

BMJ Open The prevalence and correlates of elder abuse and neglect in a rural community of Negeri Sembilan state: baseline findings from The Malaysian Elder Mistreatment Project (MAESTRO), a population-based survey

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ABSTRACT

Background As Malaysia is fast becoming an ageing nation, the health, safety and welfare of elders are major societal concerns. Elder abuse is a phenomenon recognised abroad but less so locally. This paper presents the baseline findings from the Malaysian Elder Mistreatment Project (MAESTRO) study, the first community-based study on elder abuse in Malaysia.

Design Cross-sectional study, analysing baseline findings of a cohort of older adults.

Setting Kuala Pilah district, Negeri Sembilan state, Malaysia.

Objectives To determine the prevalence of elder abuse among community dwelling older adults and its associated factors.

Participants A total of 2112 community dwelling older adults aged 60 years and above were recruited employing a multistage sampling using the national census.

Primary and secondary outcome measures Elder abuse, measured using a validated instrument derived from previous literature and the modified Conflict Tactic Scales, similar to the Irish national prevalence survey on elder abuse with modification to local context. Factors associated with abuse and profiles of respondents were also examined.

Results The prevalence of overall abuse was reported to be 4.5% in the past 12 months. Psychological abuse was most common, followed by financial, physical, neglect and sexual abuse. Two or more occurrences of abusive acts were common, while clustering of various types of abuse was experienced by one-third of abused elders. Being male (adjusted OR (aOR) 2.15, 95% CI 1.23 to 3.78), being at risk of social isolation (aOR 1.96, 95% CI 1.07 to 3.58), a prior history of abuse (aOR 3.28, 95% CI 1.40 to 7.68) and depressive symptomatology (aOR 7.83, 95% CI 2.88 to 21.27) were independently associated with overall abuse.

Conclusion Elder abuse occurred among one in every 20 elders. The findings on elder abuse indicate the need to

Strengths and limitations of this study

- ▶ The first community-based study on elder abuse reported in Malaysia employing a large sample size, good response rate, highly personalised method of data collection and referral of abused elders to the local health authorities.
- ▶ The temporal relationship of the association between elder abuse and various risk factors cannot be established due to the cross-sectional study design.
- ▶ Under-reporting, due to exclusion of severely cognitively impaired elders from the analysis, as well as elders not disclosing abuse.

enhance elder protection in Malaysia, with both screening of and interventions for elder abuse.

INTRODUCTION

Malaysia is fast achieving ageing population status. Census data show that an estimated 5.9% of a total 30.9 million population are elderly persons aged 65 years and above while elders aged 60 and above make up 9% of the population, a proportion similar to that of developed nations.^{1 2} Malaysia, in line with the United Nations World Assembly on Ageing, held in Vienna in 1982, recognises persons aged 60 years and above as belonging to the elderly age group.^{3 4} With the rapidly ageing population, it is imperative that health needs of the elders are looked into. Population ageing brings with it its share of maladies, including proper treatment of



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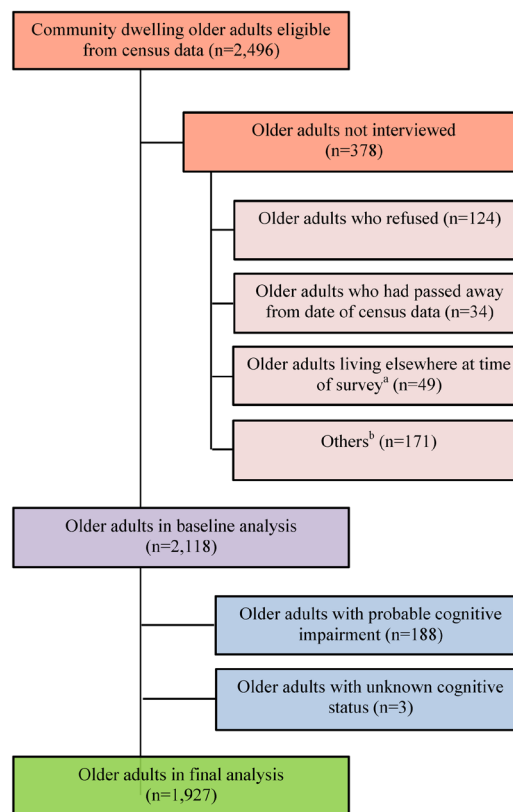
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non-communicable diseases, increased risk of falls and even abuse of elders.⁵

