Average real expenditure, 2022 and 2023 (RM, 2019 = 100)

Income groups (as of 2022)	2022	2023	Change
Under 1000 (n = 98)	825.54	720.34	-12.7%
1000-1999 (n = 153)	1,347.98	1,223.92	-9.2%
2000-2999 (n = 101)	1,775.15	1,643.62	-7.4%
3000-3999 (n = 55)	2,072.02	1,891.78	-8.7%
Above 4000 (n = 26)	2,456.92	2,341.63	-4.7%

Food spending per capita (adjusted as per CPI) registered the biggest decline, with just over half (51.2 per cent) of the respondents reducing their spending, including close to a fifth (18.2 per cent) spending over 50 per cent less (Figure 3.17). Except for the category of 'others', there were more households increasing

their spending per capita than those who had spent less. Communications as well as rent and utilities registered the highest increase in spending per capita among the households. These two categories, along with food and groceries and transportation, registered the highest change in expenditure per capita.

Figure 3.17: Share of respondents by change in expenditure per capita by category between Round 1 and Round 2, CPI-adjusted



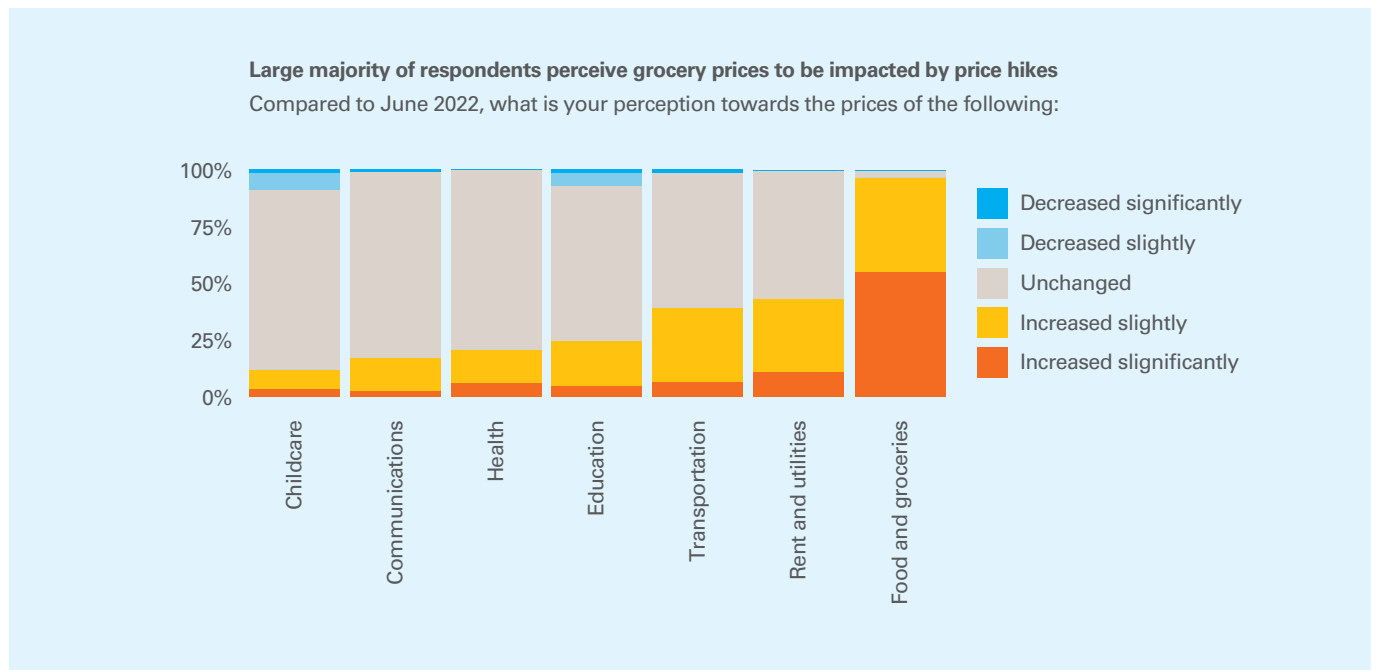
Price perception

Inflation in Malaysia and Penang had been chiefly driven by higher aggregate demand, supply chain disruptions, higher commodity prices and fiscal stimulus measures. Specifically, with the reopening of the borders in 2022, demand for food and services experienced a rapid increase. However, due to persistent pandemic-related challenges such as labour shortages and supply chain constraints in the global market, supply could not match the surging demand, thus causing prices to increase. Consistent with inflationary trends, all participants across the focus group discussions complained about the rising cost of living, stating that they now bought fewer things with the same amount of money.

Respondents were asked about their subjective perceptions of the change in prices across various categories in the past year. We found that there was widespread belief that the cost of food and groceries had increased significantly compared to the previous year. Almost all survey respondents (97 per cent) perceived that the price of food and groceries had increased, and 55 per cent considered these increases to be very substantial, posing a financial burden (Figure 3.18). This was also reflected in the food inflation rates for Penang, where the inflation rate of 6 per cent²⁴ was the highest among all items in the CPI basket.

²⁴ Averaged between February and May 2023, the duration of the survey period.

Figure 3.18: Share of respondents by perception of price increases compared to June 2022 by item category



This perception was further solidified by the focus group discussants, who professed that the most significant difference in cost of living was felt during grocery runs, as food and daily necessities are the most frequently consumed items. Families with young children who depend on formula milk found it particularly challenging and they complained of having to spend a few hundred Ringgit every month just for milk.

Rent and utility prices were also thought to have increased, with 42.5 per cent of respondents acknowledging price hikes, of which 10.4 per cent found the increases to be relatively significant. Transportation was another area with noticeable price increases, where 39.5 per cent of respondents felt the impact.

Conversely, costs related to education (68.5 per cent), health (79.2 per cent) and communication (81.7 per cent) were seen as relatively stable, with

most respondents believing that the prices had mostly remained the same. Though the majority of respondents perceived that prices for most items had increased or remained unchanged, a small percentage of respondents noted a slight decrease in prices specifically for education (5.8 per cent) and childcare (7.6 per cent).

Focus group discussants generally agreed with the survey results, except for perceived prices of rent and utilities. This was likely because rent at the PPR did not increase; RM102 a month for PPR Sungai Pinang and PPR Mak Mandin, and RM300 for PPR Desa Wawasan. However, they felt that the prices for transportation, education, health and communication remained largely the same. Most of them either used public transportation, travelled by motorcycle, or relied on their children for transport. In terms of healthcare expenditure, patients with chronic illnesses visited government health clinics or the Penang General Hospital for routine checkups and to get their medications. These government clinics and hospitals are heavily subsidised and charge minimal fees.

Savings

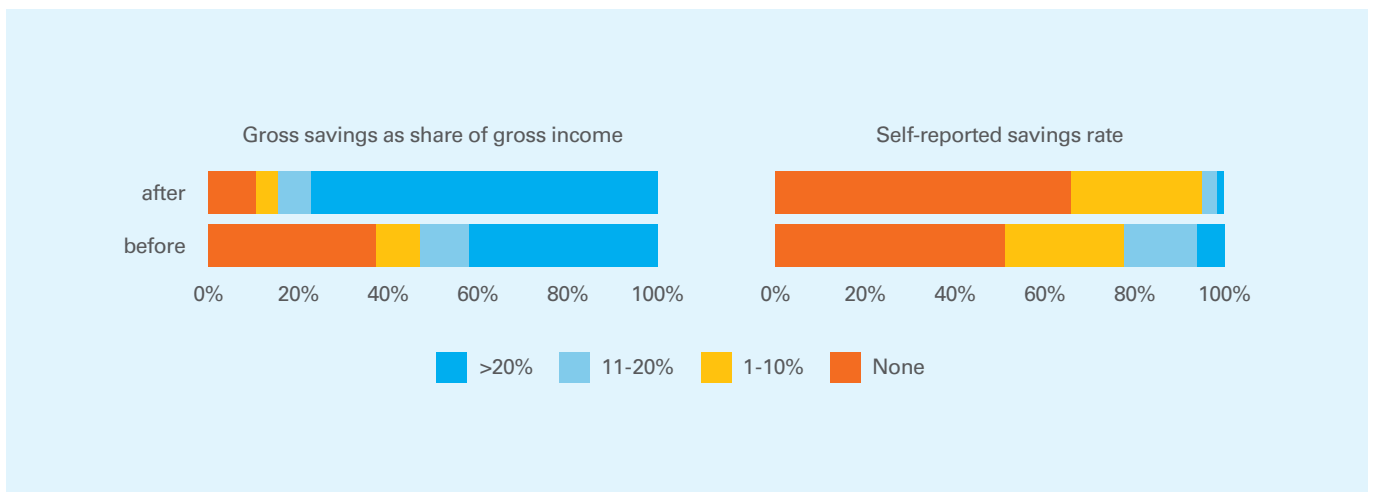
In both survey rounds, respondents were asked about the portion of income they managed to save. Subsequently, these responses were compared against households' income and expenditure self-reports to calculate their gross savings (income less expenditure).

A total of 66.4 per cent of household heads reported failing to save any portion of their monthly income (Figure 3.19, right panel). A similar proportion of households (64.4 per cent) indicated that their monthly household income was insufficient to cover their expenses. Nevertheless, 29.4 per cent of respondents reported saving between 1 per cent and 10 per cent

of their monthly income, while only 4.2 per cent of households had savings exceeding 10 per cent of their overall income. However, based on income and expenditure reports provided by respondents, this share fell to 11.1 per cent.

Focus group discussants in the districts of Northeast and Seberang Perai Tengah shared similar views as the survey respondents. Many participants reported inadequate savings due to low-wage jobs, such as cleaners, security guards and odd-job workers. This situation was exacerbated by the rising cost of living, which further depleted their already limited financial resources. Respondents expressed that the rising cost of living, especially the price of food and other essential items, left little room for savings.

Figure 3.19: Gross savings and self-reported savings rate, Round 1 (before) and Round 2 (after)

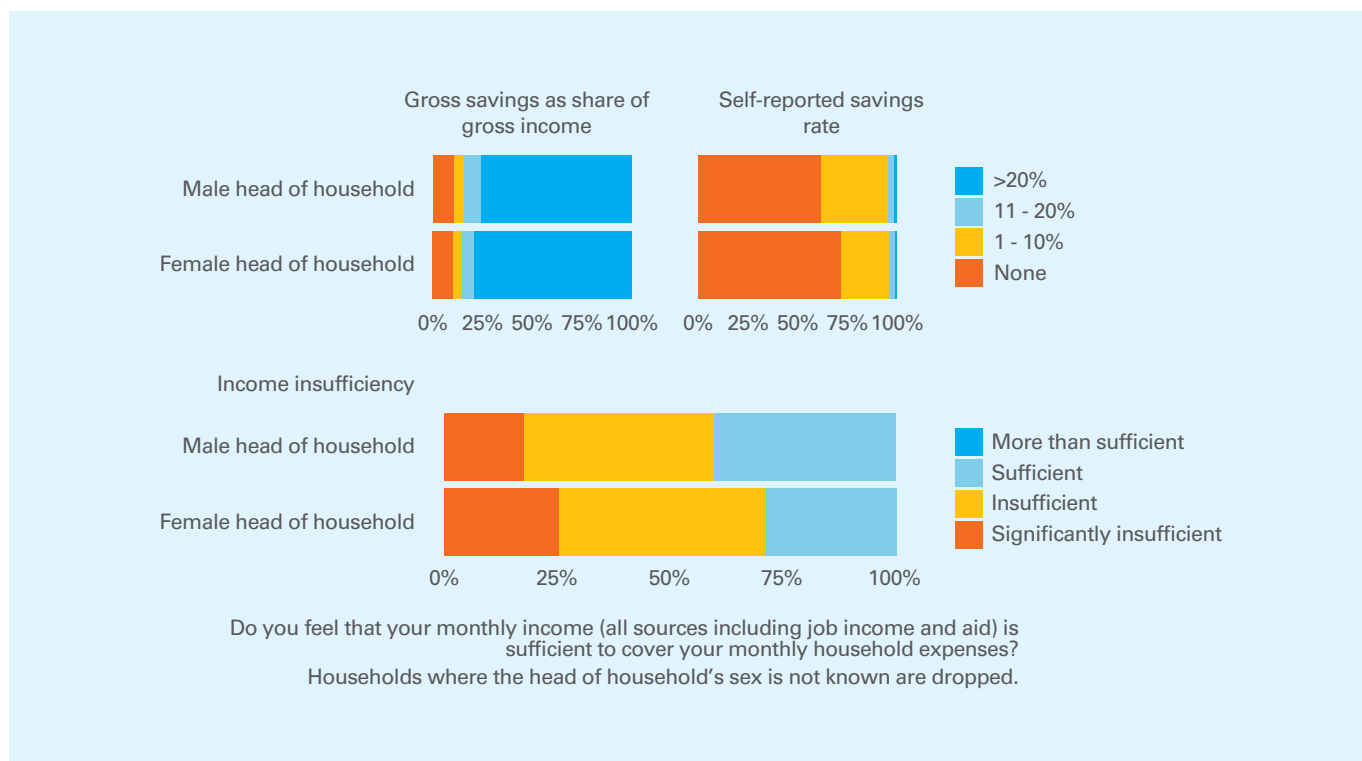


Although self-reported savings showed a worsening of households' savings, income and expenditure self-reports indicated an improvement in household savings, with a healthy three quarters of households saving over a fifth of their income. Indeed, the median household savings had quadrupled from RM180 to RM820. However, the majority of household heads perceived that their income was inadequate to cover their monthly expenses (Figure 3.20).

Female-headed households were found to have lower savings than male-headed households (Figure 3.20), with a higher percentage reporting no savings compared to male-headed households. Female-headed households also reported higher rates of inadequate income; however, this was not reflected in the difference between reported incomes and expenditures.

Male household heads were more likely (40.2 per cent) to report their income as adequate, while less than one third of female household heads shared the same sentiments. In addition, the percentage of female households reporting their income as significantly inadequate was 7.5 points higher than that of male household heads, indicating that female household heads struggle significantly more with inadequate income. The same was observed during focus group discussions, where the majority of the respondents stated that they were not earning enough to cover their expenses. The households' perception of their supposed lack of savings should be taken into account, as this could have repercussions on their perceived standard of living, financial security and mental health.

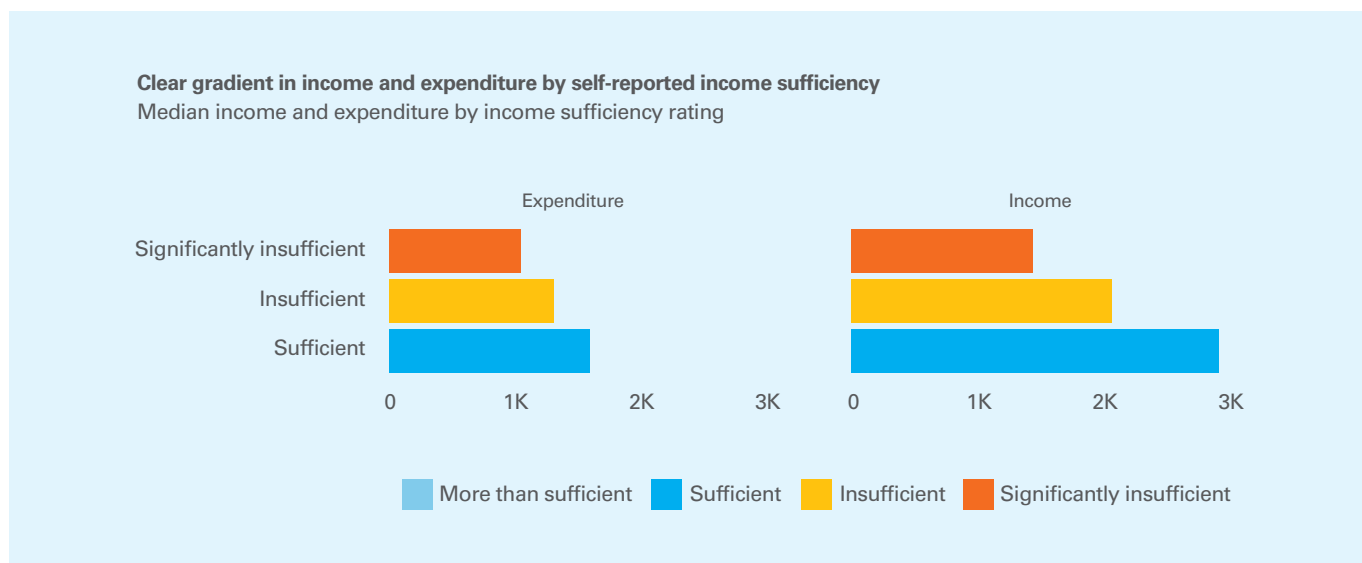
Figure 3.20: Gross savings, self-reported savings rate and perceived income adequacy by sex of head of household, Round 2 (2023)



The median income and expenditure for households reporting income adequacy were RM2,900 and RM1,600 respectively, implying a savings rate of 45 per cent (Figure 3.21). In contrast, households who regarded their income as significantly inadequate reported an income of RM1,440, just under the

national minimum wage, with expenditure taking up slightly over 70 percent of income. Households with inadequate income earned 40 per cent more than households with significantly inadequate income and 30 per cent less than households with adequate income, with an implied savings rate of 37 per cent.

Figure 3.21: Median income and expenditure by income sufficiency rating

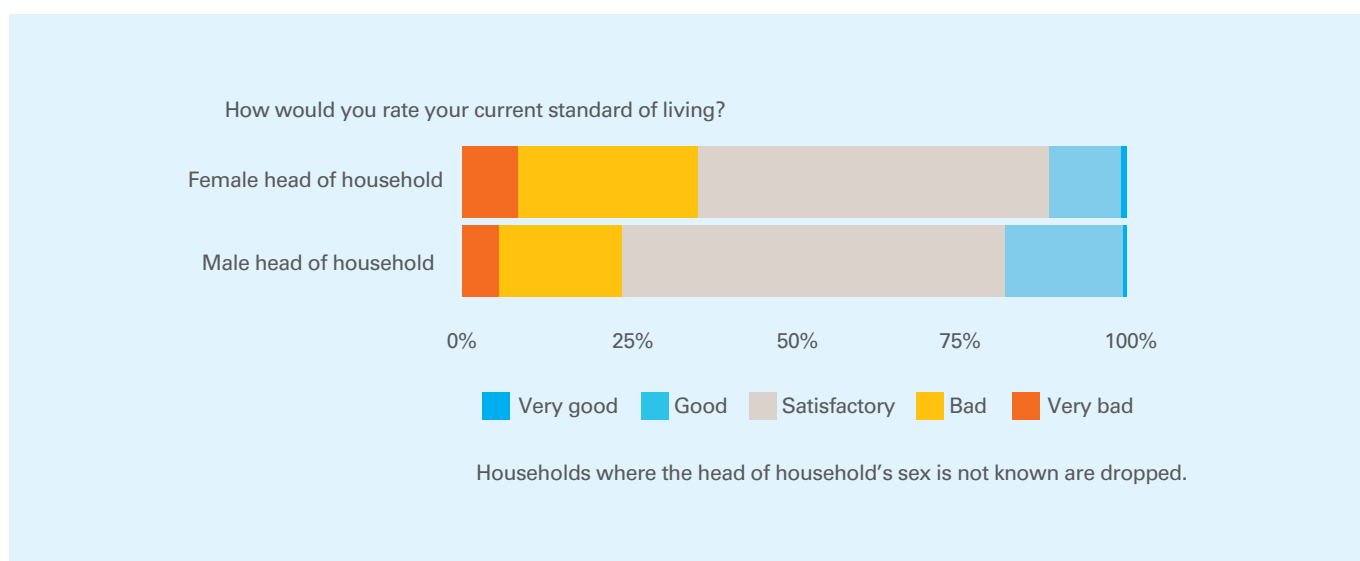


On the other hand, the focus group discussion in Seberang Perai Utara revealed contrary findings. The majority of respondents in this discussion indicated that they have accumulated savings, which they intend to use when necessary. This disparity could be attributed to the demographic characteristics of the respondents in Seberang Perai Utara, where the majority are retirees.

Living standards

A total of 70.9 per cent of respondents rated their current standard of living as satisfactory or better. Satisfaction was 10 points lower for female-headed households (64.4 per cent) compared to three quarters of male-headed households (75.8 per cent) (Figure 3.22). Female-headed households generally reported lower satisfaction with their standard of living, as a higher percentage of them indicated bad and very bad living standards. At the same time, the share of female household heads who reported good and very good standards was also lower than their male counterparts.

Figure 3.22: Self-reported standard of living by sex of head of household



Living standards ratings were generally consistent with self-reported income and expenditure (Figure 3.23). Households reporting good living standards had a median income and expenditure of RM3,000 and RM1,750, respectively, while households reporting very bad living standards had a median income and expenditure of RM1,090 and RM1,060, respectively. This illustrates that those who had more money to spend and were spending more perceived higher standards of living.

