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ON THE CORRELATES OF REPORTING ASSAULT TO THE POLICE IN MALAWI

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It is well known that many victims of crime do not notify the police. Research suggests that factors related to the victim, crime event and wider community are all implicated in the decision to report victimization. Few studies have investigated the correlates of victim reporting in developing countries, mainly owing to a lack of relevant data. It is therefore unclear whether the determinants of victim reporting in Western industrialized countries are generalizable to low-income developing settings. This paper explores the factors associated with victims reporting assault to the police in the African context of Malawi, using data from a nationally representative household survey. Results of a multilevel logistic regression indicate some similarities with the Western criminological literature, such as age of the victim and crime seriousness positively correlating with crime reporting. Other results seem to reflect the distinctive characteristics of Malawi, with victims more likely to report being assaulted if they are male, have access to a working phone or live in urban areas. The results illustrate the importance of studying criminological phenomena across a diverse range of settings. Implications of the findings for future research and crime prevention are discussed.

Keywords: assault, Malawi, police, sub-Saharan Africa, victim reporting

Introduction

Police knowledge about crime is heavily reliant on information from the public, particularly crime victims. Gottfredson and Gottfredson write that 'the victim is a principal "gatekeeper" of the entire criminal justice process', such that 'in the overwhelming majority of cases, if the victim does not report the crime to the police, the event will not be dealt with by the criminal justice system' (1980: 16). An extensive literature has thus emerged on the patterns and determinants of victim reporting (e.g. see Skogan 1984; Goudriaan *et al.* 2006; Baumer and Lauritsen 2010; Tarling and Morris 2010), which Goudriaan (2006) estimates to be in excess of 100 published articles. The vast majority of this research has taken place in Western Europe and North America, with few studies investigating the correlates of victim reporting in transitional and developing countries (exceptions include Bennett and Wiegand 1994; Zhang *et al.* 2007), mostly due to concerns over the reliability of official crime statistics (where available) and a paucity of victim survey data with which to compare (Marenin 1997).

There are several reasons why attending to this lack of criminological research in developing countries is important. On the topic of crime reporting specifically, knowledge on the extent, distribution and determinants of victim reporting can shed light on the accuracy of and gaps in official crime statistics, provide an indication of public confidence in the police and help devise mechanisms to facilitate crime reporting. More generally, research in diverse and hitherto understudied contexts provides

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opportunities to assess the generalizability of criminological theories and associated empirical regularities (see Bennett 2004).

The goal of this study is to identify the factors associated with victims reporting crime to the police in Malawi. It focusses specifically on victims of assault, defined here as a threat to or physical attack against the person. In accordance with many studies on the determinants of victim reporting (for e.g. see Goudriaan *et al.* 2006; Zhang *et al.* 2007), this research uses a multilevel analytical framework to estimate the effect of crime, victim and neighbourhood-relevant factors on the decision to notify the police. To the author's knowledge, it is one of only a handful of studies to quantitatively assess the determinants of crime reporting in a developing country. The remainder of this paper is organized as follows. First is a summary of previous research on victim reporting to the police. This is followed by a discussion focussing specifically on victim reporting patterns in developing countries. The next section provides some background to Malawi and describes the data and methods used in this study. The results are then presented followed by a discussion of their implications for policy and future research.

Research on reporting crime to the police

It is well established that many victims of crimes fail to notify the police. The disparities between police recorded crime statistics and victim survey data reflect this—the so-called 'dark figure of crime'. Although victim reporting rates may vary by place, population group and crime type, as a general indicator the British Crime Survey 2010/11 estimated that the police were made aware of around 38 per cent of all crimes committed (Chaplin *et al.* 2011). Long-term trends from the US tell a similar story; Baumer and Lauritsen's (2010) analysis of National Crime Victimization Survey data between 1973 and 2005 show that victim reporting rates continue to be 'modest' despite general improvements over time.

There is a long line of criminological studies interested in why victims report crime to the police (see Skogan 1984; Goudriaan 2006; Tarling and Morris 2010). Common reasons include a moral orthodoxy that crimes *should* be reported to the police; that informing the police will lead to an offender being apprehended and suitably punished, thereby preventing future crimes; to receive victim services (such as health facilities following a sexual assault); and for many acquisitive crimes, informing the police so as to obtain a crime reference number for insurance purposes and the replacement of stolen goods.

Other studies have focussed on why victims do *not* inform the police. Several reasons are again apparent (see Skogan 1984; Tarling and Morris 2010). Many (minor) crimes go unreported because victims harbour concerns over wasting police resources. Reporting crime exacts costs: from initially contacting the police, to participating in lengthy, sometimes stressful interviews on the circumstances surrounding the crime, to the possible giving of evidence in court. Some victims are thus deterred. Other victims may decide against notifying the police if their behaviour unwittingly precipitated victimization (or might be perceived by others to have done so). Skogan (1994), for example, showed that victims of crime were less likely to contact the police if they accepted they were 'partly to blame'. Crimes may go unreported because victims fear reprisals from the offender or their associates (Singer 1988). In certain circumstances,

the victim may wish to retain their privacy and protect the identity of the perpetrator, most obviously in the case of domestic violence (see Felson *et al.* 2002). Moreover, the police are rarely made aware of crimes experienced by individuals who themselves are involved in illegal activities (Wright and Decker 1997; Berg *et al.* 2013).