International data on elder abuse show that elder abuse prevalence varies globally between 1% and 44.6%,⁶ and between 2.2% and 66% in Asia.⁷ A recent review synthesising prevalence from community-based studies among elders aged 60 yielded a pooled prevalence of abuse estimate at 15.7%.⁸ Psychological abuse was found to be the most common form (11.6%), followed by financial, neglect, physical and sexual abuse at 6.8%, 4.2%, 2.6% and 0.9%, respectively. Regional elder abuse estimates suggest that Asia predominated at 20.2%, despite the greater emphasis on filial piety in Asian cultures. This estimate is followed by Europe (15.4%) and the Americas (11.7%).⁸ The reasons for the higher estimate found in Asian cultures are unknown although the increasing rapid economic development and social change in many Asian countries may have significantly contributed to the elder abuse problem. The slow degradation of values coincides with the disbanding of extended families in favour of the nuclear family set-up especially when work opportunities take youngsters away to larger cities.^{7,9} Some previous literature had reported that elder abuse may be associated with older age, female sex, minority ethnic status, lower levels of education, lower socioeconomic status, cohabiting with other relatives in Western societies compared with living alone in Chinese communities, current employment in some instances, poorer physical function, poorer physical and mental health, dependency on others, history of chronic disease, cognitive decline, depression, stress, prior history of abuse, social isolation and prior poor family relationships.⁹⁻¹⁸

Global and regional estimates suggest that elder mistreatment is a significant health and social problem. Therefore, it is important that local data are collected to raise awareness and convince policymakers that the elder abuse issue is a real problem in the community, and that action is clearly needed. Local researchers have highlighted the absence of information or data on elder abuse that could direct the forming of specific legislation to address elder abuse. Currently, there are no laws to prevent elder abuse in the country. The provision of the current Domestic Violence Act 1994 although by default covers all family members including older persons, primarily aims to deter violence against intimate partners, and hence is considered insufficient to safeguard and protect the rights of the older persons.^{3,19}

Community dwelling elders were the focus of this study as more than three quarters of Malaysian elderly reside at home with adult children and/or other family members, and not in nursing homes or institutions.^{20,21} This paper reports the baseline findings of the prevalence and correlates of elder abuse among community dwelling elderly in the local context.



^a Living elsewhere at time of survey denotes older adults who usually live in a rotational manner with adult children

^b Others includes elders who have shifted, were unable to communicate with the interviewer on their own, were not found during the survey period, duplicated name of an older person in the study database, were unwell at time of visit, incorrect address, non-contactable or not at home up to three times during the survey period

Figure 1 Flow diagram showing recruitment of participants in the study.

MATERIALS AND METHODS

Study population

The Malaysian Elder Mistreatment Project (MAESTRO) is an epidemiological study of elder abuse among Malaysian older adults aged 60 years and above.²² The inclusion criteria were older adults aged 60 years or more, residing at home, alone or with family over the past 12 months and not institutionally bound. The sampling frame for this study was obtained from the Malaysian Department of Statistics. A two-stage sampling process was carried out in the recruitment of older adults in the rural district of Kuala Pilah in Negeri Sembilan state, so chosen because of its high dependency ratio and high net migration rate.^{1,23} Details of the study methods conform to the STROBE reporting guideline²⁴ and have been described previously in the study protocol.²² This study employed face-to-face interviews with 2118 older adults with their written informed consent (84.9% response rate) from a total of 2496 older adults in the sampling frame. Approximately 378 older adults did not respond due to migration, death or were not at home when visited up to three times during the survey period (see figure 1). No difference was found in the characteristics of older adults such as age, ethnicity and sex among the respondents and non-respondents. Data analysis was performed on 1927 respondents after

excluding 201 older persons with severe cognitive impairment or unknown cognitive status. The following paper describes the baseline data of this cohort.