Figure 3.23: Median income and expenditure by living standards rating

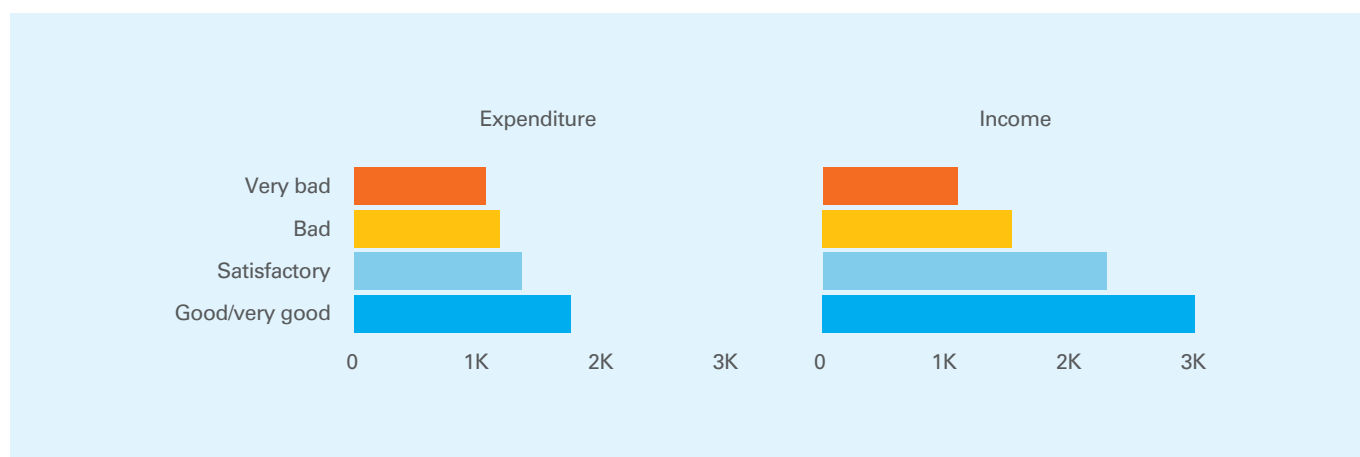
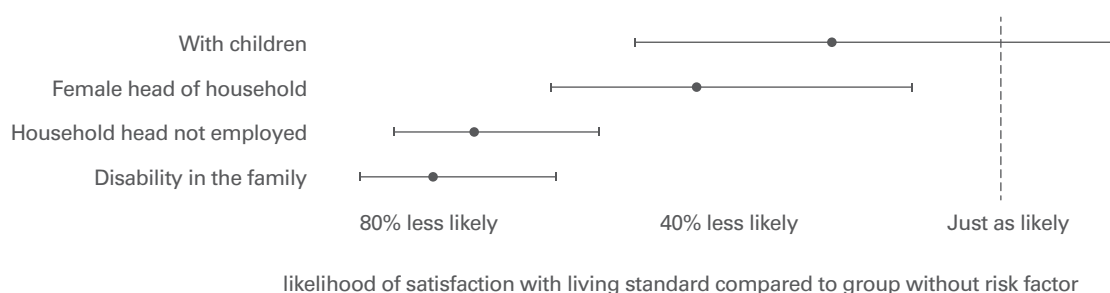


Figure 3.24 shows the impact of selected household characteristics on the likelihood of satisfaction with living standards as 'odds ratios'. Families with persons with disabilities were 80 per cent less likely to report satisfaction with living standards compared to families without persons with disabilities. The rate was similar for households where the household head was not employed, compared to households where the household head was employed. A female head of

household was 42 per cent less likely to be satisfied with living standards relative to a male head of household. Households with children had 12 per cent lower likelihood of satisfaction with living standards relative to households without children; however the 95 per cent confidence interval (represented by the error bar) indicate that we do not have enough evidence that households with children indeed have lower satisfaction with living standards.

Figure 3.24: Odds ratios and 95 per cent confidence interval for likelihood of satisfaction with living standards, selected household characteristics



Note: For each household characteristic, odds ratios are estimated separately with logistic regression. The odds ratios are derived from separate logistic regression specifications for the predictors: children present in household, female head of household, household head not employed and person with disabilities in the household. Baseline comparison groups are: no children in the household, male head of household, household employed and no persons with disabilities in the household. Estimates for intercept omitted for brevity. For the employment predictor, only households where the head of household is of working age are considered. x-axis truncated for readability.

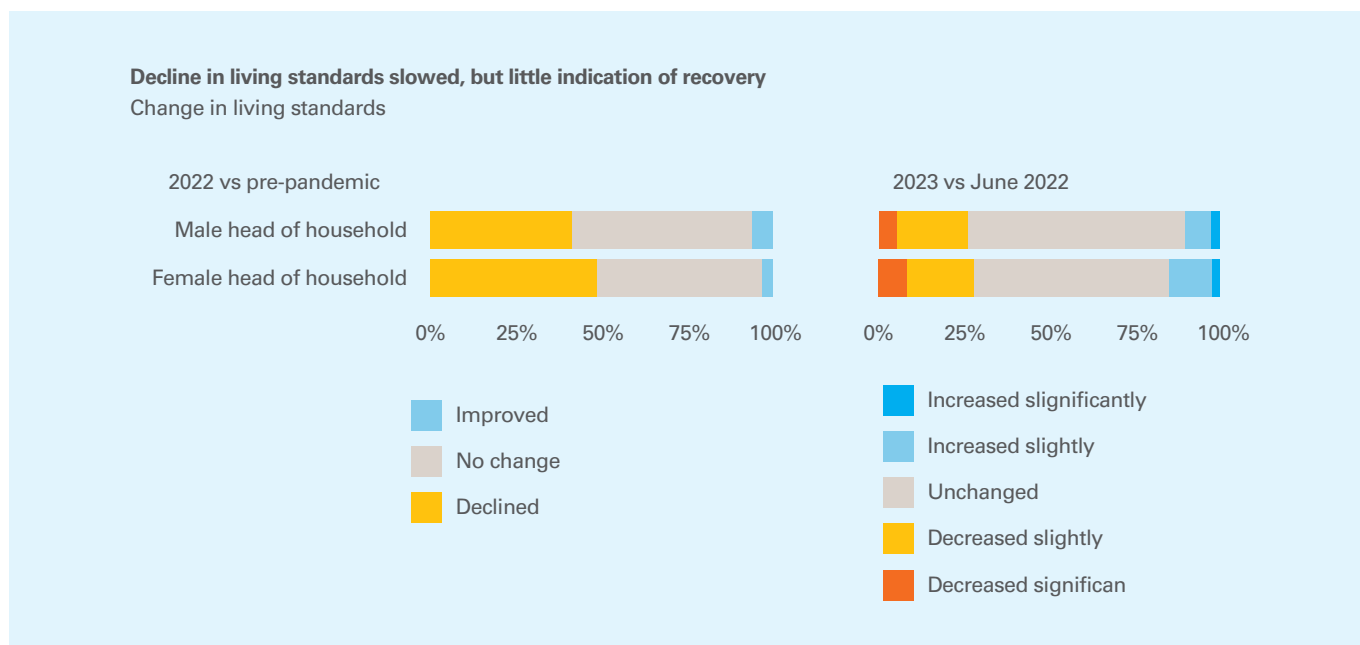
Though a significant proportion of households reported no change in their living standards following the end of pandemic-related movement restrictions in early 2022 compared to pre-pandemic times, a high percentage of households reported worsening living standards (Round 1). This trend was particularly prominent in female-headed households, with nearly 50 per cent experiencing deterioration in their living conditions (Figure 3.25).

A year on, a smaller proportion of respondents in Round 2 reported declining living standards, indicating that the decline had slowed, but there was little indication of recovery. In general, the majority of household heads indicated that their living standards had remained the same compared to June 2022. However, a slightly higher proportion of female household heads believed that their standard of living had declined compared to male household heads,

particularly a significant decrease in living standards. At the same time, female household heads reported better living standards comparatively, with a higher percentage of female-headed households citing slight improvements (12.8 per cent).

Focus group discussants perceived their living standards to have dropped compared to before as they needed to be careful with their spending. Other non-financial related factors contributing to their negative perception included the increasing amount of litter within their neighbourhood. This was particularly aggravating for the residents at PPR Sungai Pinang and PPR Desa Wawasan, where stray cats and irresponsible throwing of rubbish were the main contributing factors. During our discussion at PPR Desa Wawasan, we experienced littering first-hand with rubbish being thrown down from the flats by irresponsible residents.

Figure 3.25: Change in living standards, Round 1 vs pre-pandemic and Round 2 vs Round 1, by sex of head of household



3.3 Aid

Key Insights

- The amount of average aid received had risen substantially from pre-pandemic levels.
- Heads of households were knowledgeable when it came to sources of aid and how to get assistance.
- The State Welfare Department and elected officials were identified as the most helpful resources for aid.
- Half of the households found the aid received to be adequate and at least slightly helpful.
- Federal government cash transfers were the most preferred type of aid.
- Most households used the aid for food and groceries, followed by rent.

Federal cash transfers

The main cash transfer aid programme carried out by Malaysia's Federal Government is a conditional, income-tested programme to supplement the incomes of low-income households²⁵. In general, aid amounts vary according to marital status and the number of children in the family, and cash disbursements are conducted on a quarterly basis. It has undergone several revisions, particularly over the course of the pandemic, during

which the federal government expanded aid amounts and disbursed additional targeted assistance to address specific vulnerable groups.

Federal aid was disbursed in 2019 and 2020 under the Bantuan Sara Hidup (BSH)²⁶ programme, where households with income of RM4,000 and below were eligible for monetary assistance. The total amount of aid varied from RM550 to RM1,480. Shortly after the pandemic outbreak in early 2020²⁷, additional broader

²⁵ See also Feature Article 1.2 in the Economic Outlook 2024 (Ministry of Finance, 2023) for a current review of Malaysia's social safety net.

²⁶ See Bantuan Sara Hidup (BSH) Design Considerations for Cash Transfer Programming (Cheng, 2019) for a comparison of BSH with its predecessor, BR1M.

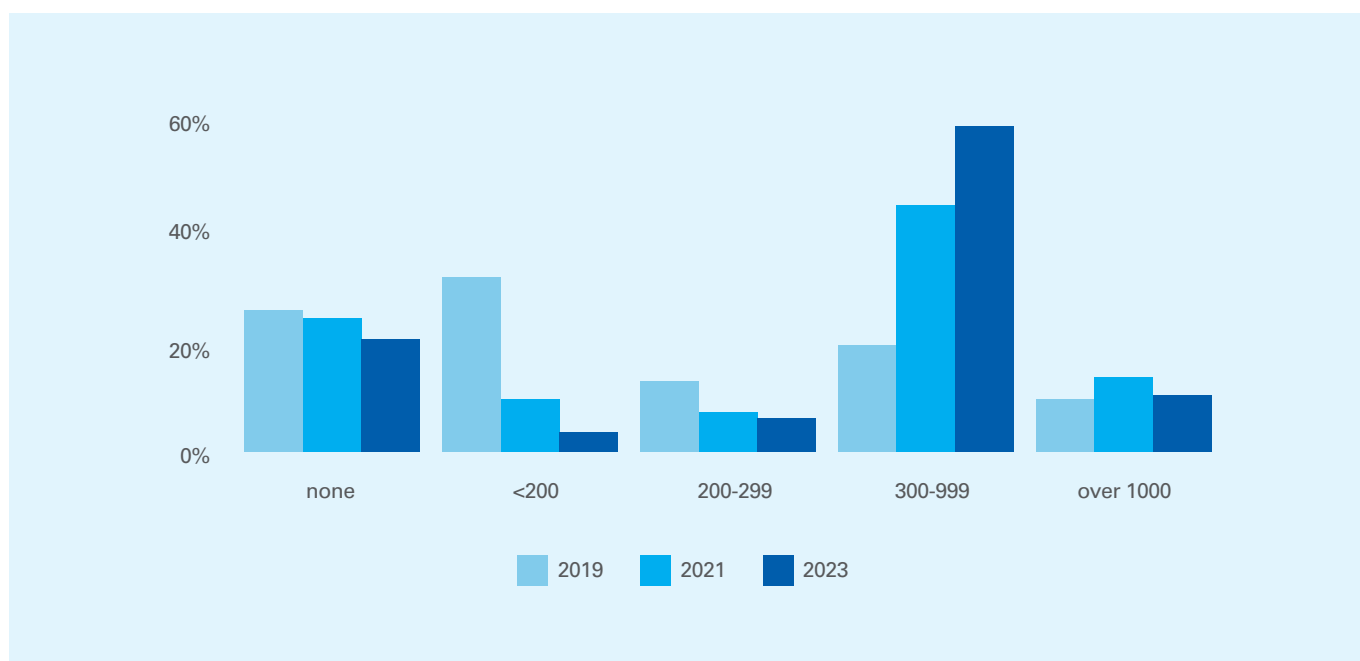
²⁷ See Flanders et al., (2020), and Loong & Wan Usamah (2022) for a review of cash transfers policy responses during the initial pandemic outbreak.

cash assistance was disbursed under Bantuan Prihatin Nasional (BPN) to include higher income groups (Cheng, 2020); subsequently, there was BPN 2.0. In 2021, this federal aid was renamed as Bantuan Prihatin Rakyat (BPR). Households earning RM5,000 and below were eligible for BPR, where financial assistance received was between RM1,800 and RM350. Additionally, there was a one-off payment of RM500 as part of the National People’s Well-being and Economic Recovery Package (PEMULIH), while the Special COVID-19 Aid (BKC) provided one-off cash payments to persons who had lost income or the next-of-kin of COVID-19 fatalities.

In 2022, the main cash assistance programme was rebranded as Bantuan Keluarga Malaysia (BKM). Federal assistance was then repackaged as Sumbangan Tunai Rahmah (STR) in 2023. The household income threshold of RM5,000 still applied, but financial assistance was increased to between RM350 and RM2,500.

Government assistance received by the survey respondents had substantially risen from pre-pandemic levels (during the current survey round; Figure 3.26), as reflected in the increasing amounts of government aid. Median quarterly aid nearly doubled from 2019 to 2021 from RM162.50 to RM300.00 in 2023. However, at 7.4 per cent of median expenditure (RM1,350), this fell short of the 20 per cent threshold suggested in Cheng (2019). Around a tenth of households received aid receipts of over RM1,000 (9.6 per cent) in 2019, which was maintained in 2023 (10.2 per cent). However, the proportion of households receiving between RM300 and RM999 in aid tripled from 19.4 per cent in 2019 to 59.0 per cent in 2023, in line with the introduction of additional amounts for non-income categories from 2020 onwards. Additionally, respondents included SOCSO and zakat payments when reporting aid for 2023, which may explain the significant increase in median aid.

Figure 3.26: Average quarterly government aid payments, 2019, 2021 and 2023



Note: 2019 and 2021 is the quarterly average from self-reporting of government aid amounts in the years 2019 and 2021. 2023 is obtained from self-reporting of government aid amounts in the past month; however, the survey was conducted following the quarterly disbursement of the Sumbangan Tunai Rahmah (January to April 2023). 2023 data should be interpreted with caution, as disbursements for certain categories of recipients were not distributed uniformly across the year.

Helpfulness and adequacy of government aid schemes

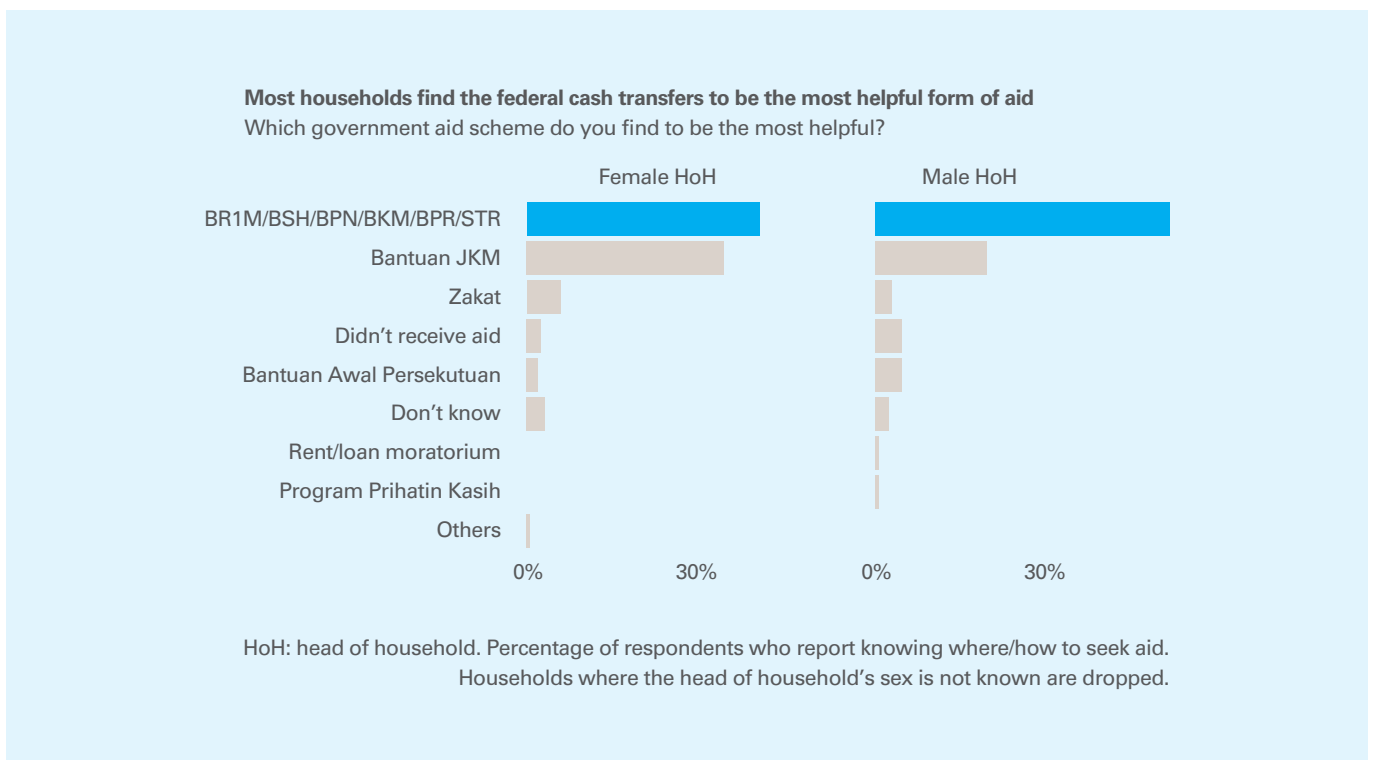
Even though cash aid covered a mere 7.4 per cent of respondents’ expenditure, respondents overwhelmingly selected the main cash transfers programme conducted by the federal government as the most helpful government aid scheme (Figure 3.27), and this applied to both male and female household heads.

The assistance provided by the JKM was ranked as second most helpful by household heads. Female household heads were observed to hold JKM’s

assistance in higher regard. In contrast, JKM received significantly lower approval ratings among male household heads. Other forms of aid were considered much less helpful when compared to the assistance from STR and JKM.

Our interview with JKM during the first round of the project revealed that aid in the form of food baskets from government, NGOs and corporations had been distributed by JKM through RELA (Malaysian Volunteer Corps Department) since 2020. Meanwhile, district offices coordinated the fair distribution of federal and state aid.

Figure 3.27: Perceived helpfulness of government aid schemes by sex of head of household



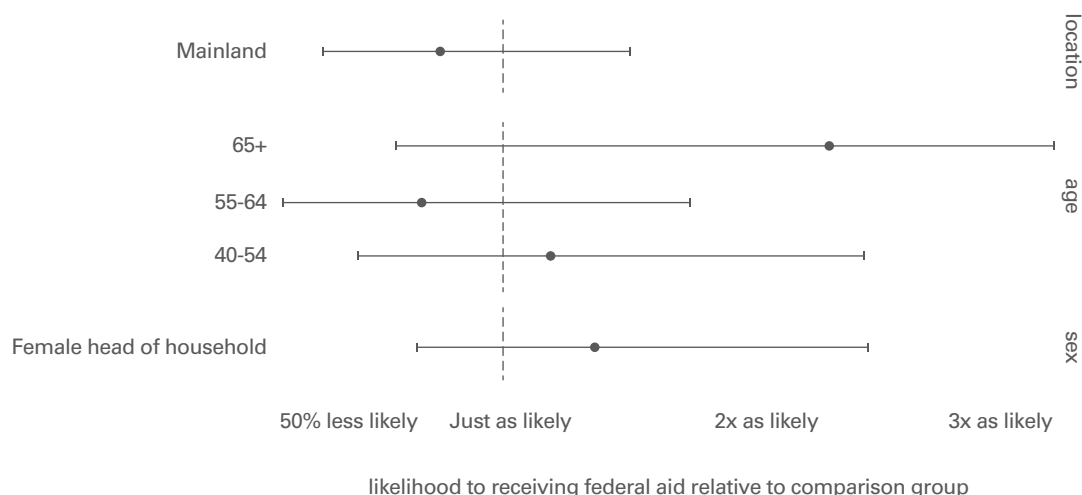
Aid exclusion

From the quantitative survey, 85.9 per cent²⁸ of households earning below RM5,000 (the federal cash transfers threshold) reported that they had received federal aid. Likewise, in the focus group discussion held in Seberang Perai Utara, it was observed that a significant majority of the participants had been

recipients of federal cash transfers. While we did not find any statistically significant risk factors for exclusion in the federal aid programme, estimates indicated that male, mainland respondents and households headed by persons aged 55-64 were less likely to receive federal aid (Figure 3.28). There were no significant differences noted for male and female-headed households.

²⁸ This is markedly higher than estimates from the Global Financial Inclusion Database 2021 (World Bank, 2023), where the share of persons within the bottom two quintiles of Malaysian households who report receiving government transfers were 53 per cent and 65.2 per cent, respectively (author’s estimates; analysis adapted from Cheng (2019)). Similar shares were found for urban-dwelling respondents (55.6 per cent, 61.3 per cent).