The so-called economic model is arguably the most popular theoretical account of the circumstances in which victims do or do not inform the police (for a discussion, see Goudriaan 2006). It conceives of crime victims as rational actors concerned with the perceived costs and incentives of crime reporting. Put simply, victims are considered more likely to report crime to the police when the perceived incentives in doing so outweigh the expected costs. The literature identifies three groups of variables that might influence this decision-making process: factors associated with the crime event, crime victim and wider community, each of which is discussed briefly below.

The near-uniform consensus in the literature on crime reporting is that crime seriousness—typically measured by the harms (physical and/or financial) caused by victimization and/or the presence of weapons—is the strongest influence on a victim's decision to inform the police: the more serious the offence the more likely it is to be reported (Skogan 1984; 1994; Bennett and Wiegand 1994; Zhang *et al.* 2007). This is attributed to the heightened emotional arousal often resulting from crimes involving weapons and an increased likelihood of requiring police assistance. By contrast, evidence in support of crime reporting and the victim–offender relationship is less clear. Although some studies find an increased likelihood of victim reporting when the offender is known to them (Felson *et al.* 1999) others have found the opposite (Hindelang and Gottfredson 1976) or no effect (Bachman 1998). Baumer and Lauritsen (2010) suggest these mixed results might be due to differences in the crime type under study and how the relationship between victim and offender is measured.

Research on what motivates crime reporting has also explored the characteristics and experiences of crime victims. Age emerges as a robust correlate and has consistently been shown to hold a positive association with the likelihood of victim reporting (Skogan 1984; Baumer 2002). Gender is also found to yield a weak but consistent effect insofar as women are more likely to report experiencing crime (Skogan 1984; Baumer 2002). Attitudes towards and experience of the police is a further factor. Many victims of cycle theft, for example, fail to inform the police because they consider it unlikely that the thief (or stolen cycle) will be apprehended (Johnson *et al.* 2008). Studies of rape victims find that a perceived failure of the criminal justice system to sensitively and satisfactory deal with prior victimizations is associated with an unwillingness to inform the police in future (Madigan and Gamble 1991). In a similar vein, Xie *et al.* (2006) show that the thoroughness of the police response to prior experiences of crime increases the probability of reporting future victimizations, regardless of whether the investigation resulted in an arrest.

The third category of variables judged to influence victim reporting patterns relate to the wider socio-economic context. Despite criminologists having long shown an interest in the relationship between neighbourhood characteristics and patterns of crime, most notably in the work of social disorganization theorists (for e.g. Shaw and McKay 1942; Sampson *et al.* 1997), surprisingly few studies have investigated whether these same neighbourhood characteristics influence a victim's propensity to report crime to the police, and through what mechanisms. Those that do typically find characteristics of the victim and crime event to hold a stronger relationship with victim reporting

(Bennett and Wiegand 1994), although this may be partly attributed to inconsistencies in how neighbourhood-level effects are measured.

The relationship between social cohesion and victim reporting is a prime example. Social cohesion lies at the heart of social disorganization theory and is an important mediator of informal social control (Sampson *et al.* 1997). It refers to the bonds between neighbourhood residents and their associated ability to deal with collective problems (such as crime). It is hypothesized to influence victim reporting patterns in one of two (contradictory) ways. The first argues that residents of neighbourhoods lacking social cohesion will be less likely to report victimization because of strained relationships with and limited access to the police (and other public services; see Baumer 2002). By contrast, a second hypothesis states that in neighbourhoods characterized by poor social cohesion, there is a greater reliance on the police (as the primary agents of formal social control) to maintain order, and therefore a higher probability of victim reporting. This second hypothesis is often seen in comparative analyses of victim reporting rates in urban versus rural areas, where it is argued that compared with life in largely anonymous urban settings, rural living is more likely to foster close-knit coalitions made up of individuals with a greater stake in their local area, which in turn gives rise to greater informal social control in rural communities and less reliance on police intervention (Ruback and Menard 2001).

Evidence on the effect of social cohesion on victim reporting is inconclusive. These divergences may be partly due to the difficulties in reliably measuring social cohesion, which Goudriaan *et al.* (2006) observe often takes the form of indirect measures (such as population density) or composite measures combined with related concepts (such as neighbourhood disadvantage). Moreover, the effect of social cohesion (or lack thereof) is found to differ by country. In Belize, Bennett and Wiegand (1994) find no association between victim reporting and social cohesion. A similar null effect is observed in Tianjin, China, for victims of robbery, theft and residential burglary (Zhang *et al.* 2007). However, in Holland, Goudriaan *et al.* (2006) find social cohesion to be positively associated with victim reporting, albeit to a lesser extent than factors associated with the crime event.