Definition and measurement

This study uses the term elder abuse or elder mistreatment, as used by the WHO,²⁵ to cover both abuse and neglect.²⁶ Elder abuse was measured using a validated instrument derived from previous literature and the modified Conflict Tactic Scales, similar to the Irish national prevalence survey on elder abuse with modification to local context.¹⁷ Prior to this study, pilot testing of the questionnaire and feasibility was conducted, whereby 291 elderly were interviewed.²⁷

In line with the WHO definition of elder abuse, the five major subtypes were defined. The main outcome for this study was overall abuse in the past 12 months, operationalised as the presence of any one occurrence of physical, psychological, sexual, financial abuse or neglect by someone in a position of trust such as family members, friends or neighbours. Psychological abuse and neglect were defined as 10 or more occurrences in the past 12 months perpetrated by someone in a position of trust as reported by the elder respondent, or if there were less than 10 such occurrences in the past 12 months, but perceived by the elderly respondent as having had a serious impact on them, then this was also taken to constitute psychological abuse or neglect. Physical, sexual and financial abuse were construed as any one occurrence in the past 12 months perpetrated by someone in a position of trust as reported by the elder. Clustering of abuse was defined as the number of subtypes of abuse reported to have been experienced by the elder in the past 12 months.

The eight physical abuse questions included, for example, if anyone had ever tried to slap or hit the elder, or restrained them in any way, among others. Psychological abuse assessment consisted of seven questions such as verbally insulted the elder using harsh words, sworn at or cursed them, besides threatening them. Sexual abuse questions included if anyone had ever spoken to, touched or tried to touch them in a sexual manner or forced them into having intercourse. The nine financial abuse questions included if anyone had stolen their money, things, property or documents; been prevented access to their money, things, property or documents; or in the local context, having experienced no contribution towards monthly expenses like food or rent which had previously been agreed on, among others. Assessment of neglect was based on 14 questions including if the elderly had received any form of assistance if he/she was unable to perform any activities of daily living listed, or lacked access to basic amenities such as food, clean clothes, healthcare or medications and shelter.

Sociodemographic characteristics such as age, sex, marital status, ethnicity, education, poverty, living arrangements and current employment, besides other characteristics such as physical health, chronic disease, cognitive impairment, stress, anxiety, depressive

symptoms, history of abuse and risk of social isolation, were examined.²² In this study, physical health was scored using the Short Form 12 survey-version 2 (SF-12v2) physical component scale in relation to the past 7 days.²⁸ Permission for usage of this questionnaire was obtained and purchased from Quality Metrics' SFTM. These questionnaires are available in Malay (local language) and English versions, validated for use in the Malaysian population.²⁹

History of chronic disease was self-reported by the older person, who were asked if they had ever been told by a doctor or medical staff that they suffered from cardiovascular disease, hypertension, stroke, arthritis or joint pain, Parkinson's disease, diabetes mellitus, respiratory problems such as lung infections or asthma, cancer or hypercholesterolaemia. This was similar to the format used in the National Health and Morbidity Survey.³⁰ An affirmative answer to any of these conditions was taken as 'yes' for chronic disease.

Cognitive impairment was assessed using the Elderly Cognitive Assessment Questionnaire (ECAQ). The ECAQ has 10 items, grouped under memory, orientation and memory recall. It has been validated for use in the local population,³¹ with scores of 0 to 4 considered probable cognitive impairment, 5 to 6 borderline cognitive impairment and 7 to 10 normal cognition.³² Interviewers noted responses and continued accordingly regardless of the scoring at this point.