Figure 3.28: Odds ratios and 95 per cent confidence interval for likelihood of receiving federal aid relative to comparison group, selected household characteristics



Note: Households below RM5,000 monthly income only. The odds ratios are derived from separate logistic regression specifications for the predictors: location, age and sex of head of household. Comparison group for age: under 40; location: island; head of household: female. Estimates for intercept omitted for brevity. x-axis truncated for clarity.

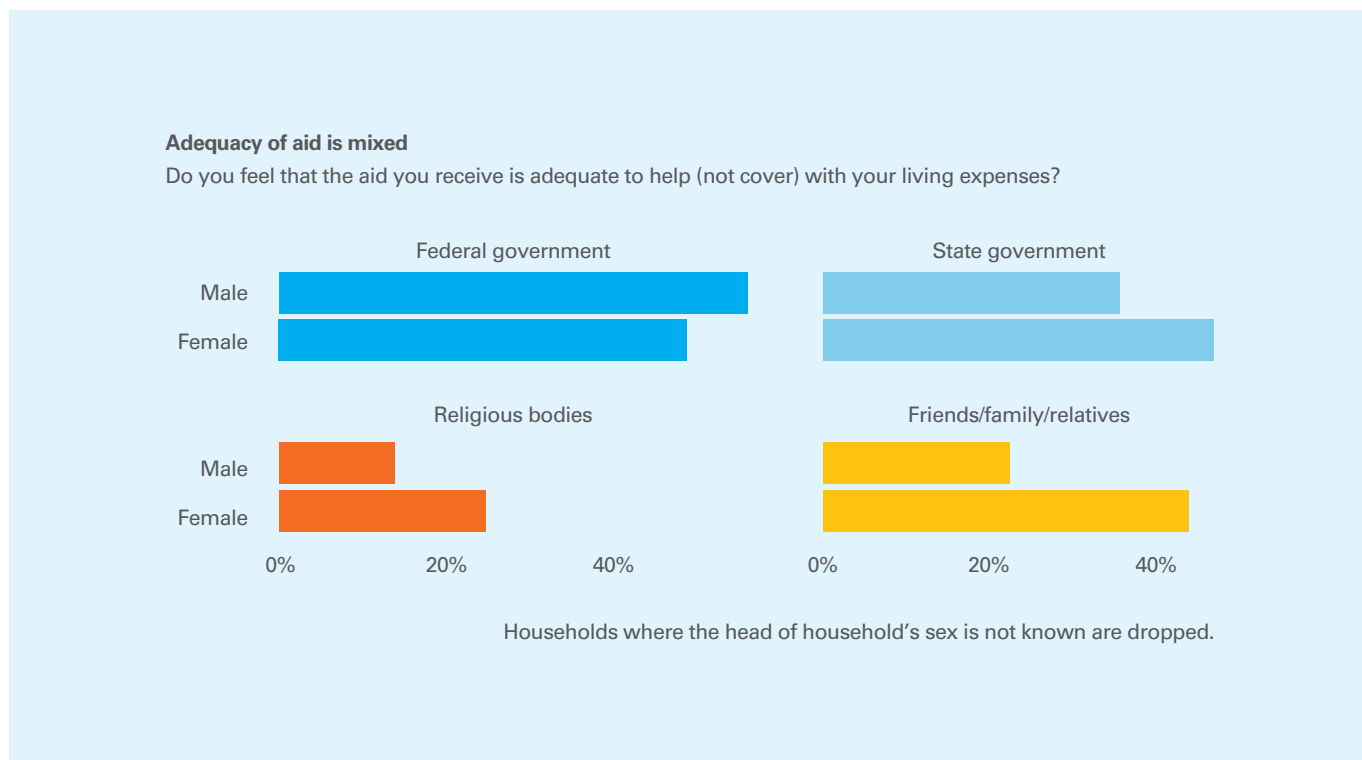
In Seberang Perai Tengah, some participants in the focus group discussion reported that they had not received any cash transfers from the federal government. This discrepancy raised questions about the reach and effectiveness of the aid distribution.

One participant, in particular, shed light on a possible reason for this disparity. She had not received the aid because she did not apply for it. This statement suggests that awareness and understanding of the application process could be potential barriers to the effective distribution of aid. It underscores the need for more robust communication strategies to ensure eligible individuals are not left out of such initiatives.

Adequacy of aid

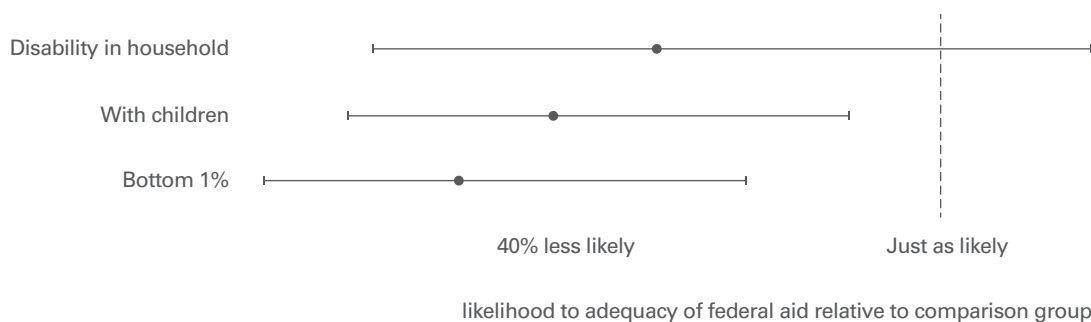
Half of households (52.4 per cent) found that aid provided by the federal government was adequate to assist with their expenses (Figure 3.29), with a larger percentage of male household heads stating so. State government assistance was also viewed fairly favourably, with a bigger proportion of female household heads holding it in higher regard. A smaller percentage of households found assistance received from religious bodies and friends and family to be less helpful when compared to government aid. Nonetheless, aid from family and friends was observed to be helpful for approximately 40 per cent of female household heads.

Figure 3.29: Adequacy of aid to assist with living expenses by aid source and sex of head of household



Households that have members with disabilities, or one or more children, or fall within the bottom 1 per cent by income were less likely to find federal aid adequate (Figure 3.30), but the effect of having persons with disabilities in the household was not statistically significant.

Figure 3.30: Odds ratios and 95 per cent confidence interval for likelihood of perceived adequacy of federal aid relative to comparison group, selected household characteristics



Note: Households receiving federal aid only. The odds ratios are derived from separate logistic regression specifications for the predictors: presence of persons with disabilities in the household, presence of children in the household, and household income within the bottom 1 per cent of households in Penang according to HIS 2022. Comparison groups are: no persons with disabilities in the household, no children in the household, households earning above the bottom 1 per cent of households. Estimates for intercept omitted for brevity. x-axis truncated for clarity.

Other sources of aid

During the first round of this project, the community leaders we interviewed at PPR public housing complexes took on the role of primary responders within their communities even before official aid or support from NGOs arrived. Initially, they utilised their personal funds to deliver ample food to the doorsteps of families in quarantine. Moreover, for those who had lost their sources of income, these leaders assisted them to sell home-cooked food to their neighbours. Additionally, the leaders dipped into their own savings to ensure an adequate supply of face masks within their communities. Their immediate actions and reassurance provided vital support to their communities to navigate the initial crisis and panic, especially following the announcement of the first movement control order (MCO). Fortunately, official sources of aid, such as cash transfers aid programmes, came in motion soon after.

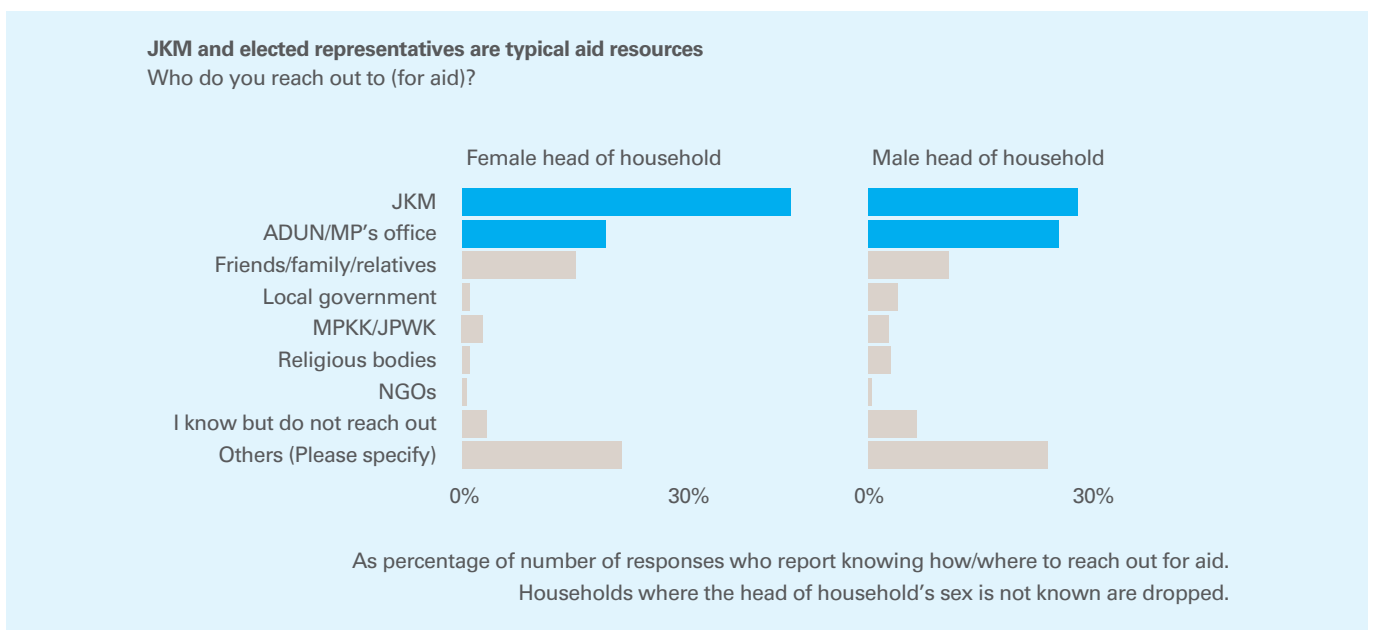
Although 14 per cent of eligible households did not receive cash aid, nine out of ten heads of households specified that they were aware of the sources of aid. A total of 92.1 per cent of heads of households were aware of how or where to reach out for aid when necessary, with no discernible differences between sexes, signifying that both male and female household heads had equal access to information on seeking aid. The first round of the survey, however, also found that 13.3 per cent of household heads were unable to identify whether the aid received originated from the federal or state government.

Community leaders, along with both public and private personnel, significantly noted that certain households and individuals tended to hoard donated food aid supplies, such as bags of rice and sugar. In certain instances, some hoarders insisted on their entitlement to these items, citing their status as voters. This mindset of entitlement and greed for free items emerged as a recurring complaint during our discussions with key experts and in focus group discussions. This underscores the lack of a structured food aid distribution system, resulting in an oversupply of dry food items to specific households over a short timeframe. People also preferred food aid in the form of cooked meals over uncooked food items.

The JKM along with elected state assembly representatives (ADUN) and members of parliament (MP) were the respondents' top choices for aid resources (Figure 3.31). There was a greater propensity for female household heads to reach out to JKM. The opposite was observed for male-headed households as the male heads were more likely to approach their elected representatives for support.

Some respondents reported that their constituency representatives or '*wakil rakyat*' also provided assistance/aid. A respondent from the Northeast district mentioned that their constituency representative provided aid in the form of wheelchairs. Similarly, participants from the focus group discussion in Seberang Perai Utara stated that their constituency representatives also extended assistance to residents in their constituency. The respondents, however, indicated that the assistance they received was not in the form of financial assistance but related to addressing the structural condition of their houses.

Figure 3.31: Sources of aid by sex of head of household



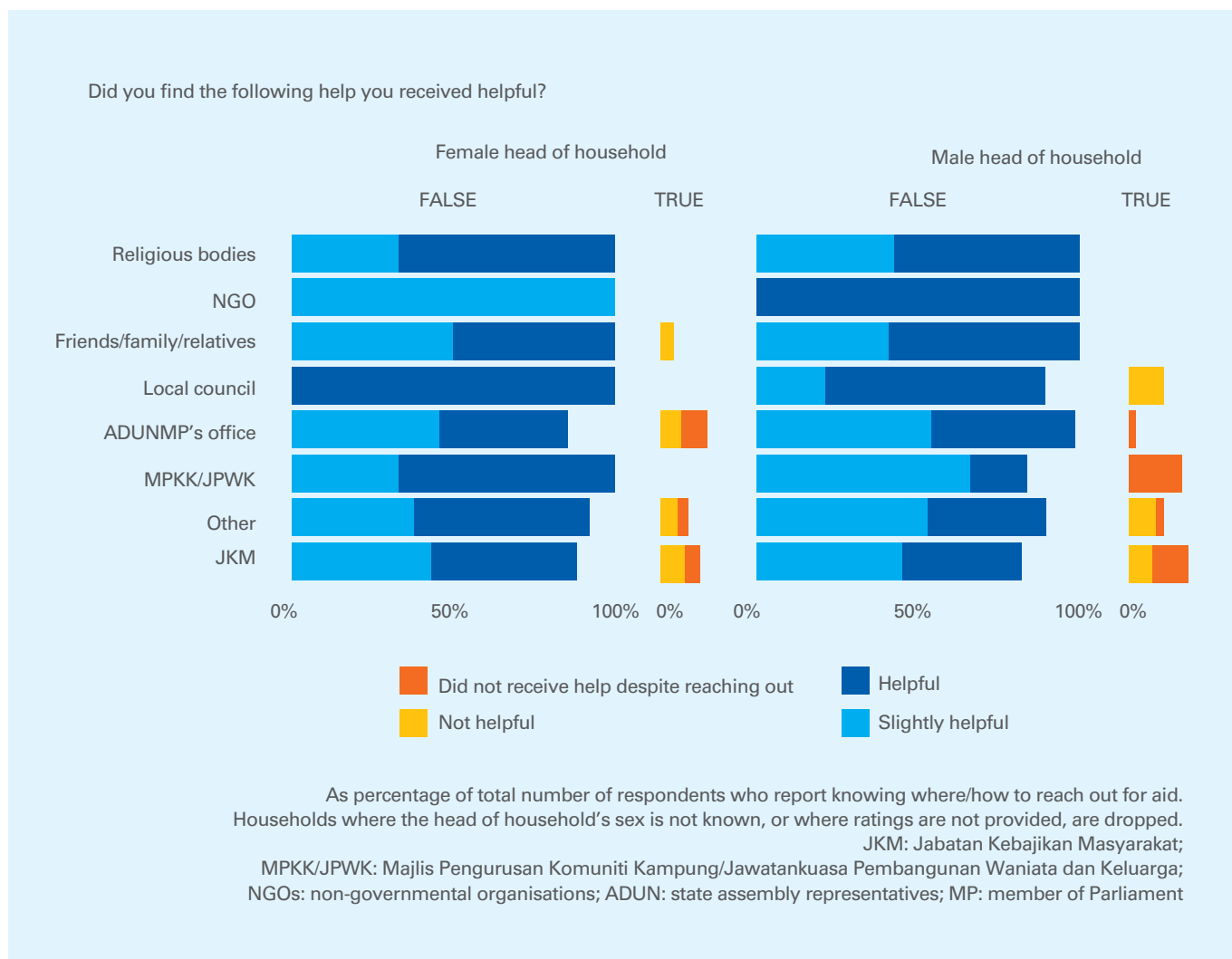
Fairly low percentages were noted for other aid options. It was found that most households did not reach out to NGOs for assistance. Local government, religious bodies and community development communities (Village Community Development Council, MPKK; and JPWK) were also unlikely options for the respondents. As for respondents who selected the option of 'other', it was found that most of them applied for aid online, though some professed that they were unsuccessful. Others managed to receive aid from temporary counters set up by political parties in their housing areas.

A possible explanation for the low outreach rate to NGOs and community leaders could be that these parties initiated contact early in times of crisis, alleviating the need for families to reach out to them proactively.

The majority of respondents generally considered the assistance they received to be at least somewhat beneficial, with notable percentages expressing that the support they received was indeed helpful (Figure 3.32).

Higher levels of dissatisfaction were observed towards political representatives' offices, MPKK/JPWK and JKM. JKM encountered several complaints, with a notable percentage of households considering the department unhelpful or unresponsive. In general, female-headed households were found to be less satisfied with JKM compared to their male counterparts. On the other hand, friends and family consistently received higher ratings in terms of perceived helpfulness, regardless of the district or the sex of household heads.

Figure 3.32: Helpfulness of aid by source and sex of head of household



Similarly, in the focus group discussions, respondents raised complaints on difficulties they faced when applying for aid from JKM. The most common complaint was that the requirements to obtain the aid were too stringent. This was similar to our findings in the first phase of this project.

Respondents felt that JKM's process of obtaining information was inadequate as the department relied on information from their neighbours, and this may not accurately reflect their circumstances. One respondent shared her experience of having her aid application rejected by JKM twice. Another respondent expressed that her children's employment status might be the reason for not receiving the aid.

Besides the difficulties in applying for and obtaining the aid, respondents also criticised the inadequate amount of aid provided by JKM. They argued that the rising cost of living and their low income made

it challenging to meet their basic needs. One of the respondents revealed that her aid amount was reduced to RM260, which she believed was due to her children's employment status.

There were no distinctive patterns in the respondents' assessment of the helpfulness of aid received (or not received) among various sources and different sexes of household heads. It however appeared that the surveyed household heads could obtain assistance when required, given that most of them found the sources of aid they accessed to be at least somewhat helpful.

Interestingly, participants from the focus group discussion at PPR Desa Wawasan disclosed that a private entity regularly provided assistance to the residents. This aid mostly comprised basic food items, such as rice and sugar. One respondent shared that she received this aid every month.

3.4 Schooling and Education

Key Insights

- School attendance was high across both rounds (close to 100 per cent).
- The majority of household heads prioritised their children studying over working.
- In 2022, respondents observed declines in school performance for one in five children.
- The lack of technology was the main challenge for children in online schooling, followed by difficulties in concentrating.
- 2023 registered a significant improvement in the children's academic results, with more than half of them at least seeing moderate improvement.
- While the majority of households indicated that their children had not faced challenges with in-person schooling, the lack of pocket money was the most frequently raised difficulty, followed by challenges in understanding the syllabus.
- The children were generally found to have better temperaments when attending school.

School attendance and performance

Almost 100 per cent of the children in the surveyed households had resumed full-time schooling. Respondents were asked about their subjective assessment of changes in their children’s academic performance between (1) Round 1 (2022) and pre-pandemic levels, and (2) Round 2 (2023) and June 2022. In comparison to the period before the pandemic, almost half of the households (46.6 per cent) reported no change in their children’s school performance in Round 1 (Figure 3.33). However, a higher percentage of households (31.9 per cent) witnessed improvements in their children’s academic achievements, whereas 21.5 per cent reported at least a moderate decline. The primary challenges for children in online learning were the lack of technology (devices and internet), followed by difficulties in concentration. Perceived changes in academic results were similar across age cohorts (Figure 3.34), with the children in lower secondary seeing slightly higher percentages of improvement.

In Round 2, there was a significant surge in the share of children showing academic improvement, with 49.4 per cent of households noting moderate improvement and 15.4 per cent reporting substantial improvement. Conversely, the rates of academic decline markedly reduced, with only 3.2 per cent of households indicating deterioration in their children’s grades. This shows that the children’s results generally registered significant improvements in 2023. Additionally, it also signifies that children were perceived to perform better with in-person schooling. Likewise from focus group discussions, there were observations that the children were doing well academically in school while parents and grandparents noticed that the children appeared happy to be in school. As with Round 1, perceived changes in academic results were similar across age cohorts (Figure 3.34), although the decline was slightly higher for upper secondary students.