Likewise, the evidence is mixed on rural/urban differences in the probability of victim reporting. At the national level, Laub (1981) finds no reliable association between urbanization and the probability of reporting rape, robbery, assault and personal larcenies to the police. However, Ruback and Menard (2001) show that female victims of sexual assault resided in urban counties in Pennsylvania were more likely to inform the police than in rural areas, which they suggest may be due to the limited availability of telephones and transport options.

Research on reporting crime to the police in developing countries

Like many social sciences, the vast majority of criminological studies have been conducted in Western industrialized countries. Criminological research in developing countries is sparse. This lack of research is attributed to several factors, from a paucity of data (Marenin 1997) to limited research funding (Banks 2012) and the fledgling status of criminology (Igbinovia 1989). For these reasons, it should come as little surprise that studies on the correlates of victim reporting in low-income settings are also rare. That research which is available is largely descriptive and typically only provides estimates of the extent to which crime is reported using international victim survey data. Referring specifically to sub-Saharan Africa, this research is limited because only a small proportion of African states

participate in international victim surveys[1], and of those that do the total sample per country is often quite small (around 1,000 respondents) and based predominantly in urban locations (see Zvekic and Alvazzi del Frate 1995; Naudé *et al.* 2006). Notwithstanding these shortcomings, estimates generated from the International Crime Victims Survey (ICVS) point to an unfortunate pattern: in regions where victimization risks are comparatively high, such as sub-Saharan Africa, reporting rates to the police are generally low (van Dijk and Alvazzi del Frate 2004), which Alemika attributes to a common perception that the police are 'ineffective, corrupt, and brutal or uncivil' (Alemika 2009: 484).

Bennett and Wiegand (1994) is a notable exception to the lack of studies on the correlates of victim reporting in developing countries. Using data from a household victim survey in Belize, Central America, they demonstrate that despite the atypical research setting many of the results are similar to the effects observed in the (predominately Anglo-American) criminological literature: incident-specific variables such as crime seriousness were shown to exert strong positive effects on the likelihood of informing the police; victim-specific measures such as household income held a minor but significant association; and community-level factors such as estimates of social cohesion and the prevalence of illegal drugs had no discernible effect on victim reporting.

More recently, Zhang *et al.* (2007) analysed the determinants of victim reporting in Tianjin city, Northern China. Though China is generally no longer considered to be a developing country, their study is relevant insofar as it examines whether factors commonly associated with victim reporting in Western studies are generalizable across diverse contexts, in this case, crime victims from an Asian urban setting. Few were. Like Bennett and Wiegand (1994) and the criminological literature more generally, Zhang *et al.* (2007) find crime seriousness to be a strong predictor of victim reporting. However, most of the other variables relating to the characteristics of crime victims (such as gender and age), features of the home they live in (such as the number of household occupants over 18) and the wider community (such as levels of social cohesion) were found to have little effect on the likelihood of victim reporting. Zhang and colleagues (2007) speculate that this might be explained, at least in part, by the prevalence of third party reporting in Chinese societies, whereby crime victims, particularly women and the elderly, opt to inform local neighbourhood committees as opposed to going directly to the police.

In summary, there is an extensive body of research on the factors associated with victims reporting crimes to the police. Such factors are generally organized into three groups relating to the crime event, characteristics of the victim and the broader social context. Examples of this research are, however, rare in developing countries owing mainly to a paucity of relevant data. This study takes the conventional analytical framework for studies of this sort and applies it in the atypical setting of Malawi to determine what factors influence assault victims' decision to notify the Malawian police.

Data and Methods

Study setting and data

The data used in this study were collected as part of the second Malawi Integrated Household Survey (IHS II). Malawi is located in southern central Africa bordered

[1] Thirteen African countries have thus far participated in the ICVS: Botswana, Egypt, Lesotho, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Tunisia, Uganda, Zambia and Zimbabwe.

by Mozambique, Tanzania and Zambia. Landlocked and comparable in size to the state of Pennsylvania (United States), it has a population of approximately 16 million of whom the majority (around 80 per cent) live in rural areas. Malawi's economy is predominantly based on agriculture and much of its rural population exist as small-scale subsistence farmers. By any measure, Malawi is a poor country. The World Bank estimated that about half of the population in 2010 lived below the poverty line. The provision of health services and primary education remains far from universal. Life expectancy presently hovers around the mid-50s (United States = 79 in 2012), in part because of the high rates of malaria, diarrhoeal diseases and HIV/AIDS[2]. Evidence in recent years, however, shows several positive signs. For example, economic growth since 2004 has been generally strong and exceeded the average for sub-Saharan Africa (Vandermoortele and Bird 2011). Furthermore, from a peak in the mid-1990s maternal mortality rates have since displayed a downward trajectory, despite being high by international standards (Colbourn *et al.* 2013).