Stress, anxiety and depressive symptomatology were assessed in relation to the past 7 days using the Depression, Anxiety and Stress Scales (DASS-21) instrument. It was read out and respondents asked to identify a response to each statement being read, ranging from not at all, infrequent, frequent to very frequent, according to how they felt in the past 1 week. The DASS 21 is a shorter version of the longer 42 item DASS, and has been shown to have adequate validity for each measure of depression, anxiety and stress,^{33 34} as well as having been validated in the Malay language.³⁵

Risk of social isolation was assessed using the revised Lubben's Social Network Scale 6. This tool comprising six questions quantified on a Likert scale, was put forth to the elderly respondent, asking about the number of persons they heard from, could talk to about personal matters or call for help from either family or friends. The scores range from 0 to 30. Scores <12 showed those at risk for social isolation and those ≥ 12 were deemed to have good social support and hence not at risk for social isolation, as suggested in previous studies.³⁶

Previous validation of these tools revealed a Cronbach's alpha of 0.731 for cognitive status measurement, 0.748 for depression measurement, 0.855 for physical and mental health component scores, 0.769 for risk of social isolation and 0.540 for overall abuse measurement.²⁷ Previous history of abuse was asked by means of a single question. The specific question asked if elderly respondents ever experienced any of the abuse or neglect mentioned, before the age of 60.

Ethical approval

Ethical approval was obtained from the Medical Research and Ethics Committee, Ministry of Health Malaysia and the University of Malaya Medical Centre's Institutional Review Board. Interviewer debriefing sessions were also held at regular intervals, as part of the safety protocol.²² Abused elders were also referred to the nearest district health office and social welfare authorities.

Data analysis

All statistical analyses were performed using the SPSS software V. 20.0 (SPSS, 2009, Chicago, Illinois). The 2118 respondents had their sociodemographic background compared with the 378 non-responders. Univariate analyses were used to describe the prevalence of all types of elder abuse in the last 12 months. Sampling weights were applied to produce unbiased estimates. Descriptive analyses were performed to describe presence or absence of overall abuse. Logistic regression was performed for both univariate and multivariate analysis to estimate the

crude and adjusted ORs (aOR) including its 95% CI of overall abuse. The model was adjusted simultaneously for sociodemographic characteristics, general health status including physical health, physical and cognitive function, chronic disease, history of abuse and risk of isolation that may serve as correlates of abuse. Variables with $p < 0.25$ in the univariate analyses were included in the regression model.

RESULTS

Prevalence of elder abuse

The overall prevalence of elder abuse reported in the last 12 months is 4.5% (see table 1). Psychological abuse is the most frequent (2.2%), followed by financial (2.0%), neglect (1.1%), physical (0.5%) and lastly, sexual abuse (0.1%). About 5.2% of males reported experiencing abuse as compared with 4.0% of females. Older adults reporting two or more experiences of abusive acts in the

Table 1 Prevalence of all types of elder abuse in the last 12 months (n=1927)