Figure 3.33: Perceived change in overall results of children, Round 1 vs pre-pandemic and Round 2 vs Round 1

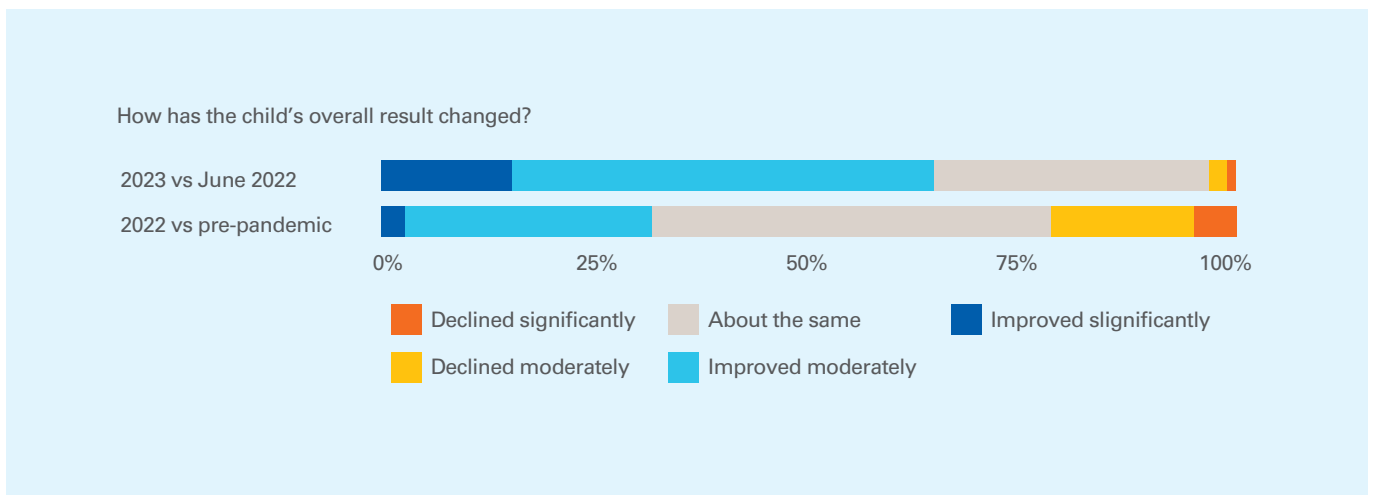
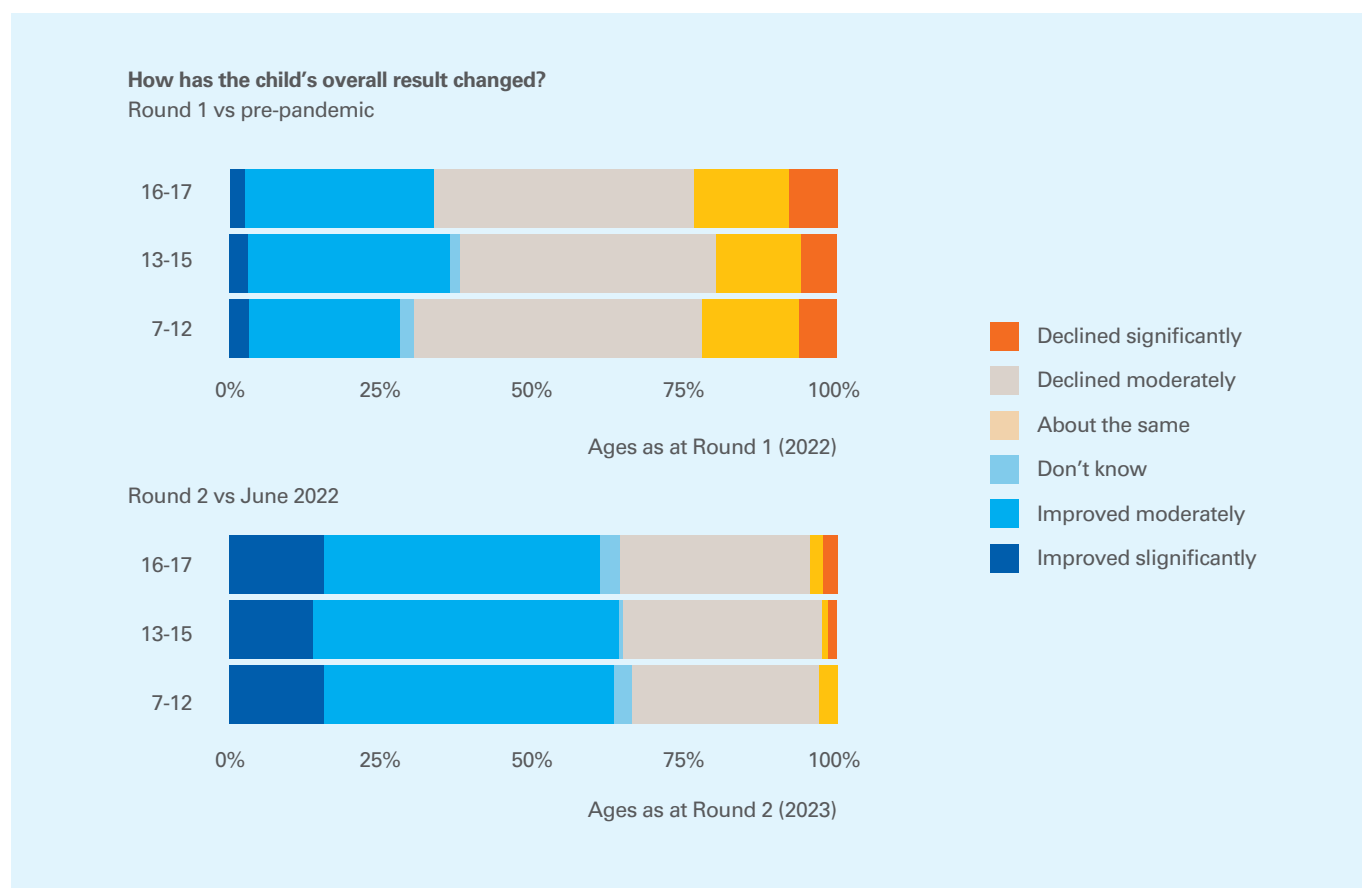


Figure 3.34: Perceived change in overall results of children by age cohort, Round 1 vs pre-pandemic and Round 2 vs Round 1



Note: Primary: ages 7-12; lower secondary: ages 13-15; upper secondary: ages 16-17. Round 1 results only consider households with available responses for children in Round 2.

	Round 1 vs pre-pandemic			Round 2 vs June 2022		
	7-12	13-15	16-17	7-12	13-15	16-17
Declined significantly	6.2%	5.8%	7.8%	NA	1.6%	2.2%
Declined moderately	16.2%	14.1%	15.6%	2.9%	0.8%	2.2%
About the same	47.1%	42.2%	42.9%	30.6%	32.5%	31.1%
Improved moderately	24.8%	33.1%	31.2%	48.1%	50.4%	45.6%
Improved significantly	3.3%	3.3%	2.6%	15.5%	13.8%	15.6%
Don't know	2.4%	1.7%	NA	2.9%	0.8%	3.3%

Parents who perceived their children's results to have improved in Round 1 were significantly more likely to report improvement in Round 2. On the other hand, parents who previously perceived a decline in their children's results were more optimistic in Round 2. Most children with prior decline (48.8% per cent) were perceived to maintain their results. Also, 46.3 per cent of children who were perceived to have worse academic performance in Round 1 (versus pre-pandemic) experienced at least a moderate improvement in Round 2, compared to 77.8 per cent and 62.1 per cent of children whose results were perceived to improve and maintain, respectively. The share of children with perceived performance decline was similar irrespective of prior perception of performance change. Moreover, 4.9 per cent of children were reported to have declining results in 2022, compared to 5.1 per cent of children who were perceived to have improved in the prior period.

Table 3.6: Perceived changes in performance, Round 2 vs June 2022, as share of perceived changes in performance in prior period (pre-pandemic vs Round 1) (%)

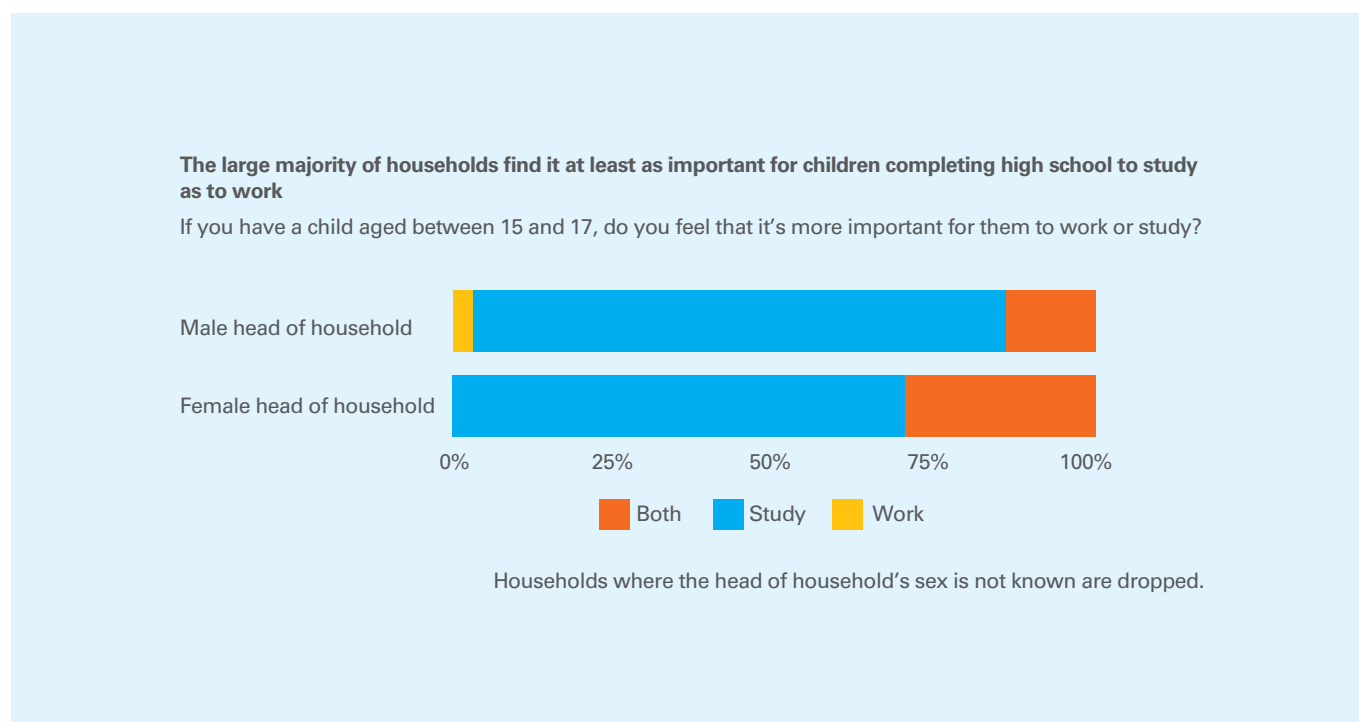
Round 1 vs pre-pandemic	Round 2 vs June 2022			
	Improved	About the same	Declined	Don't know
Improved	77.8%	15.4%	5.1%	1.7%
About the same	62.1%	33.9%	1.1%	2.9%
Declined	46.3%	48.8%	4.9%	NA
Don't know	33.3%	66.7%	NA	NA

Note: 379 children across both rounds.

The respondents were asked about their preferences regarding the priorities of their mid-adolescent/upper-secondary-aged children (15 to 17 years old), specifically whether emphasis should be on academic studies or on gaining employment to contribute to household expenses. A majority of household heads prioritised education over employment for their children, with 70.3 per cent of female household heads and 82.8 per cent of male household heads expressing this view (Figure 3.34). Likewise, the focus group participants also stressed the importance of studies over work for teenage children.

However, certain household heads believed their children could simultaneously work and study. A larger percentage of female household heads (29.7 per cent) held this perspective compared to male household heads (13.9 per cent). None of the female household heads felt that their children should completely abandon their studies in favour of work. In contrast, 3.3 per cent of male household heads believed that their children should prioritise working over studying. Other than studying and working, discussants also mentioned that having knowledge of living skills, such as cooking, is important.

Figure 3.34: Perceived importance for children to work versus study, by sex of head of household



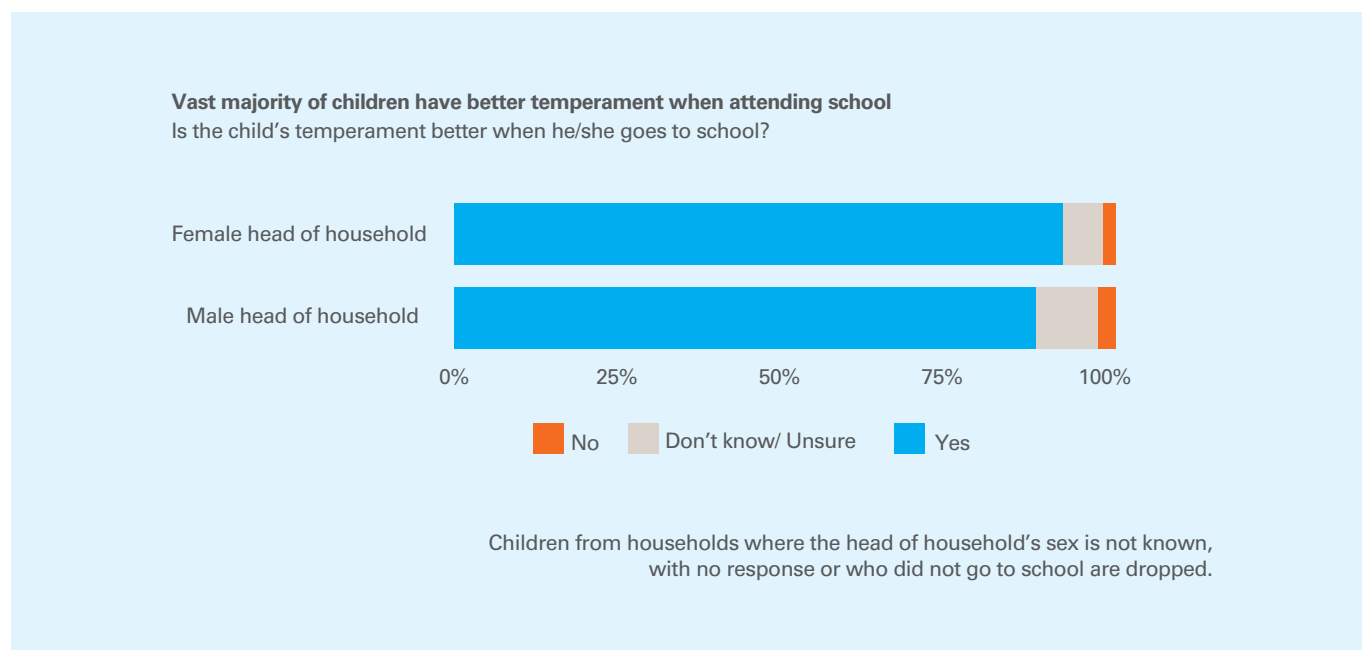
Across all districts, the majority of children’s temperaments improved when attending school, highlighting the positive impact of social interaction at school (Figure 3.35). This view was solidified by the focus group discussants, where the majority of respondents reported that their children were doing better since attending school physically. There were no substantial differences in the share of school-attending children with improved temperaments between female and male-headed households, as both categories reported high rates of improved temperaments.

Nonetheless, a slightly higher percentage (9.1 per cent) of male-headed households were not aware

of changes to their children’s moods, as opposed to 6.1 per cent of female-headed households. Furthermore, the temperaments of the children in male-headed households were slightly more likely to show no improvement when attending schools, compared to children in female-headed households. It should be noted, however, that these percentages were significantly lower than those reporting better temperaments.

In summary, for the majority of the children, attending school physically appeared to have a positive influence on their temperaments, likely attributed to the resumption of face-to-face instruction and positive social interactions with teachers and peers.

Figure 3.35: Perceived change in child’s temperament when attending school by sex of head of household

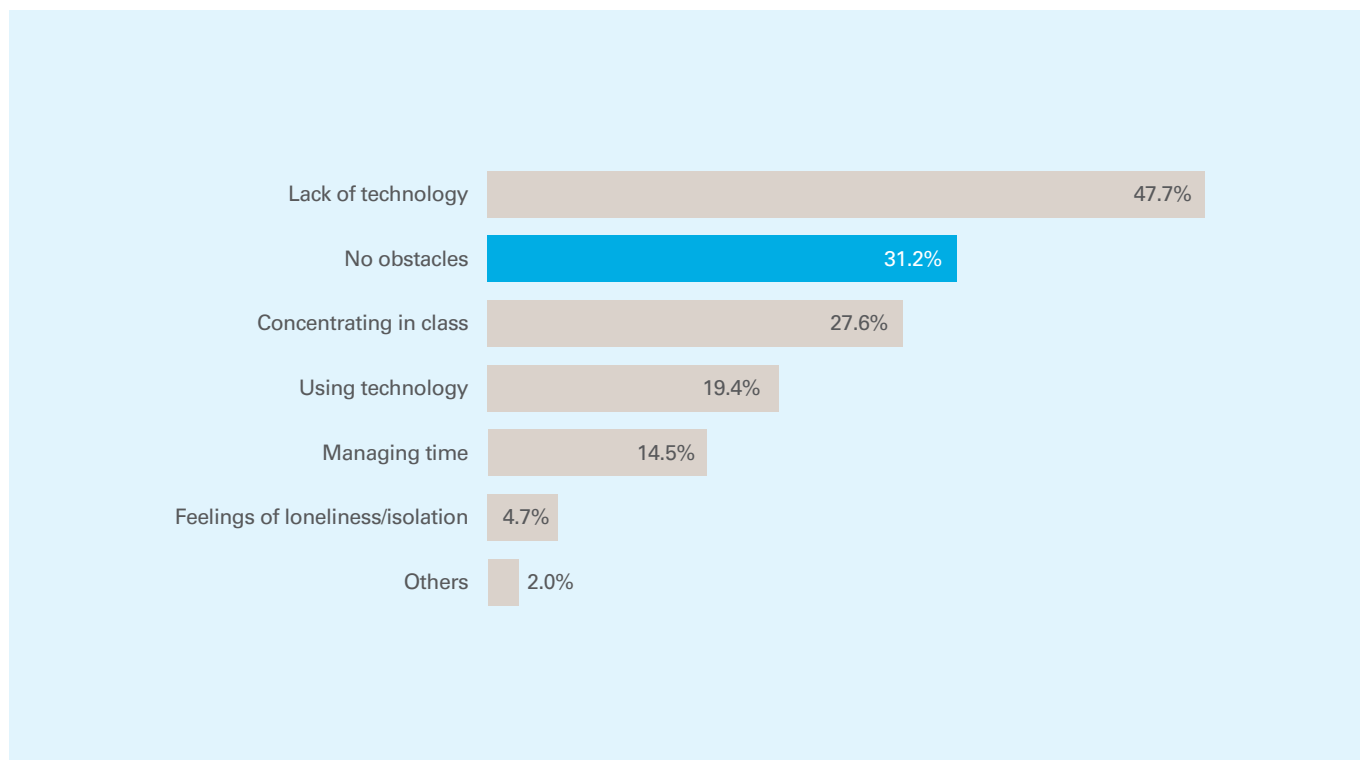


Challenges at school

The majority of household heads stated that their children did not encounter notable challenges in school, a sentiment that was reiterated by participants in the focus group discussions.

In terms of children’s current schooling and education issues, male household heads exhibited less awareness compared to their female counterparts, with a greater percentage expressing uncertainty about any challenges their children might encounter (Figure 3.37). Moreover, relatively fewer children in female-headed households were perceived to experience difficulties at school.

Figure 3.36: Obstacles of online learning (N = 558)



In Round 1 of the surveys, parents were asked about the obstacles their children faced during online learning (Figure 3.6). Nearly half (47.7 per cent) of these children faced a critical barrier: lack of adequate technology, highlighting the digital divide that exacerbated educational disparities. Encouragingly, 31.2 per cent reported no significant obstacles, suggesting resilience and resourcefulness within some families. However, beyond technology, 27.6 per cent struggled with concentration, potentially due to crowded or noisy home environments. Managing time effectively posed a challenge for 14.5 per cent, possibly reflecting competing household responsibilities or inadequate learning routines. Emotional well-being also surfaced, with 4.7 per cent experiencing feelings of loneliness and isolation during online learning. Interviews conducted with key informants during Round 1 revealed that the lack of technology access and concentration difficulties significantly impeded the educational advancement of children from low-income communities during school closures. The absence of proper guidance and support during school closures further intensified the challenges faced by these children. In many cases, parents from disadvantaged backgrounds may lack

the educational background or time, due to work commitments, to assist their children effectively with their studies.

Heading into Round 2, the most prominent issue faced by the respondents' children was the lack of pocket money (21.2 per cent), which was a challenge for 25.3 per cent and 18.2 per cent of female and male-headed households, respectively (Figure 3.37). Overall, the lack of motivation and interest did not emerge as a very significant concern for the majority of households (12.3 per cent), while homework load (9.0 per cent) and social interaction problems (4.7 per cent) were the least prevalent issues.

Pocket money issues were less prevalent among the focus group discussants, as they were more focused on the positives rather than the negatives. One respondent mentioned that her children benefited from free tuition classes offered by 'Yayasan', an unnamed foundation. Additionally, her children had free access to computers which assisted them with their homework. However, the findings were not uniformly positive.