The IHS II was co-ordinated by the National Statistical Office of Malawi and collected data on numerous health, welfare and socio-economic characteristics for the period from March 2004 to April 2005 (for further details, see National Statistical Office of Malawi 2005a; 2005b). The IHS II used a two-stage stratified sampling procedure. Across the 26 districts of Malawi[3], a total of 564 census enumeration areas (EAs) were randomly selected using data from the most recent Population and Housing Census. In rural regions, EAs constitute between one and three neighbouring villages. In urban regions, they comprise an area of roughly 1,250 people. In each selected EA, 20 households were randomly selected and information on all individuals residing in such households was collected in person by survey field staff. The final sample comprised 52,707 individuals occupying 11,280 households. The response rate was 96 per cent.

Method and Measures

Dependent variable

The IHS II asks '*in the past year, were you personally attacked, physically beaten, or threatened with violence by someone*?' This is taken here to refer to experience of assault. Respondents who indicated 'yes' were then asked if they reported the incident to the police. This response was dummy coded and constitutes the dependent variable used here (1 = reported assault to the police and 0 = did not report assault to the police).

It is important to acknowledge that 'police' in this study refers to the official state police only. In Malawi, as in many African countries, what are generally considered to be the functions of the police are provided both by the official state police *and* non-state authorities (Baker 2004; 2008), the latter ranging from community groups to private security firms and even vigilante-type outfits. Similar to what Zhang *et al.* (2007) suggest in China, it is possible that victims of crime might notify these groups instead of the Malawian police. Evidence to support this claim in the Malawian context comes from Pelser *et al.* (2005) whose analysis of victim survey data shows just over a third of assault victims reported the crime to the police (36.1 per cent), whereas 72.9 per cent

[2] All statistics are taken from the World Bank open data store, available at: http://data.worldbank.org/

[3] Likoma district is not included in the IHS II sampling frame because of the difficulty travelling and surveying there.

of assault victims informed non-state police agencies. Leading explanations for this pattern were that the crime was not considered serious enough to warrant (state) police involvement and that the victim would resolve the matter through other means, which the study authors interpret as a desire to resolve the matter locally and speedily.

Independent variables

The independent variables used here are organized into three groups: victim-specific, crime-specific and community-level measures. Victim-specific measures include the victim's age, sex, educational attainment, self-rated physical and mental capability, self-rated health status, fear of crime and access to a working phone and bicycle. Crime-specific measures relate to the victim–offender relationship and whether a weapon was present during the assault. Community-level measures are assault prevalence per EA, the proportion of households per EA defined as ultra-poor and whether the EA is classified as urban or rural. Many of these variables are common to studies on the determinants of victim reporting (such as age, sex, crime seriousness), others however were designed to capture the specific context of Malawi and explore whether they are associated with crime reporting, most notably the comparatively high level of disease, poverty and rurality. Describing each in turn:

Victim-specific measures

Victim age is measured in years. Victim sex is dummy coded (1 = male and 0 = female). Education relates to the highest level of educational attainment at the time of survey (1 = primary school and below, 2 = secondary school, training college or other vocational courses and 3 = university level).

Malawi is blighted by high levels of disease (see Bowie 2006). Presently, it is yet to be examined whether intellectual or physical impairments might stymie the ability and/or willingness of assault victims to notify the police. In this study, a victim's physical and mental capability is measured by the question: *are you physically or mentally handicapped in any way?* Victims who responded 'yes'—which relates to missing hands, missing feet, being lame, blind, deaf, unable to speak, mentally disabled and other—were assigned a 1 and those who replied 'no' were assigned a 0.

A related variable concerns the respondent's health status. It is plausible that an assault victim's health might similarly influence their decision making on the costs and benefits of notifying the police. For example, housebound individuals suffering a debilitating condition may experience great difficulty in contacting the police and therefore consider this option less appealing. The IHS II asks, '*Do you suffer from a chronic illness*?'. Responses are dummy coded so that 1 denotes a chronic illness sufferer and 0 denotes a participant absent of chronic illness. Commentators have questioned the accuracy of self-reported health assessments, particularly among disadvantaged communities (Sen 2002). Although there was no way of verifying the subjective assessments of health reported here, recent evidence from India argues that scepticism towards the use of self-reported health measures and the effect of socio-economic status on self-report accuracy may be unjustified (see Subramanian *et al.* 2009).