Type of abuse/ number of subtype experiences*	Weighted prevalence†					
	Male		Female		Total‡	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Overall abuse	40	5.2 (3.7 to 7.4)	44	4.0 (2.8 to 5.6)	84	4.5 (3.5 to 5.7)
0	716	94.8	1127	96.0	1843	95.6
1	19	2.1	18	1.5	37	1.7
≥2	21	3.1	26	2.5	47	2.7
Psychological	16	2.2 (1.3 to 3.8)	22	2.3 (1.4 to 3.7)	38	2.2 (1.5 to 3.2)
0	740	97.8	1149	97.7	1889	97.8
1	8	1.0	8	0.7	16	0.8
≥2	8	1.2	14	1.5	22	1.4
Financial	16	2.1 (1.2 to 3.6)	19	2.0 (1.2 to 3.3)	35	2.0 (1.4 to 3.0)
0	740	97.9	1152	98.0	1892	98.0
1	13	1.8	17	1.6	30	1.7
≥2	3	0.3	2	0.3	5	0.3
Neglect abuse	10	1.6 (0.8 to 3.1)	11	0.8 (0.4 to 1.7)	21	1.1 (0.7 to 1.8)
0	746	98.4	1160	99.2	1906	98.9
1	2	0.2	3	0.2	5	0.2
≥2	8	1.4	8	0.6	16	0.9
Physical	5	0.4 (0.2 to 1.0)	6	0.6 (0.2 to 1.4)	11	0.5 (0.3 to 1.0)
0	751	99.6	1165	99.4	1916	99.5
1	4	0.3	2	0.2	6	0.2
≥2	1	0.1	4	0.4	5	0.3
Sexual	1	0.3 (0 to 2.1)	0	–	1	0.1 (0 to 0.8)
0	755	99.7	1171	100.0	1926	99.9
1	1	0.3	0	0	1	0.1
≥2	0	0	0	0	0	0

*Table percentages for number of experiences are columnar percentages.

†Weighted for enumeration block and living quarters as provided by Department of Statistics.

‡Total for overall abuse is > total of each subtype of abuse as multiple subtypes of abuse may have been experienced by an abused elder.

past 12 months (2.7%) were more common than a single abusive experience (1.7%). Clustering of abuse subtypes shows that about 3% of older persons had experienced one type of abuse, and 1.2% had experienced multiple types of abuse.

Profile of respondents

Table 2 shows the baseline characteristics of elderly respondents by the presence of overall abuse. Slightly more abused elders are males, aged 60–69 years old, not married, of non-Malay ethnicity and of lower educational levels. They are also more likely to be living in poverty, staying alone and currently employed. In terms of mental health, those who reported abuse are more likely to have depressive symptoms, anxiety and stress, besides poorer physical health. Eighty per cent of elders had at least one known chronic disease, while almost 10% had probable, and another 10%, borderline cognitive impairment. Almost one in 20 abused elders reported having experienced abusive acts before the age of 60, while almost 10% of elders were found to be at risk of social isolation.

Analysis of factors associated with elder abuse

Examining each factor individually, older adults aged 70 to 79 years, those not married, hard-core poverty, current employment, presence of any one chronic disease, stress, anxiety, depressive symptoms, history of abuse and being at risk social isolation were all found to have $p < 0.25$ and therefore included in the multivariable regression (table 3). However, in the multivariable analysis, males were found to be twice as likely as females to be abused (aOR 2.15, 95% CI 1.23 to 3.78), while those with depressive symptoms were eight times more likely to be abused (aOR 7.83, 95% CI 2.88 to 21.27). A prior history of abuse increased the odds of abuse by three times (aOR 3.28, 95% CI 1.40 to 7.68) while socially isolated older adults had twice the odds of being abused (aOR 1.96, 95% CI 1.07 to 3.58). Age, marital status, ethnicity, educational level, poverty, living arrangements, current employment, chronic disease, stress and anxiety were no longer significantly associated with overall abuse in the multivariable model (table 3).

DISCUSSION

Generalisation of findings

This community-based survey garnered a very respectable 84.9% response rate from respondents, showing that the results are generalisable to the target population of older adults (see figure 1). A comparison of the respondents to census data showed that it was largely representative of the older adults population in Kuala Pilah district.³⁷