Figure 3.37: Share of children facing issues at school by sex of head of household

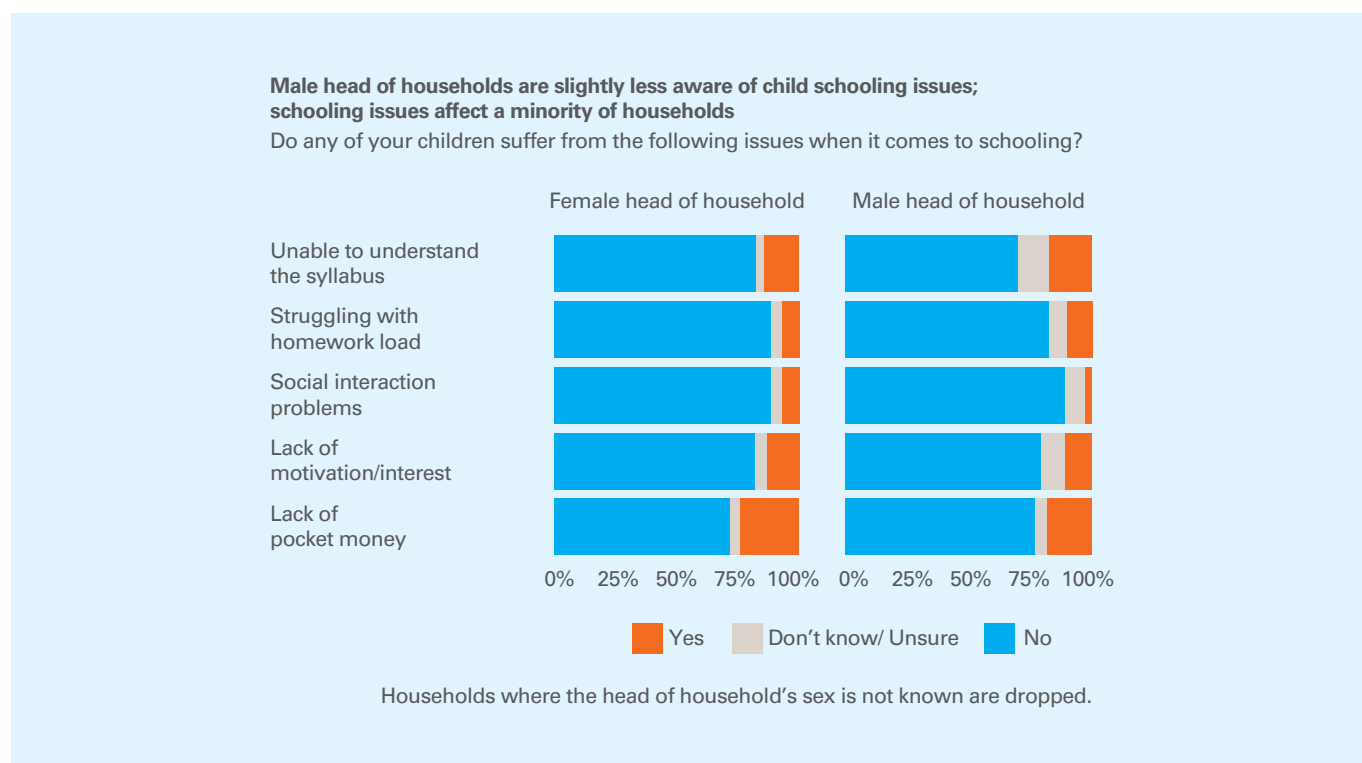


Table 3.7: Share of children facing issues at school by sex of head of household

Issue faced	Female head of household			Male head of household		
	Yes	Don't know/Unsure	No	Yes	Don't know/Unsure	No
Lack of motivation/interest	14.3%	3.3%	82.4%	10.7%	9.9%	79.3%
Lack of pocket money	25.3%	3.3%	71.4%	18.2%	5.0%	76.9%
Social interaction problems	7.7%	3.3%	89.0%	2.5%	8.3%	89.3%
Unable to understand the syllabus	14.3%	3.3%	82.4%	17.4%	12.4%	70.2%
Struggling with homework load	7.7%	3.3%	89.0%	9.9%	7.4%	82.6%

Key Insights

- The health status of heads of households and their children remained largely unchanged. Most respondents perceived theirs and their children's weight to be ideal.
- Although the majority of respondents reported unchanged health status, a fifth of household heads reported a decline in health, while health improvements were reported for children in a quarter of households.
- Chronic diseases affected 27 per cent of household heads, while 6.4 per cent of household heads considered themselves as persons with disabilities. Also, 3.4 per cent of household heads have both chronic disease and are persons with disabilities.
- Families with lower incomes face the greatest risk of experiencing a decline in health.
- The level of worry in 2022 was higher compared to pre-pandemic times but registered a decline of 1.6 per cent in 2023.
- 61.2 per cent of female household heads felt worried about the future, with 23.9 per cent feeling extremely worried.
- Almost half of the household heads reported feeling more worried compared to six months ago.
- The level of future savings was also a source of concern. This was more prevalent in households with children, especially those headed by women.
- Financial constraints, caregiver responsibilities and health concerns were the top reasons for decline in mental health.

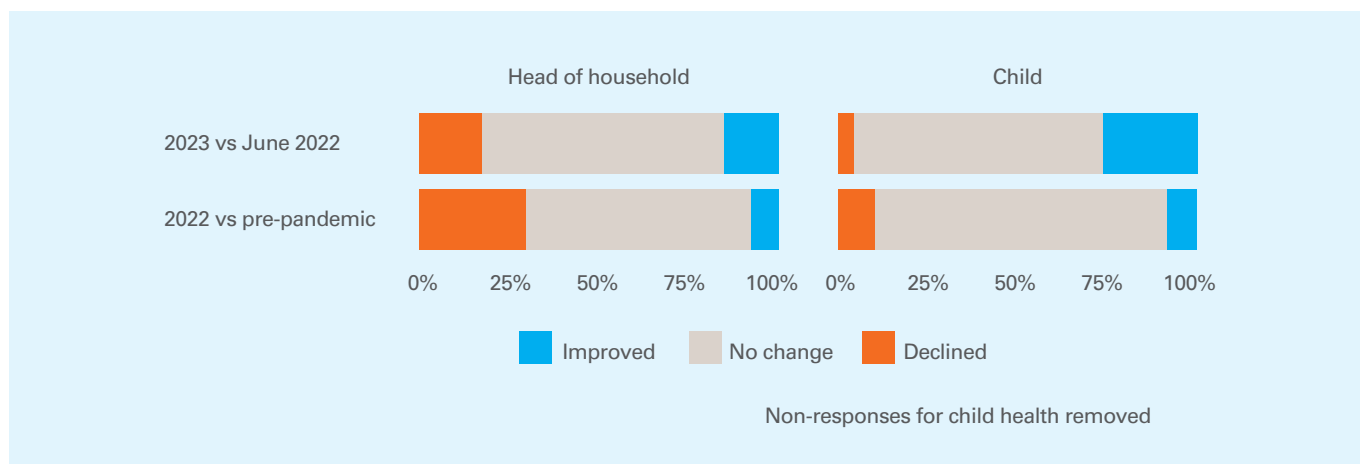
Physical health

General health

The overall health conditions for adults and children were perceived to be largely unchanged after nine months of the survey (Figure 3.38). Respondents were asked about their perceived health changes for both rounds of the survey - in Round 1, in comparison to before the pandemic, and in Round 2, in comparison to June 2022. In Round 1, 44.6 per cent did not experience any change in health since before the pandemic; in Round 2, about two thirds of the 433 heads of

household did not experience any changes to their health compared to June 2022. Only 15.5 per cent (67 respondents) stated an improvement in their health, while 17.6 per cent (76 respondents) cited worsening of health after nine months. In contrast, children's health was perceived to be relatively better than adults, where out of 298 children, 26.2 per cent (78 children) experienced an improvement in their health while only 4.7 per cent (14 children) experienced declining health status. Figure 3.38 also highlights a noticeably higher percentage of children experiencing improvements in their health compared to their adult counterparts, along with markedly lower rates of health decline.

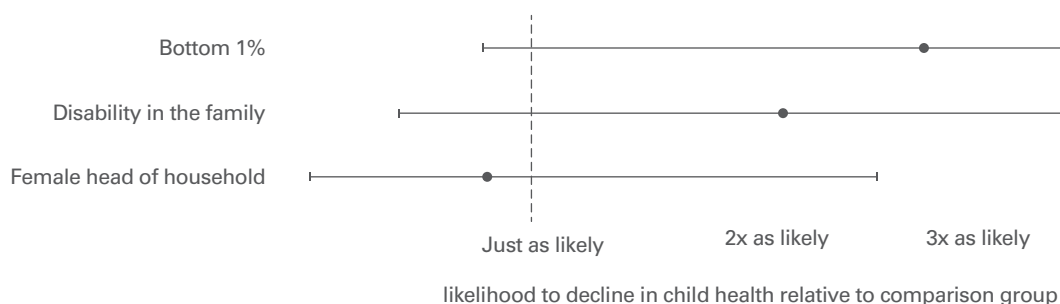
Figure 3.38: Perceived change in health status of head of household and children in household, Round 1 vs pre-pandemic and Round 2 vs Round 1



Low-income families faced the highest likelihood of a decline in child health, with children in these households nearly three times more likely to experience health deterioration (Figure 3.39). Moreover, children in households with disability challenges were also almost three times as likely to see a decline in their health, although the likelihood

was somewhat lower compared to low-income families. In contrast, children in female-headed households were slightly more likely to experience improved (or unchanged) health (-16.4 per cent). The wide confidence intervals, however, implied that we lack statistical evidence to deem these household characteristics as risk factors for child health.

Figure 3.39: Odds ratios and 95 per cent confidence interval for likelihood of decline in child health relative to comparison group, selected household characteristics

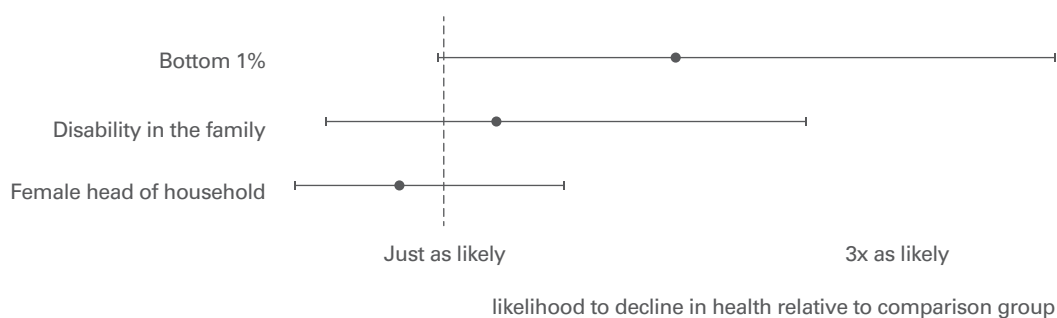


Note: The odds ratios are derived from separate logistic regression specifications for the predictors: Household income in the bottom 1 per cent of Penang households according to HIS 2022, persons with disabilities in the household, female head of household. Sample restricted to households with children only. Estimates for intercept omitted for brevity. Baseline comparison groups are: household income above the bottom 1 per cent of households, no persons with disabilities in the household and male head of household. x-axis truncated for readability.

Similar to children, household heads with the lowest incomes (bottom 1 per cent) faced an elevated risk of health decline, being nearly twice as likely (1.88 times) to experience health deteriorations (Figure 3.40). In contrast, having household members with disabilities posed a lower risk to the health status of household

heads, as they were only slightly more likely (1.18 times) to see negative changes in health. Female household heads, on the other hand, experienced slightly better chances for improved (or the same) health (-15.2 per cent), though not by much.

Figure 3.40: Odds ratios and 95 per cent confidence interval for likelihood of decline in head of household health relative to comparison group, selected household characteristics



Note: The odds ratios are derived from separate logistic regression specifications for the predictors: Household income in the bottom 1 per cent of Penang households according to HIS 2022, persons with disabilities in the household, female head of household. Estimates for intercept omitted for brevity. Baseline comparison groups are: household income above the bottom 1 per cent of households, no persons with disabilities in the household and male head of household. x-axis truncated for readability.

Chronic illness

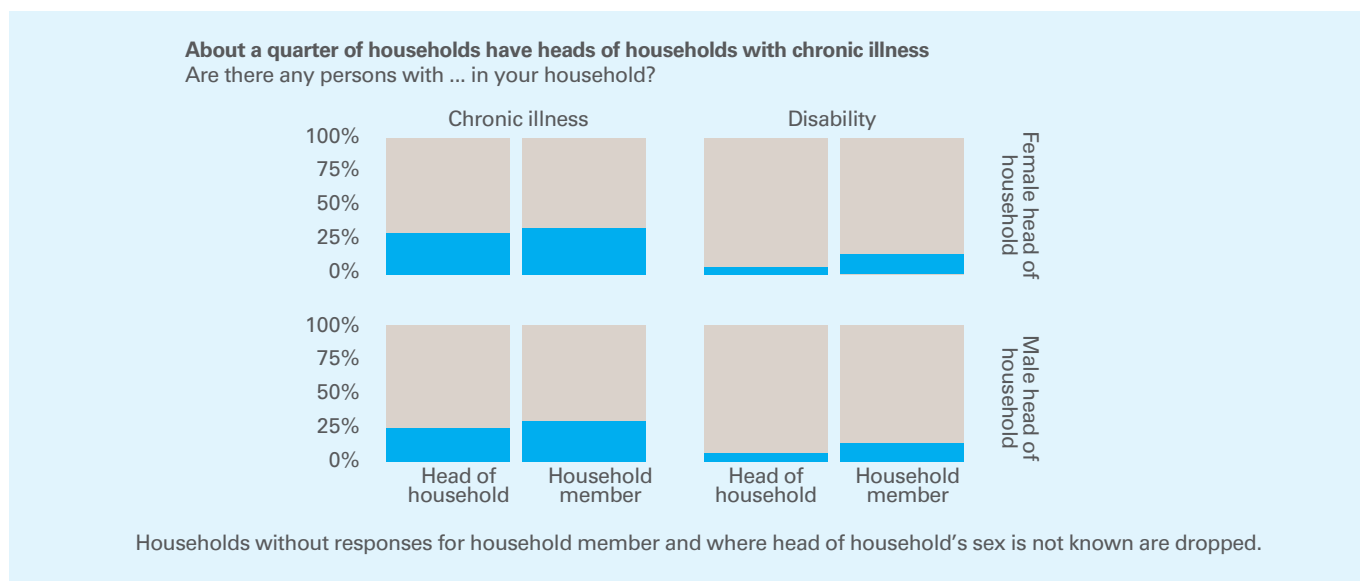
Respondents were asked to self-report whether they or any of their household members are persons with chronic illness. A total of 27 per cent of the household heads reported having chronic diseases, with female household heads accounting for 30.3 per cent compared to 24.6 per cent of male heads (Figure 3.41). This suggests that female household heads were more susceptible to chronic illnesses than their male counterparts. Additionally, families headed by females had a higher proportion of members with chronic illnesses, representing over one third of female-headed households. In the focus group discussions, there were respondents who identified as persons with chronic diseases. The types of chronic diseases mentioned were: hypertension, anaemia, diabetes, kidney disease and cancer. These situations often affected their work routine. For example, an anaemic respondent expressed that her disease restricted her work capacity. Similarly, a participant with kidney disease reported frequent dialysis treatments as part of her routine.

Despite these health challenges, the participants did not report any substantial difficulties in accessing healthcare services. They primarily relied on public health centres, such as government hospitals and health clinics, for their medical needs. Regular check-ups and follow-up appointments at these centres enabled them to effectively manage their health conditions. This suggests that the current healthcare system is adequate for addressing their needs.

Disability

Respondents were also asked to self-report if they or any of their household members identified themselves as persons with disabilities. A total of 6.4 per cent of household heads considered themselves as persons with disabilities. Among the interviewed families, nearly 15 per cent had household members with a disability. One focus group discussant who identified as a person with disability explained that she is able to work and raise her children without feeling any different from a person without disability.

Figure 3.41: Share of households with head of household and household member self-reporting chronic illness and disability, by sex of head of household

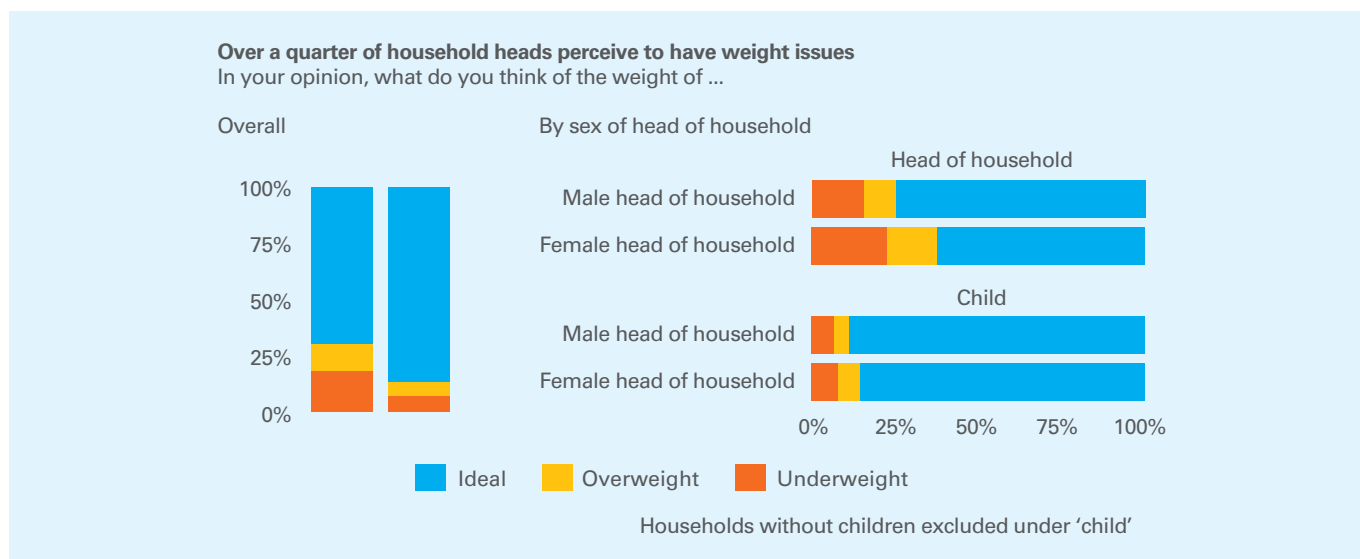


Weight

Respondents were asked about their perception of the weight of the head of household and the children in the household. Household heads were more likely to perceive their weight as unhealthy compared to the children in their household. About 30 per cent of them were perceived to have an unhealthy weight, with 12 per cent perceived as overweight and 18.7 per cent

perceived as underweight (Figure 3.42). Meanwhile, about 13 per cent of households perceived their children's weights to be unhealthy, with 5.4 per cent and 7.3 per cent reporting overweight and underweight children, respectively. For reference, the National Health and Morbidity Survey (NHMS) 2019 reports that 60 per cent²⁹ of adults in Penang were of unhealthy weight, whereas the NHMS 2022 reports that 38.8 per cent of adolescents were of unhealthy weight³⁰.

Figure 3.42: Perceived weight status of head of household and children by sex of head of household



²⁹ The NHMS 2019 reported two different definitions of normal weight for adults: one from the World Health Organization (1998) and the other from the Malaysian Clinical Practice Guidelines on Management of Obesity (Ministry of Health Malaysia et al., 2004). Using the World Health Organization's (1998) definition (18.5-24.9 kg/m²), 40 per cent of adults are of normal weight. The definition from the Malaysian Clinical Practice Guidelines on Management of Obesity is more stringent (18.5- 22.9 kg/m²), with only 27.2 per cent of Penang adults being of normal weight.

³⁰ The NHMS flags weight issues among children by comparing with the BMI of a healthy child of the same age and sex based on WHO Child Growth Standards. Based on the weight-related nutrition indicators (thinness, overweight, obese) considered in the NHMS 2022, we assume that children who do not fall two standard deviations below or more than one standard deviation above the age- and sex-specific median are of normal weight.

Mental health

General worry

As expected, the primary source of concern for respondents was the rising cost of living, with 73 per cent identifying it as one of their two main worries (Figure 3.43). This was also reflected among the focus group discussants, with the majority feeling the pressure of rising prices, especially regarding food and basic necessities. Many participants voiced concerns about the rising costs of food and other essential items, noting that basic commodities

like rice, sugar, eggs, cooking oil, formula milk and diapers have become increasingly expensive.

The second most frequently mentioned concern was financial issues as respondents expressed apprehensions about not having enough income to meet essential expenses, such as rent and utilities. Additionally, slightly over a quarter of respondents (26.3 per cent) reported concerns about their children's education, while 14.5 per cent were burdened by health problems. A mere 2.3 per cent of respondents declared that they had no worries.