The relationship between fear of crime and victim reporting is not clearly understood. One argument it is individuals with a heightened fear of crime are more likely to

contact the police upon being victimized in a bid to reduce their risk of revictimization. By contrast, from a psychological perspective, Kidd and Chayet (1984) suggest that the fear and trauma commonly associated with criminal victimization can 'immobilize' crime victims from notifying police authorities, and serve as a coping mechanism to avoid reliving these negative emotions. Two binary fear of crime measures were used in this study. The first relates to the following question: *'when walking alone in your neighbourhood or village during the day, how safe do you feel against criminals?'* Survey respondents could indicate very safe, fairly safe or unsafe. For this paper, the responses were dummy coded so that 1 = unsafe and 0 = safe (referring to both very safe and fairly safe). The second measure differs only by time of day, asking respondents about their feelings of safety at night, and is coded in the same way.

Bennett and Wiegand (1994) observe that accessing police services in many developing nations is unevenly distributed across population groups. According to Baker (2004), the existence of non-state policing in many African countries is, in part, evidence of the inability of the state police to equitably serve its citizens. Many rural-poor households will not have access to a telephone and may be required to travel large distances to report crime at the nearest police station or outpost[4]. To the author's knowledge, this relationship is yet to be specifically examined for an African country in the research literature. Typically, as in Bennett and Wiegand's (1994) study, some measure of affluence is used as a proxy for police accessibility; wealthier households are assumed to have sufficient resources to access the police should they so wish. This study used an improved measure. Survey participants are asked: '*is there a landline telephone in working condition in the dwelling unit*' and '*does someone in the household own a cellular telephone in working condition*'. These two responses were used to create a single household phone availability measure, dummy coded so that 1 denotes the presence of a working phone (mobile and/or landline) and 0 denotes its absence.

A related measure concerns bicycle ownership. Bicycles are a common mode of transport in Malawi (Kraemer *et al.* 2012) and might, therefore, act as an important enabler for victims who wish to report a crime in person (or to access the nearest phone). The IHS II asks head of households whether they currently own a bicycle. This is used to compute a bicycle availability measure, dummy coded as 1 = the household possesses a bicycle and 0 = it does not.

Crime-specific measures

Two crime-specific variables were computed. The first concerns the victim—offender relationship. The IHS II asks assault victims, '*was the individual* [i.e. the perpetrator] *a household member, a relative, a neighbour, or a stranger?*' Although assault victims could report up to two perpetrators, in the overwhelming majority of cases only one perpetrator was mentioned. For this reason, only respondents' first response is used here. For the purpose of analysis, responses were dummy coded with 1 denoting a stranger and 0 an offender with whom the victim is familiar (household member, relative, neighbour).

The second crime-specific variable speaks to the seriousness of the assault and relates to the presence of weapons. Victims are asked: "*was a knife or panga* [machete] *used in the*

[4] Some European countries have now introduced online reporting for non-emergency crimes. As far as the author is aware, this is not available in many parts of Africa, not least because internet access, though increasing over time, is nonetheless only available to around 10 per cent of the population (Porter 2012).

attack or to threaten you?" and "*was a gun or pistol used in the attack or to threaten you?*" For convenience, these responses are collapsed to form a single crime seriousness measure, dummy coded so that 1 indicates a weapon was present and 0 indicates the absence of weapons. It is hypothesized that victims of assaults involving weapons are more likely to report the crime to the police than incidents where weapons were not present.

Community-level measures

The model incorporates three community-level measures. The first relates to the levels of assault in the communities in which respondents live, specifically the proportion of respondents per EA that reported experiencing assault in the past year. It is hypothesized that variation in the prevalence of assault is associated with victims' willingness to notify the police. For example, high levels of assault in an area may indicate greater social acceptance and tolerance of such behaviour (see Pelser *et al.* 2005), manifest as lower victim reporting rates.

The second community measure denotes the proportion of households per EA that are defined as ultra-poor. Households are considered ultra-poor if their reported annual per capita consumption expenditure falls below 10,029 Malawi Kwacha per person per year (US$ 358 at the time of survey), calculated as the amount required to meet basic calorific requirements (World Bank 2006). The literature provides several mechanisms through which area-level disadvantage might influence victim reporting (for a detailed discussion, see Baumer 2002). In the main, these tend to suggest a negative association between levels of disadvantage and victim reporting rates, attributed to various factors including an enduring lack of trust in the police and a tendency to deal with the criminal victimization through means other than police authorities. In low-income settings such as Malawi, a further constraint might be a lack of resources, which would otherwise facilitate crime reporting (money to travel, transport options, etc).

The final community variable indicates whether an EA is defined as urban or rural, based on classifications of the Malawi National Statistical Office. It is hypothesized that assault victims residing in rural areas are less likely to notify the police, for two possible reasons. The first is because police activity in Malawi, like many countries in sub-Saharan Africa, tends to concentrate in urban business districts and therefore accessing the police in predominately rural areas might prove challenging. The second possible explanation derives from prior research and is grounded in the concept of social cohesion, and suggests that rural communities tend to share closer bonds than urban dwellers and therefore are less reliant on the police to maintain order.