Prevalence of abuse

The prevalence of overall elder abuse in this study was slightly higher than the estimate found in Ireland, from which the instrument was based on.¹⁷ Other studies using a similar means of assessment obtained prevalence

estimates of 12.3% in Portugal,³⁸ 2.6% in the UK,¹⁶ 3.24% in the USA³⁹ and 4.6% also in the USA.⁴⁰ Our findings are at the lower prevalence range comparing other studies reviewed (1.1% to 44.6%, or pooled at 15.7%)^{6 41} as well as those reported in Asia (2.2% to 66%)⁷. Elder abuse still occurs despite the preconceived notion that filial piety, respecting and caring for elders is practised widely and expected of Asian families and children. This has to be tempered with the social changes in Asian societies as they become more westernised and thus the old cultural values are therefore diluted with the intrusion of Westernised occupations and lifestyles.^{9 15} Degradation of cultural values is occurring along with rapid changes to the family structure, urbanisation and modernisation. Number of experiences of abuse at 1.7% and 2.7% for one or more than one abusive act experienced was similarly reported by two studies before. This was 30.7% of abused elders in Portugal⁴² and 32.8% in Thailand.⁴³ Clustering of abuse was also seen in a Latino population in the USA,³⁸ and another Portuguese study,⁴² with similar proportions of abused elders (two-thirds and one-third, respectively) experiencing one type or multiple types of abuse.

The most common type of abuse, psychological abuse, was reported by elders. This is similar to studies done elsewhere where psychological abuse is the most frequently reported type of abuse.^{11 12 44 45} Similar to evidence elsewhere, sexual abuse was the least common type of elder abuse. Only one occurrence of verbal sexual harassment was reported. This is similar to a national prevalence study on elder abuse in the UK and was reported by a male respondent.¹⁶

Factors associated with elder abuse

Males were predisposed to elder abuse compared with females, which may be explained by the local culture prevalent to Negeri Sembilan state in which Kuala Pilah district is located. The practice of 'adat perpatih', a matrilineal kinship system, where womenfolk hold the rights to ancestral property and land is a local custom or tradition peculiar to Negeri Sembilan state. The basic difference between the matrilineal and bilateral system is seen at the household unit level or family. Under the 'adat perpatih' system, much of the pattern of life revolves around the women of the family, which also dictates that inheritance and property is handed down to daughters rather than sons. Descendants of the mother, and her sisters and daughters is the most important kinship group in the 'adat perpatih' system. Thus, female elderly are valued more in this matriarchal community compared with male elderly. This 'adat' is applicable to Malays, and as they comprise the majority of the population, may explain the higher prevalence of abuse among males compared with females.⁴⁶

Depressive symptomatology in this study was found to be strongly associated with elder abuse. Similar findings were reported from other studies, estimated to be between 2.5 and 4.5 times more as older adults' with poor mental health conditions may predispose them to

Table 2 Baseline characteristics of elderly respondents by the presence of overall abuse (n=1927)

Characteristics	Abused		Non-abused		Total	p Value
	n	%*	n	%*	N	
Age						
Oldest-old (80+ years)	8	4.4	175	95.6	183	0.41
Old-old (70–79 years)	29	3.7	752	96.3	781	
Young-old (60–69 years)	47	4.9	915	95.1	962	
Sex						
Male	40	5.3	715	94.7	755	0.26
Female	44	3.8	1127	96.2	1171	
Marital status						
Not married	7	10.9	57	89.1	64	0.04
Widowed	19	3.1	593	96.9	612	
Married	58	4.6	1193	95.4	1251	
Ethnicity						
Non Malay [†]	6	13.3	39	86.7	45	0.29
Malay	78	4.1	1804	95.9	1882	
Educational level						
Secondary or higher	16	3.2	489	96.8	505	0.41
None or primary	68	4.8	1354	95.2	1422	
Poverty[†]						
Hardcore poor (<RM440)	19	5.3	341	94.7	360	0.26
Poor (RM441-700)	20	5.8	327	94.2	347	
Non-poor (>RM700)	44	3.6	1164	96.4	1208	
Living arrangements						
Staying alone	12	6.7	168	93.3	180	0.07
Staying with others	72	4.1	1675	95.9	1747	
Current employment						
Currently employed	11	5.8	179	94.2	190	0.22
Not currently employed	72	4.2	1648	95.8	1720	
Physical health						
Below normal	47	5.1	871	94.9	918	0.66
Normal	37	3.7	954	96.3	991	
Cognitive impairment						
Borderline	14	5.6	238	94.4	252	0.47
None	70	4.2	1605	95.8	1675	
Stress						
Stress	9	31.0	20	69.0	29	0.01
No stress	75	4.0	1806	96.0	1881	
Anxiety						
Anxiety	15	24.2	47	75.8	62	<0.001
No anxiety	69	3.7	1785	96.3	1854	
Depressive symptoms						
Depressive symptoms	14	31.1	1803	96.3	1872	<0.001
No depressive symptoms	69	3.7	31	68.9	45	
Chronic disease						
Presence of any one disease	73	4.9	1431	95.1	1504	0.09