Figure 3.43: Main worries of head of households

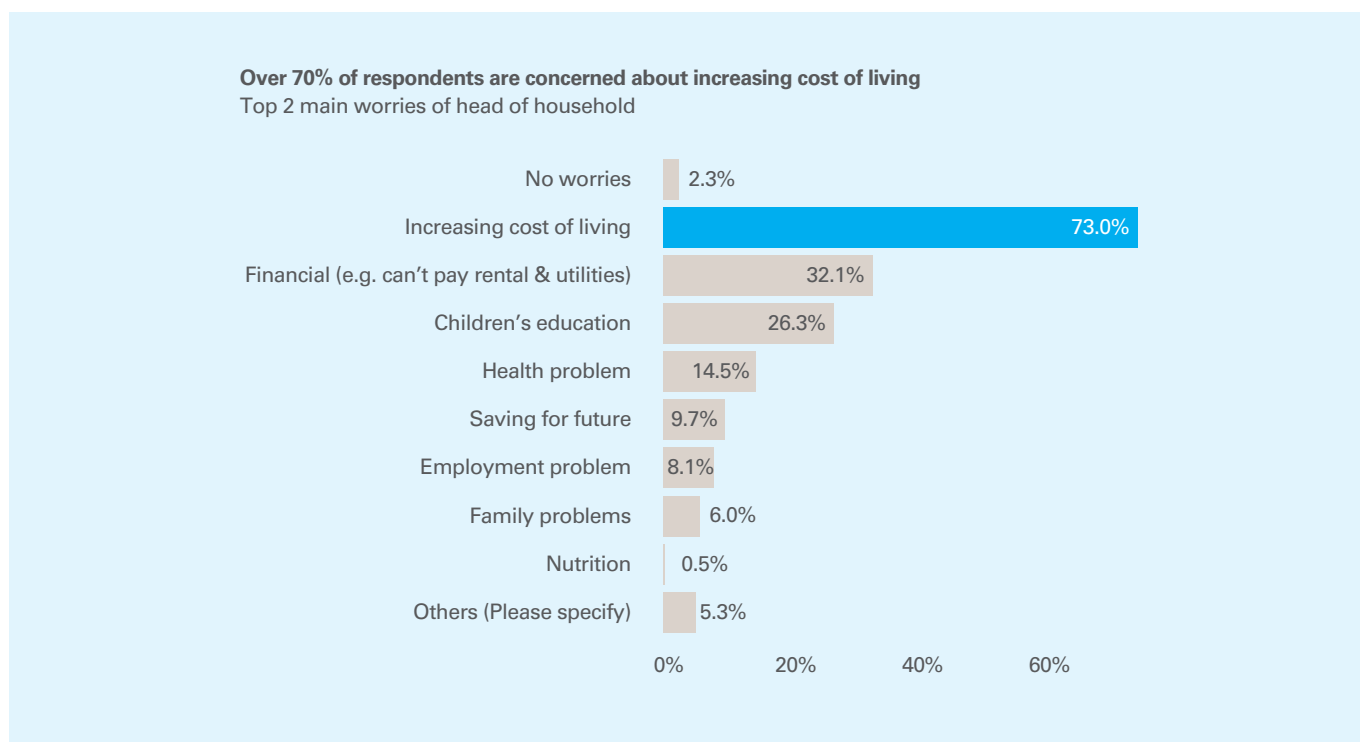
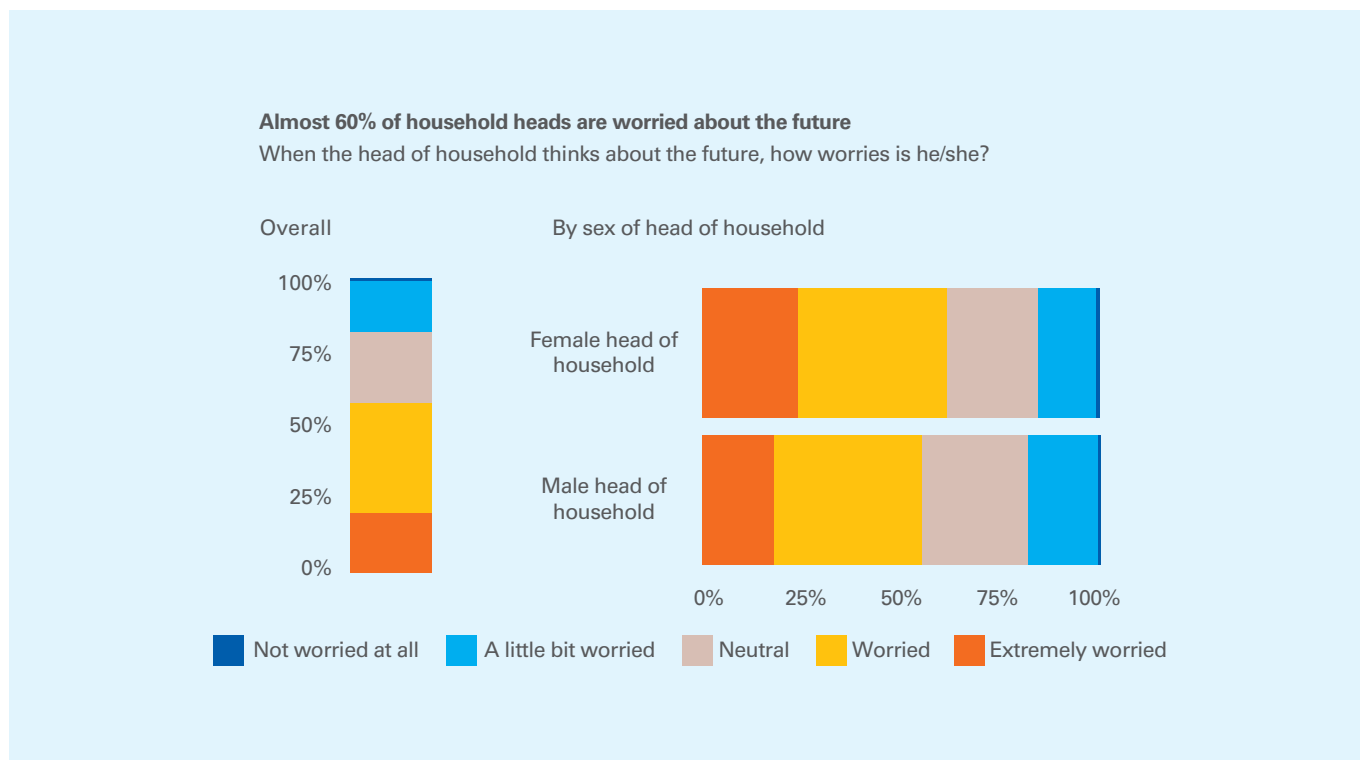


Figure 3.43 shows that a majority of heads of household were worried about their future. Close to three quarters of the respondents (74.6 per cent) reported being at least a little worried about their future (Figure 3.44), with a third (37.3 per cent) feeling worried and 20.6 per cent extremely worried about their future. In contrast, only three respondents felt no worry about the future, though 24.8 per cent were ambivalent, neither worried nor confident.

Female household heads were more concerned about the future, with 37.3 per cent worried and 23.9 per cent extremely worried. The percentage of worried male household heads was similar at 37.3 per cent, but they recorded a lower rate of 18 per cent when it came to feelings of extreme worry.

Figure 3.44: Head of households’ worry about the future, overall and by sex of head of household



From the focus group discussions, all respondents reported that they were worried about their families’ and their own future. Unsurprisingly, the level of worry was more significant for those with young children due to higher expenses compared to families with adult children who were already working and supporting themselves. However, one of our respondents, an elderly woman caring for her two school-going grandchildren, reported being worried about their futures but said she has to “leave it to God’s will” since she was already doing her best to raise them. This was a common sentiment among retirees and elderly participants who were no longer working.

It was also noticeable in our discussions that the communal support system in the PPRs was strong and positive. We were told that whenever they needed financial, physical or mental support, neighbours or community leaders would extend assistance. It was heartening to witness the strong social support available for our discussants.

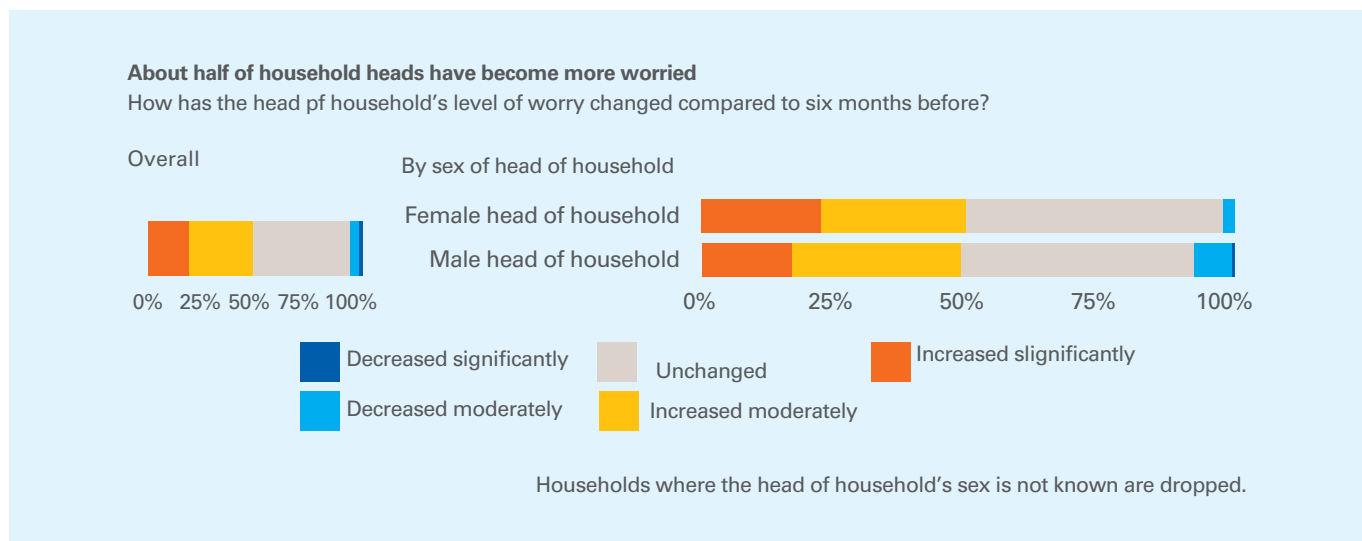
Compared to the past six months, Figure 3.45 shows that 45.4 per cent of the heads of household maintained a stable level of worry. The sentiments of

the focus group discussants backed up this finding, as a high proportion of them indicated that the level of worry they felt was mostly unchanged compared to six months earlier.

Nevertheless, more household heads - nearly half at 49.2 per cent - reported increased levels of worry. In comparison to their male counterparts, female household heads generally encountered higher levels of worry, with close to a quarter (22.3 per cent) experiencing significant increases in levels of worry. The percentage of female household heads reporting high levels of worry was 5.5 per cent greater than male household heads. As it is, some of the women in focus group discussions, especially those with young children, also voiced an escalation in their levels of worry.

Only a small percentage of household heads (5.3 per cent) reported decreased levels of worry. Male household heads were almost four times more likely to cite decreases in levels of worry (7.8 per cent) than female household heads (2.1 per cent). Close to zero households reported significant declines in levels of worry.

Figure 3.45: Change in level of worry for head of household compared to six months ago

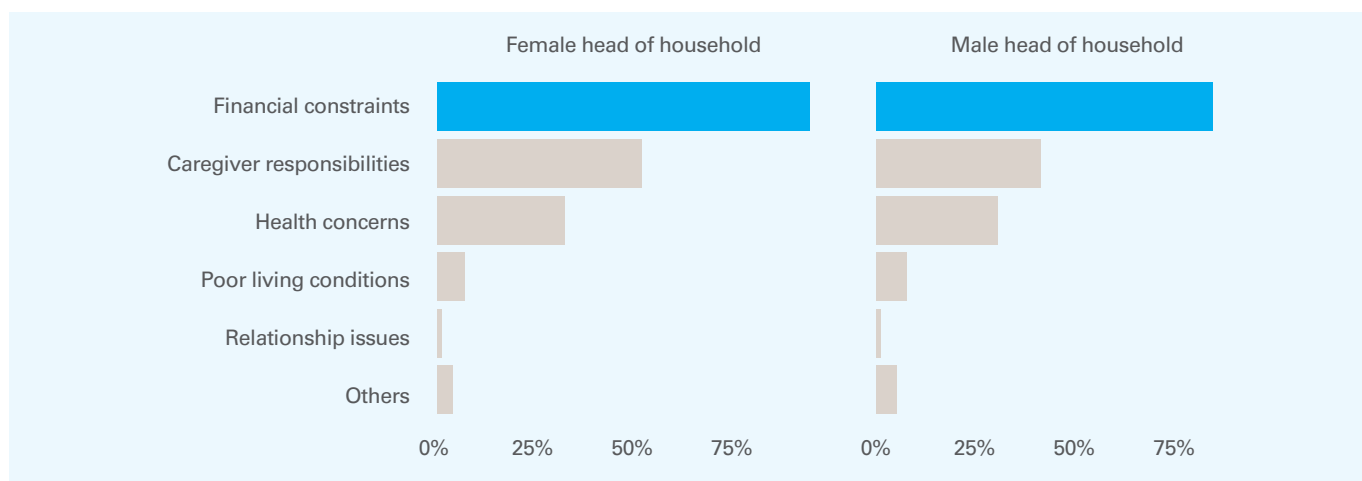


Respondents who indicated changes in their level of worry were asked to identify the drivers for changes in their level of worry. The top three reasons for increased worry were financial constraints, caregiving responsibilities and health concerns (Figure 3.46). Among heads of households with increased worry, nine out of ten (89.7 per cent) picked financial constraints as the main reason, and this was also clearly illustrated in the responses of the focus group participants. Financial constraints led them to experience the harsh effects of the rising costs of living, causing them to set a strict budget for food and groceries expenditure. They could only purchase what they needed at the moment, with very little room for extra expenses. Some of them kept a constant lookout for discounted items to further stretch their budget.

Caregiver responsibilities were the second leading cause of increased worry among household heads in Penang. This was particularly prevalent among female household heads, where over half (52.1 per cent) reported increased worry due to caregiving responsibilities. In contrast, only 42 per cent of male respondents cited caregiver responsibilities as a primary reason for increase in worry.

Health concern was the third most frequently cited reason for increased worry among household heads. Nearly one third of both female (33.0 per cent) and male (31.1 per cent) household heads experienced the strain of health-related issues, with female household heads surpassing male household heads by a slight margin of 1.9 points. This was consistent with the percentages of female and male household heads reporting chronic illnesses and disabilities (Figure 3.41).

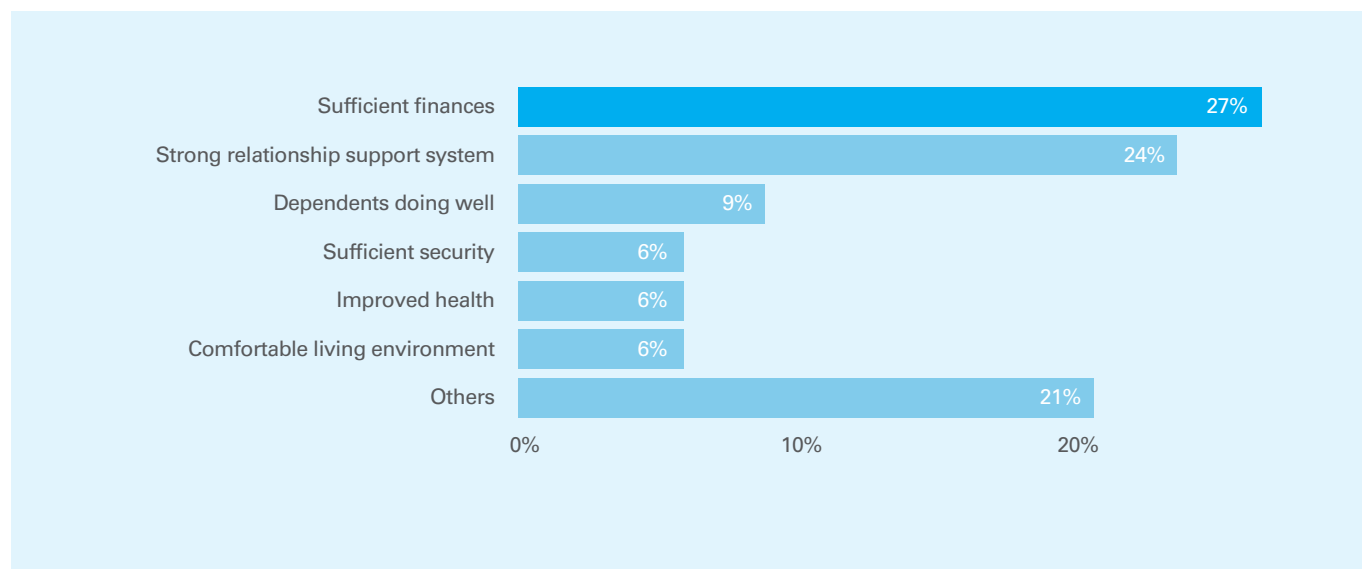
Figure 3.46: Main reasons for increased worry of the head of household



Likewise, respondents who reported decreased worry were asked to specify the reasons for the alleviation of their concerns. Figure 3.47 shows that the primary factor cited for decreased worry among household heads was financial security (27 per cent), closely followed by strong support systems within the family and community (24 per cent). The well-being of dependents also played a role in reduced worry, though a lesser extent (9 per cent), along with factors

such as adequate security, improved health conditions and a satisfactory living environment (6 per cent). Respondents also cited other contributing factors, including business improvement, increased demand for their products as well as children graduating and hence contributing to the household. The end of the pandemic and the opening up of the economy were also cited as factors contributing to the decline in worry.

Figure 3.47: Main reasons for reduced worry of the head of household



Financial worry

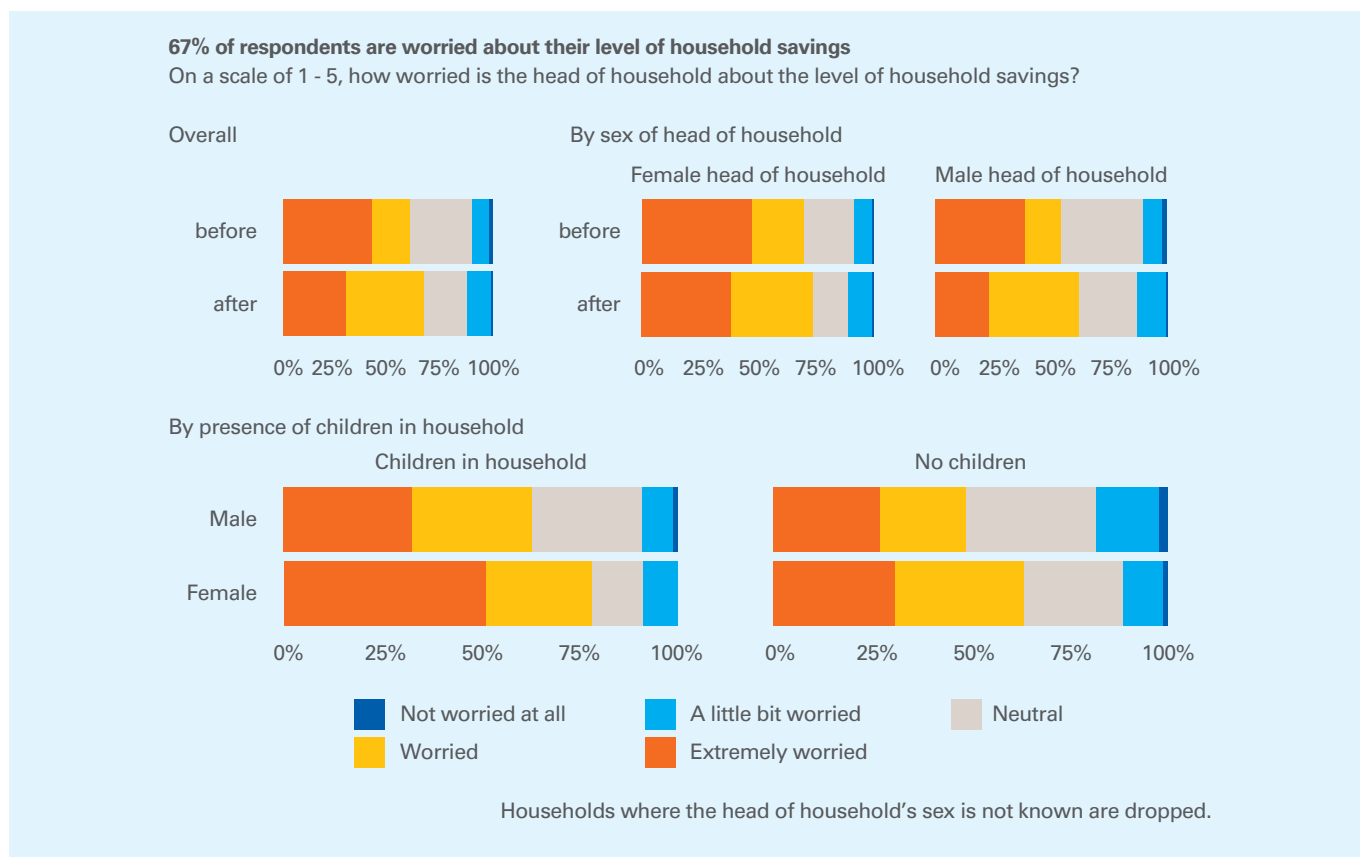
From our findings on general worry, finances played a dominant role in determining changes in general worry in either direction: improvements in finances was the most common factor for reduced worry, while the most common reason for increased worry in household heads across both sexes was financial constraints. With that, we examined households' level of worry specific to their financial condition, beginning with their level of comfort regarding their current level of savings.

Overall, households with children tended to be more concerned about their household savings compared to households without children (Figure 3.48). Among

these, female-headed households showed higher levels of worry, with 92.2 per cent expressing at least some concern, including 46.6 per cent feeling extremely worried and 34 per cent feeling worried. In contrast, 23.8 per cent of male-headed households with children experienced significant levels of worry, though the percentage of those worried - at 45 per cent - was higher than that of female-headed households.

For households with no children, the share of female-headed households expressing some worry (75.3 per cent) was also higher than the male-headed households (68.8 per cent). Furthermore, extremely worried and worried childless female household heads exceeded their male counterparts by 6.7 per cent and 8.6 per cent, respectively.