Certain caveats with these community-level variables deserve mention at this point. First is the use of EAs as proxies for Malawian communities. Communities mean different things to different people. On this point, the IHS II manual specifically informs field staff that EA administrative boundaries may transcend or fall short of what respondents define as their community. Regrettably systematic information on what Malawian citizens define as their communities was not available. For convenience and in order to compute the variables of interest here, EAs were therefore used as a crude indicator of a Malawian community. Similarly, several of the community-level variables described previously are aggregated from individual-level survey responses. This is unavoidable because independent data (such as census data) at the community level were unavailable. Finally,

although each household per EA has an equal chance of being selected in the final IHS II sample, the small number of households per EA ($n = 20$) does introduce concerns over the representativeness of these measures for the EA more generally.

Results

Descriptive statistics are displayed in Table 1. It shows that less than a fifth of assault victims reported the crime to the Malawian police (n = 217, 17.1 per cent)[5]. By way of comparison, this is considerably lower than the 51 per cent of violent crimes that reached the police's attention in the United States (Truman 2011) but is in line with the reporting rates (23.7 per cent) for assault in sub-Saharan countries participating in the 2005 ICVS (Prinsloo 2006).

Table 2 reveals sex differences in victim reporting rates. Overall, 12.1 per cent of assaults against woman were reported to the police compared with 19.8 per cent of those committed against men. The higher reporting pattern for males is shown to be

TABLE 1 *Descriptive statistics for variables associated with assault victims informing the police in Malawi, from April 2004 to March 2005 (inclusive)*

Variables	Mean	Standard deviation	Min	Max
Dependent variable				
Reported assault to the police (1 = yes)	0.17	0.38	0.00	1.00
Individual-level variables				
Age	29.62	14.25	7[a]	89
Sex (1 = male)	0.65	0.48	0.00	1.00
Physically or mentally handicapped (1 = yes)	0.06	0.23	0.00	1.00
Chronic illness (1 = yes)	0.22	0.41	0.00	1.00
Education (1 = primary school and below, 2 = secondary school, training college or other vocational courses and 3 = university level)	1.34	0.48	1.00	3.00
Fear of crime when walking alone in neighbourhood in the day (1 = unsafe)	0.13	0.33	0.00	1.00
Fear of crime when walking alone in neighbourhood at night (1 = unsafe)	0.51	0.50	0.00	1.00
Household phone (1 = available)	0.03	0.16	0.00	1.00
Household bicycle (1 = available)	0.43	0.50	0.00	1.00
Crime-specific variables				
Victim–offender relationship (1 = offender is a stranger)	0.55	0.50	0.00	1.00
Weapon involvement (1 = weapon present)	0.37	0.48	0.00	1.00
Community-level variables				
Proportion of assault victims per EA	0.11	0.07	0.01	0.31
Proportion of ultra-poor households per EA	0.12	0.13	0.00	0.75
Rural/urban (1 = rural)	0.89	0.31	0.00	1.00
Total N = 1,275				
Reporting N = 217				
Non-reporting N = 1,058				

Source: Malawi Integrated Household Survey 2004/05.

[a]The IHS II asks questions of all household members aged 10 years or over. However, one 7 year old also provided relevant information on assault victimization and is therefore included (0.08 per cent of this sample).

[5] Six victims failed to provide information, so the total n here is 1,269.

consistent regardless of the victim–offender relationship. Most pronounced is the difference in the proportion of stranger-perpetrated assaults that reached the police's attention. For female victims, for every one assault by an unknown offender to which the police were notified, (at least) a further eight actually took place.

Non-reporters were questioned as to why they did not inform the police (Table 3). The most common response was that the victim did not consider the assault sufficient to warrant police involvement ($n = 421$, 40.3 per cent). This is consistent with findings reported elsewhere (Bennett and Wiegand 1994; Prinsloo 2006). The second most common reason was that the assault was considered a neighbourhood issue ($n = 248$, 23.7 per cent). It is plausible that these victims may have reported the assault to non-police affiliated groups, but this cannot be examined with these data. Third, 14.2 per cent of victims ($n = 148$) did not inform the police because they were too far away, suggesting that practical constraints such as the distance required to contact the police may influence victim reporting rates in Malawi (as is explored in further detail below). It is noteworthy that contrary to a common image of the police in sub-Saharan Africa, just 2.5 per cent of victims cited police corruption as the primary reason they did not report experiencing assault.

Correlates of assault victim reporting

Multilevel logistic regression was performed to explore the factors associated with assault victims' informing the police in Malawi. A multilevel model is the appropriate statistical technique because it accounts for the non-independence in the data—households nested

TABLE 2 *Sex differences in the percentage of assaults reported to the police by victim–offender relationship in Malawi, from April 2004 to March 2005 (inclusive)*

Victim–offender relationship	Percentage of assaults against males reported to the police	Percentage of assaults against females reported to the police
Household member	13.33	11.11
Other relative	14.43	11.84
Neighbour	18.87	14.29
Stranger	21.33	10.55

Source: Malawi Integrated Household Survey 2004/05.