Continued

Table 2 Continued

Characteristics	Abused		Non-abused		Total	p Value
	n	%*	n	%*	N	
No chronic disease	11	2.6	410	97.4	421	
History of abuse (prior to age 60)						
Abuse	14	17.3	67	82.7	81	<0.001
No abuse	68	3.8	1735	96.2	1803	
Risk of social isolation						
At risk	28	8.2	315	91.8	343	0.01
Not at risk	53	3.4	1519	96.6	1572	

*Table percentages are row percentages.

†Malays refer to the largest population group in Malaysia, while non-Malays in this study refers to both ethnic Chinese and Indians.

‡Poverty delineation follows that of the Economic Planning Unit, Prime Minister's Department Poverty Line Indicator.

abuse.^{17 47 48} However, depression could be a risk factor or the effects of the abuse.^{17 49}

A prior history of abuse was found associated with elder abuse among elderly respondents of this study. This finding has also been reported by other research, where it has been postulated that elder abuse is an extension of domestic abuse that has occurred at a younger age and that is now continuing into old age.^{14 42} It may also be explained by the same stressors being present in the elderly person's environment or family. Another plausible explanation is that the abusive act is being perpetrated in a cyclical pattern.^{13 50} The cyclical pattern may also be explained by transgenerational or social exchange theory, whereby those abused elders view violent behaviour as acceptable, and thus may perpetrate it themselves later.^{51 52}

Poor social support from both friends and family may cause elders to be at risk of social isolation.⁴⁹ In this study, older adults at risk of social isolation were found to be twice more likely to be abused. These included those feeling isolated despite living with family members, as well as those living alone. In the latter case, perpetrators were persons whom elders do come in contact with, regardless of frequency, such as adult children or neighbours. The social scale measure also reflects lack of support, so not hearing from family or friends contributed to this measure too. Previous research in Malaysia has shown that elders with better social support are those who kept active socially and were well connected by virtue of participating in political and religious activities or the local neighbourhood watch.³⁰ Currently, social support may be eroded by virtue of younger people migrating to urbanised areas leaving a largely elder population in rural areas like Kuala Pilah.² Net migration for Negeri Sembilan state is high, it being among the top three states to send migrants out to other states. Negeri Sembilan had the highest migration effectiveness ratio in Malaysia.²³

Strengths and limitations of this study

The large sample size, good response rate, highly personalised method of data collection and referral of

abused elders to the local health authorities are some of the strengths of this study. To the best of our knowledge, this is the first community-based study on elder abuse reported in Malaysia. As the baseline data is from a cross-sectional study, the temporal relationship of the association between elder abuse and various risk factors cannot be established. As experience of abuse in this study was based on self-report, under-reporting of abuse is a possible shortcoming. Under-reporting is also possible due to exclusion of severely cognitively impaired elders who may be more susceptible to abuse. Older adults who experienced abuse may not want to disclose their status and this is especially so in Asian communities, where upholding the family honour is important in order to 'save face', lest the family be humiliated by disclosure of such negative personal experiences encountered by the elder person.⁷ While the findings are largely representative of rural elderly in this district, it may not be the same in the urban scenario. However, this study by virtue of being the first to identify the magnitude of elder abuse among community dwelling elderly locally is of importance to the public health programme.