Figure 3.48: Level of worry of head of household about the level of household savings, by wave and by sex of head of household (Round 2)

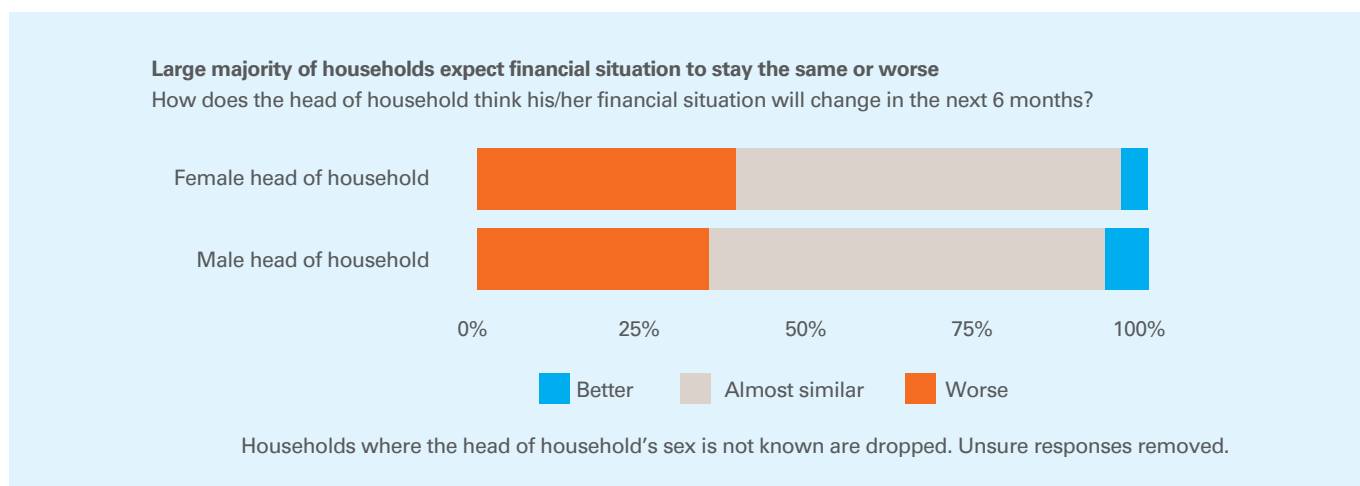


The majority of households expected their financial situation to remain the same in the next six months (Figure 3.49). Male household heads held more positive sentiments, with 6.4 per cent expecting their financial situation to improve, versus 4 per cent for female household heads. Conversely, female household heads had a more pessimistic view, with 38.4 per cent expecting worsening financial situations, while male household heads were 3.9 points less comparatively. Similarly, all 18 focus group participants expected their

financial situation to border between unchanged or worse in the next six months. This was attributed to the constraints they were currently experiencing.

Very few household heads expected their financial situation to improve. A mere 6.4 per cent of male household heads and 4 per cent of female household heads anticipated an improvement in their financial situation in the next six months. The low rate of positive sentiments is a matter of concern.

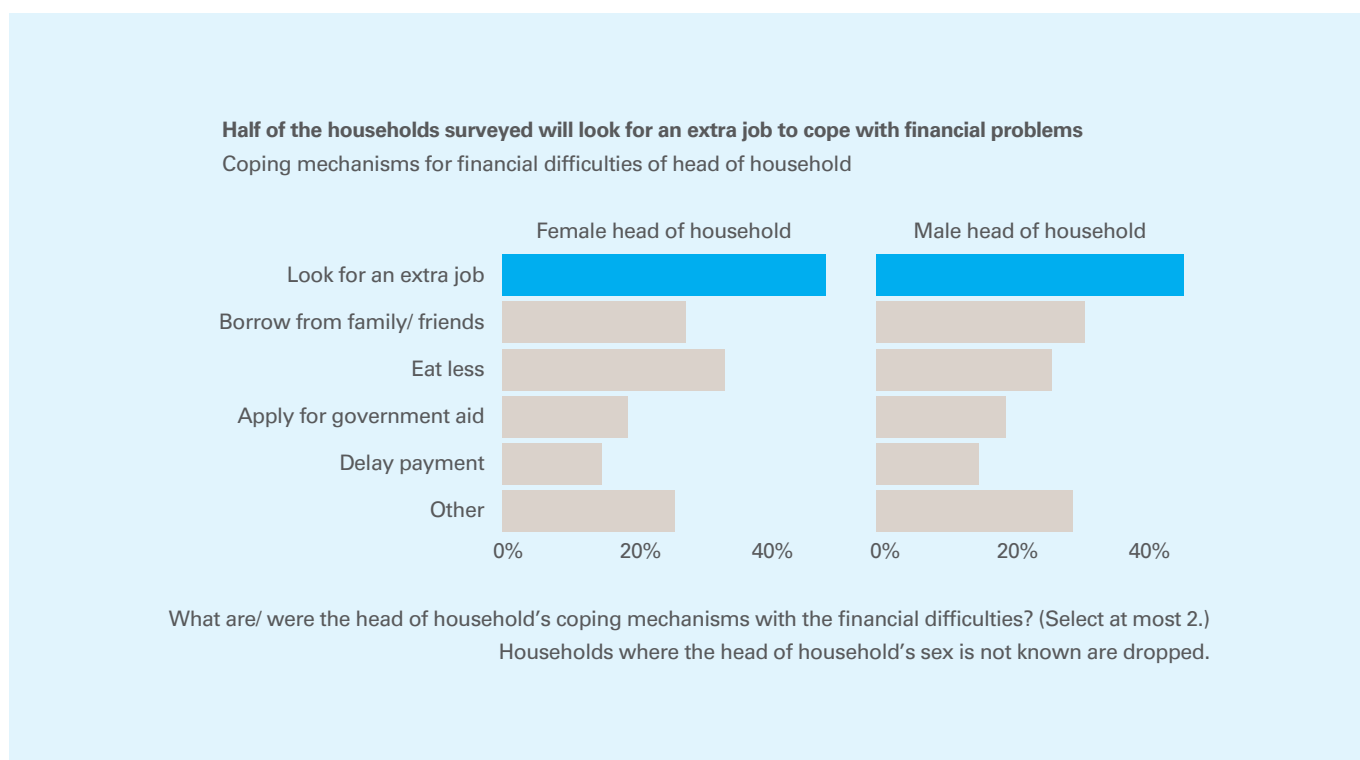
Figure 3.49: Perceived change in financial situation of head of household in the next six months, by sex of head of household



The primary coping strategy embraced by a majority of household heads involved pursuing additional employment, with 46.3 per cent of female household heads and 43.9 per cent of male household heads choosing to do so (Figure 3.50). A concerning 31.9 per cent of female household heads and 25 per cent of male household heads chose to reduce their food intake. Additionally, more than a quarter of both female household heads (26.6 per cent) and male household heads (29.9 per cent) resorted to borrowing money from family and friends, potentially exacerbating debt issues within the household.

Some respondents adopted other coping strategies such as cutting down expenses, extending business hours (for those who were self-employed) and working longer hours as Grab drivers/delivery riders. Very few household heads expected their financial situation to improve. A mere 6.4 per cent of male household heads and 4 per cent of female household heads anticipated an improvement in their financial situation in the next six months. The low rate of positive sentiments is a matter of concern.

Figure 3.50: Coping mechanisms of heads of households for financial difficulties



The focus group discussions revealed two primary coping strategies employed by the respondents, which slightly differed from those of the survey respondents. The first strategy involved seeking financial assistance from government programmes such as JKM, zakat and Sumbangan Tunai Rahmah. This approach was widely adopted by the focus group

discussion respondents, while only approximately 18 per cent of survey respondents adopted this strategy. The second strategy was a more self-reliant approach, whereby respondents actively decreased expenses, primarily by purchasing fewer goods compared to their previous spending habits.

Key Insights

- A high percentage of households were involved in care work for both children and/or the elderly.
- In almost all female-headed households, either the household head herself or another female household member was the main caregiver in the household.
- In a large majority of male-headed households, a female household member was mainly responsible for caregiving in the household.
- Approximately 30 per cent of caregivers reported feeling burdened by care work.

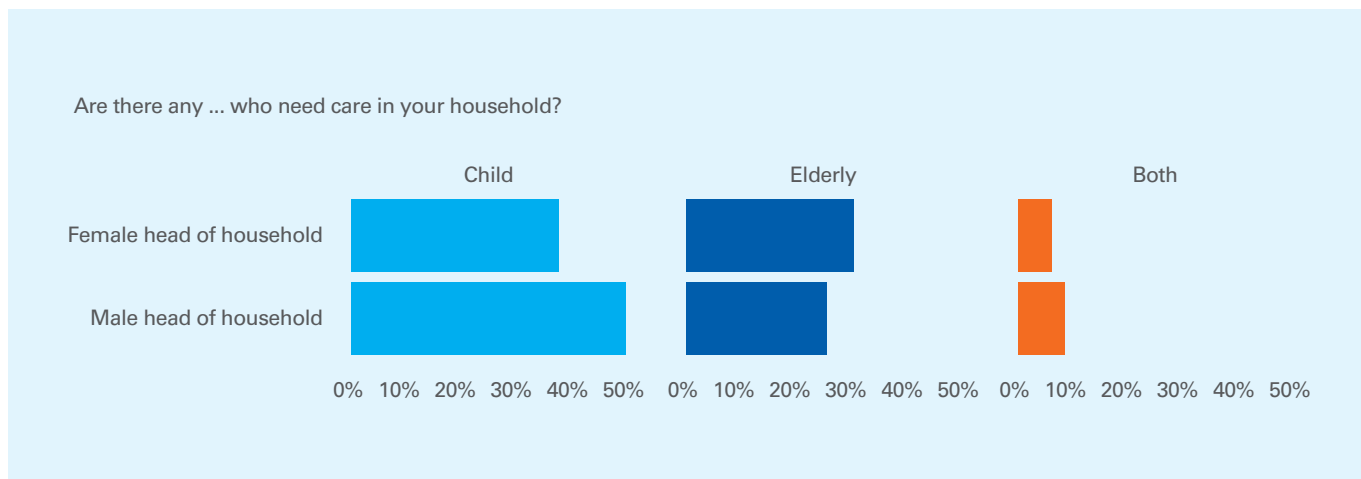
Care requirements

In general, a greater percentage of households were engaged in caring for children (44.8 per cent) compared to caring for the elderly (28.1 per cent), although it is important to acknowledge that certain households undertook responsibilities for both childcare and elderly care (7.7 per cent). Figure 3.51 shows that a higher percentage of male-headed households had children needing care, while elderly care responsibilities were slightly higher in female-headed households compared to male-headed

households. The percentage of households with both elderly and children needing care were notably lower, with a higher proportion belonging to male-headed households (8.7 per cent; female: 6.4 per cent).

Among the 18 focus group discussants, seven were from households that required care for children. Twelve of these households had elderly individuals in need of care. Two of our discussants were in households that had both children and elderly needing care.

Figure 3.51: Share of households where child and elderly need care, by sex of head of household



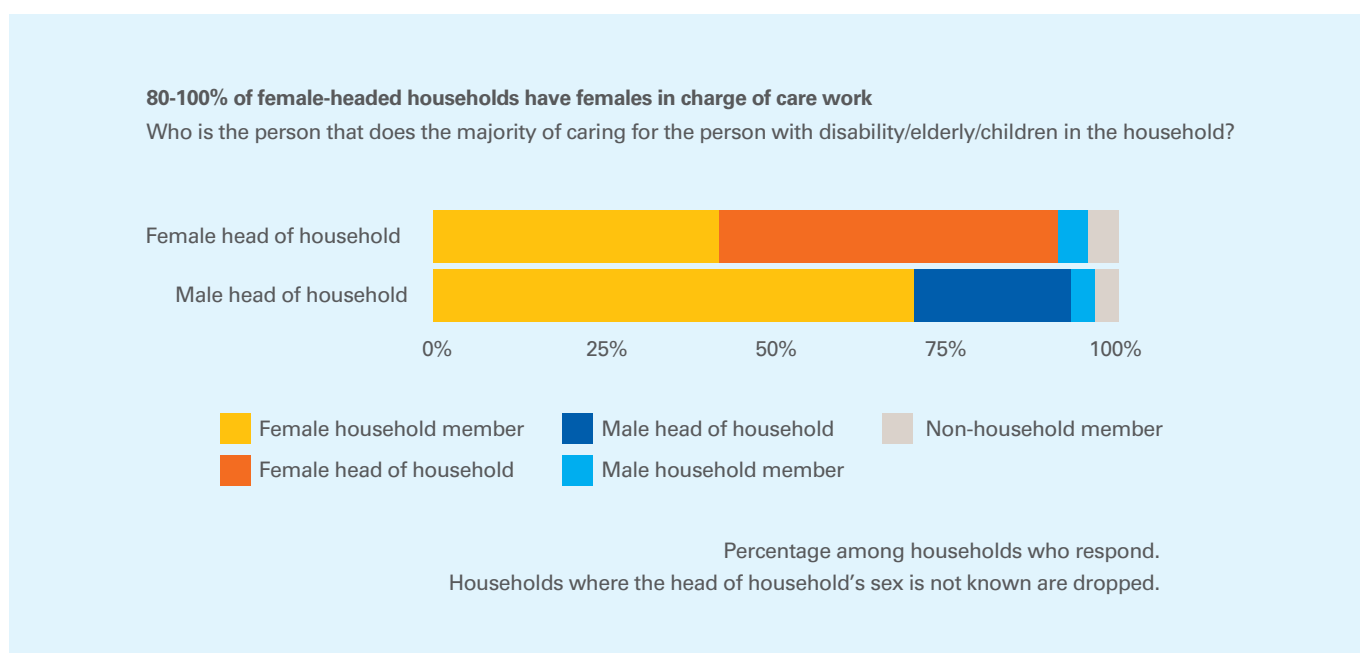
Caregiver burdens

The responsibilities and burdens of care work largely fell on women: women were chiefly responsible for caregiving activities in 78.8 per cent of households. In almost all female-headed households, women were primarily responsible for care work: the household head was also the main caregiver in nearly half (49.5 per cent) of female-led households (Figure 3.52). Although 23.1 per cent of male household heads did the majority of care work in male-headed households, women were still the primary caregivers in 70 per cent of these households. While the majority of caregivers did not appear to feel overly burdened by their responsibilities, 30 per cent of caregivers experienced feelings of burden and stress due to their caregiving duties. This observation was echoed in focus group discussions where the most laments

were heard from two respondents who came from households requiring care work for both children and the elderly. It was predominantly the women in these households who had to shoulder this responsibility.

Two of the focus group discussion respondents reported that they sent their young children to babysitters who are trusted neighbours within the same PPR instead of nurseries further away to save time, although they felt their children might benefit more in terms of educational development at the nurseries. There was also a respondent who sent her child to her parents-in-law's house for the grandparents to take care of while she and her husband worked during the day. Another respondent sent her children to the nearest nursery and mentioned that the fees were burdensome.

Figure 3.52: Share of responsibility for care work by sex of head of household



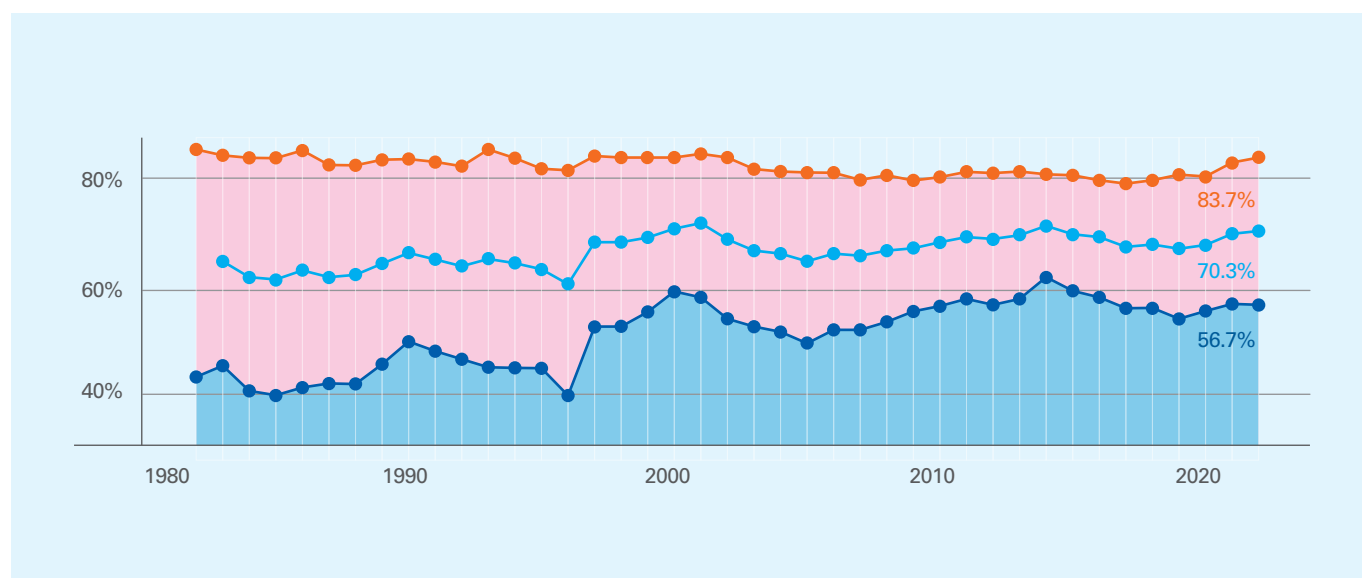
Care work and employment

In an earlier discussion revolving around the reasons for unemployment, family and housework responsibilities were one of the top reasons cited. The labour force participation rate for women in Penang has historically been lower than that of men (Figure 3.53), and family responsibilities and domestic duties were frequently cited as the reason that women dropped out of the workforce. In 2022, 62.9 per cent

of working-age women were outside the labour force due to housework and family responsibilities.³¹ In contrast, only 2.3 per cent of working-age men outside the labour force cited the same reasons. Insights from the focus group participants supported this, indicating that families who do not utilise childcare services or seek childcare assistance from grandparents often rely on their mothers for caregiving at home. These responsibilities restrict women from participating in the labour force.

³¹ Labour Force Survey 2022 (Department of Statistics Malaysia, 2023).

Figure 3.53: Labour force participation rate, Penang, 1982-2022, male and female



The Penang Women’s Development Corporation (PWDC) also acknowledged that women were often the primary caregiver in families. In their field project examining affordable childcare for lower-income communities, they observed that more than 80 per cent of the community participants across different districts were women, even though the project brief asked for all parents. Non-working mothers also professed that the lack of suitable childcare services and arrangements was one of the reasons they did not return to work.

The issue of affordability was frequently highlighted, with a single mother expressing the challenges of childcare fees, particularly for single-parent families. Some mothers also mentioned that the additional financial burden of fees for extra curriculum or development courses proved challenging for lower-income families. Making childcare services affordable and accessible could facilitate the return of women to the workforce, if they wished to do so.

3.7 Food and Nutrition

Key Insights

- Eggs have replaced meat as the primary source of protein, though carbohydrates and vegetables remain the top food choices.
- Households were mostly satisfied with the quality and quantity of their food intake.
- The elimination of hunger and the satisfaction of feeling full were the top priorities for food preparation.
- Households preferred to consume home-cooked food.
- Households reporting weight concerns and with older household heads were more likely to see significant reductions in food spending.

Food intake preferences

Compared to pre-pandemic times, a significant percentage of households were found to have replaced meat with eggs as their primary source of protein, though carbohydrates and vegetables remained the top food consumption choices. Meat consumption actually registered an overall decline of 47.1 per cent in 2022. The intake of carbohydrates and instant noodles rose, suggesting that households were consuming high-sugar foods for sustenance. Additionally, about 75 to 77 per cent of households were satisfied with the quality and quantity of their food intake.

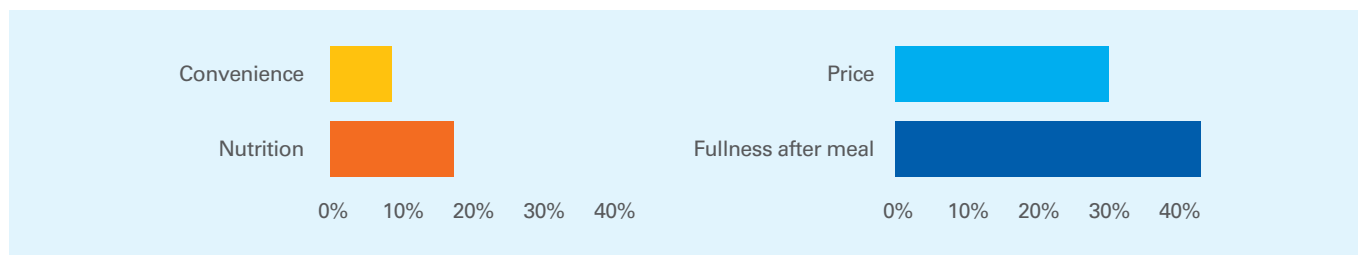
Most households prioritised the satisfaction of feeling full after a meal; hence carbohydrates made up the largest proportion of nutrition in households. A total of 43.2 per cent of households selected this as their primary consideration in food preparation, followed by price (30.3 per cent), nutrition (17.6 per cent) and convenience (9 per cent) (Figure 3.54).

The focus group discussants also placed satiation as important in food preparation. They mentioned that when choosing what to eat, the nutritional balance of the meals did not matter as long as they felt full for longer.

Prices were the main topic of discussion for the focus group participants when it came to their food preferences; they were particularly concerned with the costs and accessibility/availability of essential food items. As mentioned earlier, respondents reported an upward trend in the prices and shortages of staple foods such as rice, sugar and cooking oil. The situation was further worsened by the gradual removal of subsidies, such as those for chicken. These findings suggest that food security and affordability was a growing challenge, which may negatively affect health and well-being.