TABLE 3 *Assault victims' reasons for not informing the Malawian police, from April 2004 to March 2005 (inclusive)*

Reason for not reporting	*N*	%
Crime not serious	421	40.3
Neighbourhood issue, did not want police	248	23.7
Police too far	148	14.2
Other	110	10.5
Reporting would cause trouble	92	8.8
Police corrupt	26	2.5
Total	1,045	100.0

Source: Malawi Integrated Household Survey 2004/05.

within EAs. Three models were run. The first was an intercept-only model without any independent variables. This estimates whether there is any variation in the likelihood of victims reporting assault to the police between EAs. In the second model, the individual- and crime-related predictor variables are added as possible correlates of reporting. In the third model, community-level variables are added to assess their influence on victim reporting, over-and-above that of the individual-level variables. The results are presented in Table 4, with regression coefficients expressed as odds ratios (ORs). Variance inflation factor estimates, which assess for collinearity among the modelled explanatory variables, were all within tolerable levels (1.03–1.24, mean = 1.12). Moreover, the likelihood ratio test indicates that the inclusion of the predictor variables (in Models 2 and 3) improved the overall fit of the model than when no predictor variables were included, as would be expected.

Model 1 shows the log-odds of an assault victim informing the Malawian police in an "average" Malawian EA. The OR of 0.18 and *z*-score of –15.22 is statistically significant ($p < 0.001$), indicating that the chance of an assault victim notifying the police varies between Malawian communities more than would be expected on the basis of chance. Exploring this variation via a multilevel approach is therefore justified.

Model 2 shows that males were more likely to report assault victimization to the police than females (*OR* = 1.64). Increased age also is found to be weakly but positively

TABLE 4 *Random-intercept multilevel logistic regression models of reporting assault to the police in Malawi, from April 2004 to March 2005 (inclusive)*

Variables	Model 1		Model 2		Model 3	
	OR	*z*-score	*OR*	*z*-score	*OR*	*z*-score
Intercept	0.18**	–15.22	0.03**	–8.80	0.09**	–4.80
Individual-level variables						
Age			1.02**	4.43	1.03**	4.04
Sex (1 = male)	–	–	1.64*	2.42	1.58*	2.22
Physically or mentally handicapped (1 = yes)	–	–	1.01	0.02	1.04	0.12
Chronic illness (1 = yes)	–	–	0.79	–1.04	0.86	–0.70
Education	–	–	1.17	0.39	1.11	0.58
Fear of crime when walking alone in neighbourhood in the day in the day (1 = unsafe)	–	–	1.22	0.72	1.30	0.95
Fear of crime when walking alone in neighbourhood at night = unsafe)	–	–	0.90	–0.50	0.94	–0.31
Household phone (1 = available)	–	–	4.24*	3.07	2.90*	2.18
Household bicycle (1 = available)	–	–	0.90	–0.58	1.00	–0.00
Crime-specific variables						
Victim–offender relationship (1 = offender is a stranger)	–	–	0.72	–1.71	0.67*	–2.07
Weapon involvement (1 = weapon present)	–	–	3.51**	6.65	3.49**	6.44
Community-level variables						
Proportion of assault victims per EA	–	–	–	–	0.05	–1.82
Proportion of ultra-poor households per EA	–	–	–	–	2.35	1.15
Urban/rural (1 = rural)	–	–	–	–	0.44*	–2.72
Likelihood ratio test (multi-level model vs. logistic)	20.60**		11.37**		7.67**	

Source: Malawi Integrated Household Survey 2004/05.

Unweighted estimates. Total $N = 1{,}275$; reporting $N = 217$; non-reporting $N = 1{,}058$.

*$p < 0.05$; **$p < 0.001$.

associated with an increased likelihood of reporting (*OR* = 1.02). Victims residing in households with access to a working phone (3 per cent of sample, see Table 1) were significantly more likely to report assaults to the police than victims residing in a dwelling without a phone (*OR* = 4.24). This emerged as the strongest predictor among the variables considered and emphasizes the practical importance of being able to report crime to the police, something that, understandably, is often taken for granted in research conducted in Western industrialized settings. No support was found for the hypothesis that the availability of a working bicycle increased the likelihood of victim reporting. Likewise, having a chronic illness or a physical and mental impediment was found to yield no effect.

Turning to variables associated with the crime event, victims of assaults involving weapons were more likely to report the crime than assaults where weapons were absent (*OR* = 3.51). This conforms to the criminological literature that crime seriousness is a key predictor of whether the police are contacted (Tarling and Morris 2010). By contrast, the victim–offender link was found to hold no reliable association with victim reporting.