CONCLUSION

This study, based on a representative sample of older adults residing in rural Malaysia suggests that elder abuse occurs among one in every 20 elders. The prevalence found in this study is within the range reported elsewhere. Some similarities are observed in the distribution of correlates of elder abuse with findings from other studies. This adds to the growing number of literature reported in Asia. Overall, the findings from this study strongly indicate the need for further efforts to enhance elder protection in Malaysia. Early screening and home visits to identify older adults with poor mental health, prior history of abuse and those at risk of isolation is needed. Increasing awareness on elder abuse is important in order to empower elders as well as enable service providers to provide better care for vulnerable elders.

Table 3 Univariate and multivariate logistic regression analysis of factors associated with overall elder abuse

Characteristics	Crude OR	95% CI	p Value	Adjusted OR	95% CI	p Value
Age						
Old-old (80+ years)	0.87	0.36 to 2.10	0.757	0.70	0.22 to 2.28	0.559
Old (70–79 years)	0.70	0.40 to 1.21	0.197*	0.71	0.37 to 1.33	0.283
Young-old (60–69 years)	Ref			Ref		
Sex						
Male	1.34	0.80 to 2.24	0.265	2.24	1.23 to 3.78	0.008*
Female	Ref			Ref		
Marital status						
Not married	3.29	1.10 to 9.82	0.033*	0.73	0.23 to 2.31	0.589
Widowed	0.87	0.48 to 1.58	0.637	0.77	0.34 to 1.74	0.530
Married	Ref			Ref		
Ethnicity						
Non Malay	1.73	0.63 to 4.81	0.290		–	
Malay	Ref					
Educational level						
Secondary or higher	0.76	0.40 to 1.46	0.412		–	
No formal or primary	Ref					
Poverty						
Hardcore poor (<RM440)	1.65	0.87 to 3.13	0.122*	1.88	0.90 to 3.90	0.091
Poor (RM441–700)	1.17	0.61 to 2.23	0.635	1.05	0.52 to 2.14	0.891
Non-poor (>RM700)	Ref			Ref		
Living arrangements						
Staying alone	1.99	0.93 to 4.26	0.076*	1.20	0.44 to 3.28	0.718
Not staying alone	Ref			Ref		
Current employment						
Currently employed	1.60	0.75 to 3.41	0.223	1.64	0.75 to 3.56	0.213
Not currently employed	Ref					
Physical function						
Walking speed	1.37	0.24 to 7.68	0.724		–	
Physical health						
Below normal	1.12	0.67 to 1.88	0.655		–	
Normal	Ref					
Chronic disease						
Presence of any one disease	1.85	0.90 to 3.79	0.094*	1.93	0.85 to 4.40	0.116
No chronic disease	Ref			Ref		
Cognitive impairment						
Borderline	1.28	0.66 to 2.49	0.471		–	
None	Ref					
Stress						
Stress	5.69	1.89 to 17.14	0.002*	0.98	0.32 to 2.99	0.996
No stress	Ref			Ref		
Anxiety						
Anxiety	6.24	2.88 to 13.52	<0.001*	2.44	0.89 to 6.68	0.082
No anxiety	Ref			Ref		
Depressive symptoms						

Continued

Table 3 Continued

Characteristics	Crude OR	95% CI	p Value	Adjusted OR	95% CI	p Value
Depressive symptoms	9.97	4.58 to 21.73	<0.001*	7.83	2.88 to 21.27	<0.001**
No depressive symptoms	Ref			Ref		
History of abuse (prior to age 60)						
Abuse	5.79	2.65 to 12.64	<0.001*	3.28	1.40 to 7.68	0.006**
No abuse	Ref			Ref		
Risk of social isolation						
At risk	2.18	1.25 to 3.80	0.006*	1.96	1.07 to 3.58	0.029**
Not at risk	Ref			Ref		

*Significant at $p < 0.250$; ** Significant at $p < 0.05$.

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