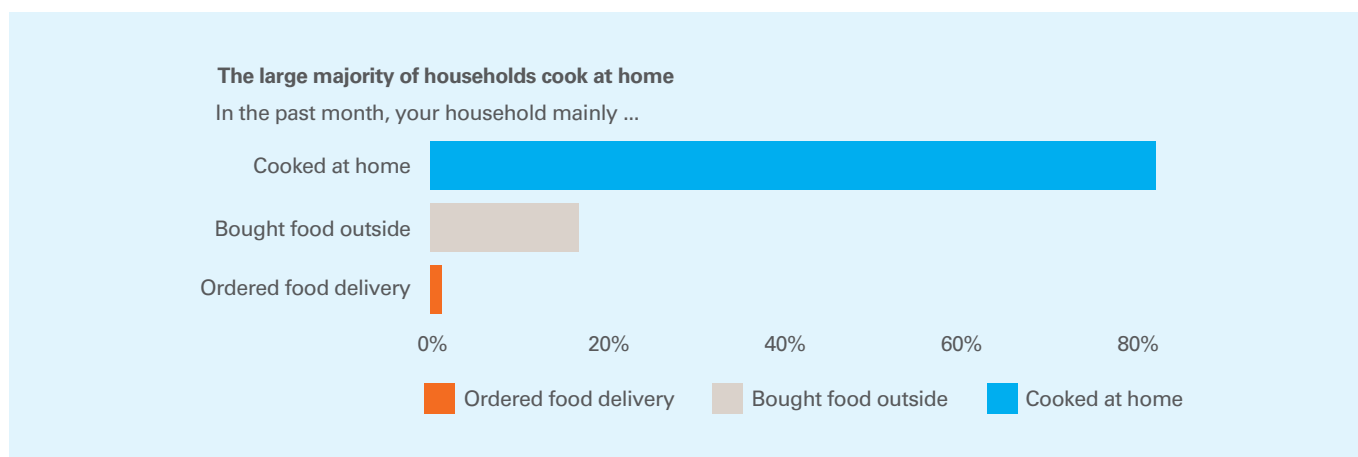
Interestingly, one of the PPRs where we conducted our discussions had a community vegetable garden. While the garden does not guarantee food security for the entire PPR, residents were welcomed to harvest the crops to supplement their food supplies. This helped residents who were in need of extra food.

Figure 3.54: Top priority when preparing food for household members



The majority of households preferred to prepare meals at home, with 81.4 per cent of all households choosing this as their primary option (Figure 3.55). A minority (16.9 per cent) opted to purchase food outside, while those selecting food delivery as their first choice were negligible at 1.4 per cent.

Figure 3.55: Households’ main food preparation methods



The focus group discussion respondents' views on food and nutrition revealed some common themes and challenges. Many respondents preferred to cook at home as they believed it was a way to save money and be healthier. This preference highlighted the respondents' awareness of health and financial considerations.

Reduction in food intake

As discussed previously, self-reported expenditure indicated that more than half of households (51.2 per cent) had reduced their real food expenditure in the past year. Moreover, 27.9 per cent cited eating less as a coping mechanism for financial problems.

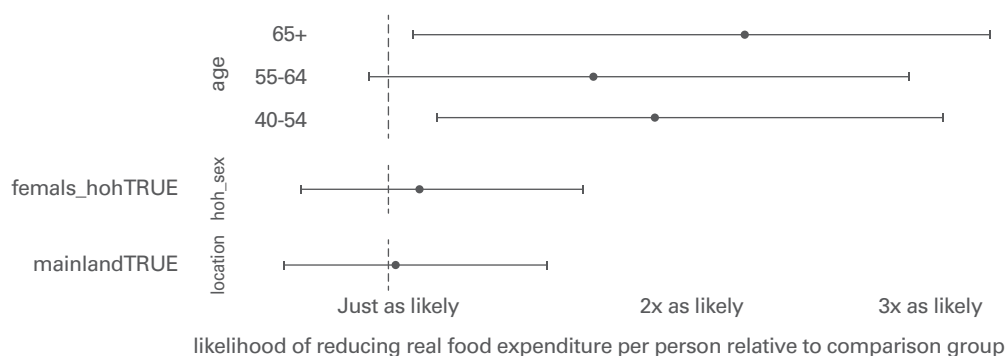
Reduction in food intake in Round 2 was correlated with weight issues. Households that self-reported weight issues experienced the steepest declines in food expenditure (Table 3.8). This was regardless of whether household heads self-reported underweight or overweight issues.

Table 3.8: Real groceries expenditure per person by self-reported weight status of head of household and children in household, median and percentage change

Self-reported weight status, Round 2	Head of household		Children in household	
	Median real groceries expenditure per capita, Round 1 (RM)	Change (%)	Median real groceries expenditure per capita, Round 1 (RM)	Change (%)
Ideal	167	-3.9%	153	-7.7%
Underweight	150	-35.9%	150	-35.9%
Overweight	162	-23.6%	120	-39.9%

Age of the head of household was a risk factor for reduction in food intake. We use reduction in the household's real per capita expenditure of food by >5 per cent or more as an indicator of reduced food consumption. Female-headed households were slightly more likely to have reduced real food expenditure per person (Figure 3.56). Households on the island and the mainland were just as likely to have reduced food expenditure. Age was a major risk factor: all age groups above 40 exhibited a higher risk of reducing food expenses in 2023, relative to households headed by persons below 40.

Figure 3.56: Odds ratios and 95 per cent confidence interval for the likelihood of reducing real food expenditure per person above 5 per cent relative to comparison group, selected household characteristics



Note: The odds ratios are derived from separate logistic regression specifications for the predictors: age of head of household, sex of head of household and location. Estimates for intercept omitted for brevity. Baseline comparison groups are: age of head of household below 40, male head of household and location on the island. x-axis truncated for readability.

Changes in food intake were linked to changes in perceived weight status, particularly for children. Figure 3.57 illustrates a correlation between the household's reduction in food intake and the reporting of underweight issues for both household heads and children. A total of 40.7 per cent of underweight household heads reported a reduction in the household's food intake following the onset of the pandemic. Similarly, among households where children were perceived as underweight, 39.1 per cent had reduced their food intake. Only a small percentage of households with underweight issues had increased food intake (approximately 13 per cent for both household heads and children).

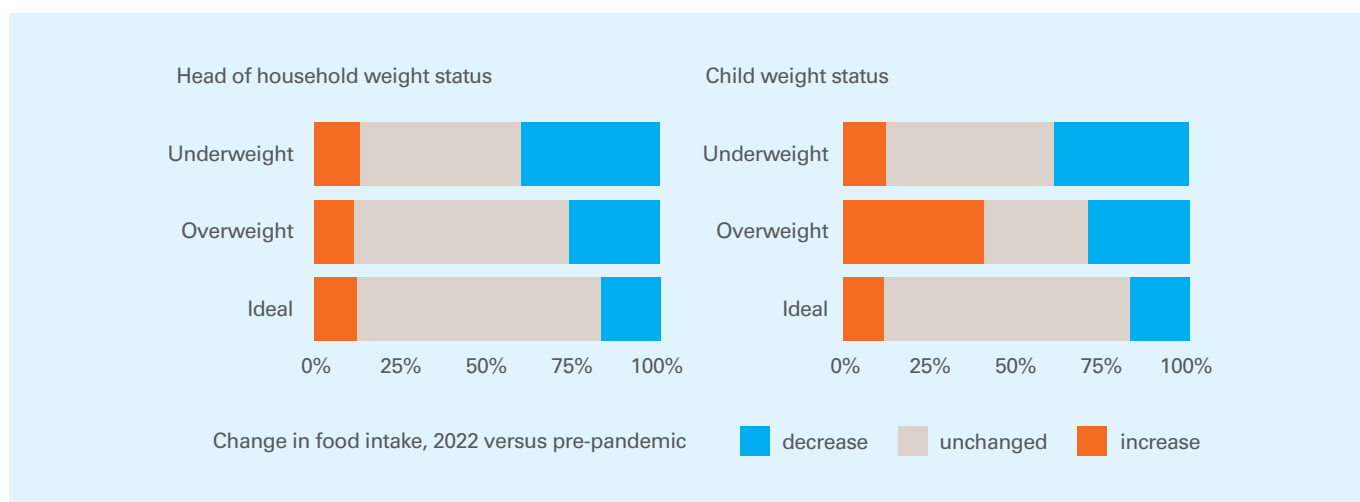
Surprisingly, a larger percentage of household heads who classified themselves as overweight reported a reduction in food intake (26.9 per cent) rather than an increase (11.5 per cent). Children displayed more distinct patterns with 41.2 per cent of those

categorized as overweight experiencing a significant increase in food intake in the household, yet 29.4 per cent of households with overweight children had decreased their food intake.

Food consumption registered the least changes in households where the weights of the household heads and children were perceived to be ideal, as most (70 per cent) observed their food intake to be unchanged. However, in households where weight was perceived to be ideal, higher proportions of both household heads (17.9 per cent) and children (17.3 per cent) registered decreases in food intake rather than increases.

Overall, there was little evidence to suggest that substitution for unhealthy foods may be driving weight status, as we did not find any discernible relationship between perceived weight status and changes in the intake of snacks and instant noodles.

Figure 3.57: Changes in food intake according to perception of weight for head of household and child



Note: "Compared to before the pandemic, how has your household's weekly food intake (amount) changed?"

4. POLICY RECOMMENDATIONS

Although Penang emerged from the COVID-19 pandemic as a model of economic prosperity, the most vulnerable families continue to suffer lingering impact. The key challenges identified in this study include:

- **Inadequate Resources:** Limited aid combined with unstable employment in the informal sector left many households struggling to meet basic needs. Depleted savings amidst movement restrictions created a precarious situation where families resorted to reduced food intake, jeopardising their health and well-being. Additionally, the lack of social protection, especially for the self-employed and gig workers, poses economic security issues during uncertain times. The economic uptick for lower-income communities, while positive, remains fragile, and families continue to rebuild their savings cautiously. The lack of education, skills and experience, however, limit opportunities for the poor to access gainful employment, while limited social protection coverage leaves them vulnerable to future shocks. Therefore, a comprehensive review and gap analysis of welfare policies and aid programmes is needed at both federal and state levels for the purpose of streamlining these policies to ensure efficient and effective delivery of support to low-income communities.
- **Health Concerns:** Physical and mental health issues contributed to unemployment and economic hardship. In particular, financial stability is the primary driver of changes in worry for heads of households. A significant portion of the households reported heightened levels of anxiety regarding the immediate present and the long-term future. Investing in preventive healthcare and making mental health services accessible are essential for overall well-being and economic productivity.
- **Childcare Burden:** Childcare, particularly for female-led households, represents a significant barrier for re-entering the workforce. Affordable and accessible childcare options are crucial for enabling parents, especially mothers, to participate in the economy and improve household income.
- **Education Gaps:** The pandemic's disruption to education affected children from disadvantaged backgrounds due to limited access to technology and difficulties in concentrating. Improved school performance and better temperaments for children in face-to-face schooling highlights the importance of sustained interventions to keep schools open while minimising interruptions from future outbreaks.

Therefore, the following policy recommendations are proposed:

1. Streamline federal and state welfare policies and aid programmes to ensure comprehensive delivery of support to vulnerable communities.

- Identify and address gaps and inefficiencies in existing welfare policies and aid programmes of federal and state governments across multiple areas of welfare for the vulnerable communities, including housing, health, education and employment.
- Perform an analysis of the current aid delivery mechanisms to address inefficiencies and enhance efficiency in the distribution of assistance.
- Examine and evaluate policy and aid initiatives to determine their coverage/accessibility and impact on households' well-being for making future informed policy decisions.
- Engage with local government and communities to ensure that welfare policies and aid programmes remain relevant and responsive to the communities' immediate and longer-term needs and concerns.
- Simplify application processes and ensure clear communication about eligibility criteria, application procedures and benefits received to build trust and confidence in data collection and aid distribution.
- Improve communication and coordination among the State Welfare Department, elected representatives and other relevant stakeholders to ensure seamless delivery of services and avoid duplication of efforts.
- Expand and increase the frequency of cash transfers to provide greater flexibility and empowerment for households to meet their specific needs.
- Expand financial aid programmes specifically tailored for persons with disabilities to support healthcare costs, assistive technology, education and vocational training; and
- Offer respite care services, training programmes and financial assistance to caregivers, especially female caregivers.

2. Implement training and development opportunities to increase and enhance employability, with a specific focus on women and youth.

- Identify existing skills and training needs of the target groups.
- Establish training and development programmes tailored to the needs of women and youths in high-demand occupations.
- Develop technical and soft skills within the training and development programmes, with an emphasis on empowering women and youths.
- Provide training and employment opportunities tailored to the needs of persons with disabilities and/or chronic illnesses.
- Incorporate specialised skills training programmes, such as woodworking classes, culinary classes, tailoring classes and so on.
- Improve access to vocational skills training programmes that are aligned with the particular needs of Penang's manufacturing-intensive economy.
- Ensure training and development programmes are easily accessible via multiple platforms and address barriers, such as lack of childcare and transportation, to enable the participation of women.
- Encourage employers to offer flexible work arrangements, such as part-time or remote work.
- Collaborate with the private sector on advancing training and development opportunities within specific industries.
- Collaborate with NGOs to expand and facilitate opportunities to vulnerable groups; and
- Monitor and evaluate the outreach and effectiveness of the programmes for continued success.

3. Enhance social protection and security for the self-employed and gig workers.

- Educate on the importance of social protection and social security.
- Encourage and incentivise businesses to onboard gig workers with social protection/security schemes.
- Increase awareness of the Social Security Organisation's (SOCSO) Self-Employment Scheme (SPS) and SPS Contribution Match among the self-employed and gig workers.
- Encourage participation and self-contributions to the Self-Employment Scheme to increase social protection, with a long-term plan to move towards mandatory contribution.
- Monitor and evaluate the outreach and efficiency of the Self-Employment Scheme and SPS Contribution Match for future enhancement and improvement.
- Design retirement and pension plans targeted towards the self-employed and gig workers to strengthen their financial security in later years.
- Engage relevant stakeholders, such as gig economy employers, in discussions to further improve social protection and security for the self-employed; and
- Engage the self-employed and gig workers to gain feedback about their needs to develop more tailored social protection benefits and security measures.

4. Support financial planning for low-income communities.

- Offer one-on-one financial counselling services to address the specific needs and challenges faced by individuals in low-income communities, helping them set achievable financial goals.
- Implement programmes that provide financial literacy education designed specifically for low-income communities, particularly for female-headed households, focusing on practical skills such as making informed decisions about budgeting, saving, understanding credit, and basic financial planning.
- Create easily accessible and understandable financial education materials, including workshops, online resources, mobile applications and community-based sessions.
- Partner with local community organizations, NGOs and financial institutions to deliver financial education workshops and provide guidance on accessing banking services, securing loans and managing debt.
- Integrate financial literacy education into school curricula from an early age, ensuring that children from disadvantaged backgrounds receive basic financial knowledge.
- Provide incentives such as vouchers, small savings matches and micro-savings programmes to encourage active participation in financial education programmes.
- Facilitate access to basic banking services, low-cost accounts and affordable financial products for individuals with limited resources.
- Encourage employers to provide financial education and wellness programmes for their low-income employees,

- assisting them to make informed financial decisions and manage their income more effectively; and
 - Encourage banks to develop clear and simple saving products specifically designed for low-income families, focusing on categories such as emergencies or financial security.
- 5. Implement policies to ensure equal opportunities and accessibility for persons with disabilities.**
- Invest in intensive and accurate data collection on the challenges faced by persons with disabilities in Penang to better understand their needs, so as to ensure the efficient allocation of resources.
 - Include and engage the community to ensure that policies and programmes for persons with disabilities are tailored to address their immediate and long-term needs.
 - Support access to affordable and quality healthcare services for persons with disabilities, including targeted therapy and assistive technology.
 - Provide financial assistance to persons with disabilities facing economic challenges, especially those with limited employment prospects.
 - Implement targeted career training programmes for persons with disabilities that are designed to cater to their specific needs and abilities.
 - Implement policies to promote the inclusion of persons with disabilities in the workforce.
 - Organize campaigns to raise awareness about disability issues and promote social inclusion of persons with disabilities; and
 - Support organizations and initiatives that cater to persons with disabilities, and actively involve them in policy decisions that affect their lives.
- 6. Improve access and quality of physical and mental health services.**
- Increase and invest in public health spending to improve the accessibility (i.e., more public health clinics, improved waiting times) and quality of public healthcare.
 - Expand and publicise government health initiatives for the lower-income communities, such as the Peduli Kesehatan Scheme (Peka B40)³⁴ and Madani Medical Scheme,³⁵ to encourage greater participation in physical health screening programmes, specifically for those who are chronically ill and disabled.
 - Expand the scope of the MySalam³⁶ initiative to enhance coverage and protection, e.g., increasing the payments of replacement income and increasing the quota of payments.
 - Develop programmes on nutrition, exercise and preventive care for financial aid recipients.
 - Ensure accessibility to mental health services by addressing barriers such as affordability, transportation, and availability of healthcare facilities.
 - Encourage and fund the formation of mental health support groups and mental health awareness programmes within the community.
 - Develop targeted programmes which promote nutrition, exercise and preventive healthcare for financial aid recipients.
 - Promote mental health awareness through community mental health programmes, and work towards reducing the stigma associated with seeking assistance; and
 - Develop mental health training programmes for community leaders so that they are able to guide community members towards available resources.
- 7. Coordinate programmes to promote nutrition and food security for low-income families.**
- Allocate designated underused spaces in PPRs for community gardens where residents are free to grow and share vegetable crops.
 - Provide nutrition education programmes to assist individuals and families to make informed choices about their food consumption. These programmes should emphasise the importance of balanced nutrition, portion control and meal planning.
 - Encourage food retailers in underserved areas to offer discounts on healthier food items or to expand their

³⁴ Peduli Kesehatan Scheme (Peka B40) is a government initiative aimed at meeting the healthcare needs of the B40 community, with a focus on non-communicable diseases (NCDs) and the early detection of illnesses.

³⁵ The Madani Medical Scheme is a primary healthcare service for the people, with a focus on the B40 group, to enable them to seek free treatment for minor ailments at registered private general practitioners (GPs).

³⁶ mySalam B40 Takaful Protection Scheme is a free takaful (Islamic insurance) protection scheme provided by the government to the B40 community, with hospitalisation and critical illness benefits.

selection of fresh produce and healthier alternatives so that the community does not compromise on nutrition to save money.

- Implement programmes to reduce food waste and ensure that surplus food is distributed to families in need.
- Support local food programmes to enhance food security and reduce dependence on markets and grocery stores.
- Establish or enhance programmes that address food insecurity, including: community gardens, farmers' markets, and partnerships with local businesses to provide affordable and nutritious food options.
- Support the establishment and maintenance of community gardens through financial assistance and foster connections among local farms, community gardens and schools to promote healthy eating habits by integrating fresh produce into school meal programmes.
- Offer training programmes and workshops on gardening, sustainable agriculture practices, nutrition and food preservation techniques to community members interested in participating in these initiatives.
- Foster partnerships among local governments, community organizations and businesses to create and sustain community gardens, leveraging resources and expertise for long-term success.
- Invest in necessary infrastructure such as irrigation systems, fencing, and composting facilities to ensure the sustainability and productivity of community gardens; and
- Extend and improve community-led food support initiatives such as the Mutiara Food Bank.

8. Improve accessibility and affordability of childcare services tailored for lower-income families.

- Study the feasibility of increasing existing childcare subsidies and/or implementing alternative subsidy models for families with lower incomes.
- Explore the potential of working together with existing childcare centres on providing tiered fees for families with lower incomes.
- Examine the possibility of creating additional community-based childcare centres within neighbourhoods.
- Engage in open discussions and encourage active participation of parents, especially fathers, to address care work responsibilities and childcare needs within the community.
- Engage stakeholders such as employers and companies, existing childcare centres and providers, NGOs, community and civic organizations as well as the families themselves in developing affordable childcare services best suited to the families' needs; and
- Ensure that the families have full access to information regarding location, prices and services offered by existing childcare centres.

9. Provide education support.

- When closing schools as a last resort, Malaysia should guarantee uninterrupted substitute and adapted services for those normally delivered in the school setting, such as special needs education, health services and school meals (where applicable).
- Even when schools are open, remote learning readiness should be developed and secured for all, with an additional emphasis on children in vulnerable situations.
- Strengthen and increase access to education programmes, including scholarships and tutoring services, to empower children in low-income families for future opportunities.
- Foster partnerships with community organizations, NGOs and local leaders to create supportive environments that encourage education, mentorship and positive role models for children.
- Ensure equitable access to technology and the internet for educational purposes; bridging the digital divide by providing devices and connectivity to the lower-income communities.
- Ensure schools adopt measures to reduce risks from the continuation of in-person learning and interaction through practices such as improved ventilation and adherence to mask-wearing protocols.
- Coordinate programmes to expose children from low-income households to high value careers, including STEM occupations.
- Focus on early childhood education and development programmes to prepare children from disadvantaged backgrounds for formal schooling; and
- Implement programmes to address mental health concerns and provide additional support for students struggling academically or facing financial difficulties.

5. CONCLUDING REMARKS

In summary, addressing the multidimensional needs of low-income families requires a multifaceted approach, driven by the government in collaboration with all critical stakeholders. By implementing strategies such as expanding financial assistance programmes, creating income-generating opportunities, ensuring social welfare protection and enhancing educational opportunities, a more supportive and holistic environment that uplifts and empowers these families can be created. It is also crucial to recognize the unique challenges faced by women and children, and ensure they have equal access to essential resources and opportunities to improve their standard of living. Policy design and framework must be inclusive in addressing the needs of every single low-income family member. It is possible to construct a more inclusive and equitable society through collaborative efforts that lay the groundwork for the prosperity and well-being of all.

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