Model 3 includes the community-level variables. Only one is shown to be statistically significant: assault victims residing in houses located in rural EAs were significantly less likely to report the crime to the police. Residing in a community containing a higher proportion of poorer households or assault victims in the past year was not significantly associated with the likelihood of victim reporting. It is difficult with the available data to determine what accounts for this finding. One interpretation is that the remoteness typically associated with rural living reduces the likelihood of victim reporting as opposed to a lack of financial resources.

Inclusion of the community-level variables had little effect on the direction or strength of the other covariates. The exception is the victim–offender relationship, which now emerges as significant; being assaulted by a stranger is shown to *reduce* the likelihood of reporting the crime to the police (*OR* = 0.67). This reveals an interesting individual-level and community-level interaction. At the level of the individual, the relationship between the victim and the offender does not appear to have an influence of victim reporting. Yet at the community level, residing in an area characterized by stranger-perpetrated assaults is found to decrease the likelihood of an assault victim notifying the police. The reasons for this community-level effect are unclear and are speculated on in the Discussion.

Discussion

The emergence of crime victimization surveys in the 1960s and 70s confirmed that many victims of crime fail to notify the police. Documenting the extent and patterns of crime underreporting has been a popular topic in criminology ever since, and has led to the identification of several robust factors judged to influence a victim's decision to inform the police. Limited data have precluded such research in many developing countries. Uncertainty therefore remains over whether victim reporting patterns observed in Western industrialized settings are generalizable to different contexts. Using nationally representative data collected as part of a household survey, the goal of this paper was to investigate the factors associated with reporting assault to the police in Malawi.

The results show that the Malawian police were made aware of only a small proportion of assaults committed. This was most pronounced for stranger-perpetrated assaults against females. If generalizable, this suggests that police recorded crime data will underestimate the prevalence of assault and in particular that experienced by female victims. Although underreporting is of course observed in many settings—crime's dark figure appears omnipresent—and the estimates produced here are comparable with other African countries (Prinsloo 2006), it nonetheless raises concerns over the adequacy of official police statistics to inform the development, targeting and evaluation of assault prevention programmes in Malawi. It remains to be investigated whether other crime types exhibit similar patterns of underreporting.

Despite the atypical research setting, results of a multilevel regression indicate some similarities between the correlates of victim reporting found here and that of previous research. In agreement with the overwhelming consensus in the literature (Skogan 1984; Tarling and Morris 2010), including studies from developing (Bennet and Wiegand 1994) and transitional settings (Zhang *et al.* 2007), crime seriousness, measured here as the presence of weapons was significantly and positively associated with notifying the police, whereas the opposite—the crime was not serious enough—emerged as the most common reason for not reporting. These results appear compatible with the cost-benefit model often used to explain victims' decision to report crime to the police.

The evidence from prior studies is inconclusive on the effect, if any, of the victim–offender relationship on crime reporting. In the Malawian context, the final model indicated that assaults committed by individuals *unknown* to the victim were less likely to be reported to the police. The explanation for this finding is unclear. One hypothesis is that stranger-perpetrated assaults tend not to be reported to the Malawian police in the belief that apprehending the offender is unlikely, in part because the victim possesses few details on who the perpetrator is. It is also possible that these incidents tend to be reported to local non-police agencies in the hope that there is an increased likelihood of someone identifying the suspect.

Three additional findings speak to the specific context of Malawi as it relates to crime reporting. The first is that male assault victims were found to be more likely to notify the police than females. This contradicts the prevailing view in the literature where a small but reliable sex difference is observed in favour of women exhibiting higher reporting rates (see Skogan 1984). Several explanations may account for this finding. One relates to the cultural norms and status of females in Malawi. Bazargan *et al.* (2013: 43) argue that 'for decades, patriarchal ideology in Malawi has allowed men to exercise power over women, which makes interpersonal violence normative in this culture (i.e. part of men's role to "correct", and "discipline women")'. The existence of such norms would likely serve to reduce the probability of female victims informing the police.

An alternative explanation is that Malawian females may have poorer access to resources that facilitate crime reporting (such as money, phones and modes of transport). Evidence to support this claim can be found in Miller *et al.* (2001) study on spousal differences in survey responses in rural Malawi, who report that in some Malawian households resources such as bicycles and mobile phones are often considered to be "male" items. In this explanation, unlike the one before it, although assault is considered unacceptable, the ability to report it to the police is hampered. A third explanation relates less to female victims and more so the police. Like many police

forces across the world, the Malawian police service is overwhelmingly male and women may therefore feel uncomfortable to report assaults directly to the police (for a more detailed discussion, see Natarajan 2008). Further research is needed to corroborate the apparent sex differences in crime reporting observed here. If additional evidence were to support the claim that female victims report crime less frequently to the police, then future research might usefully seek to identify the perceived barriers to crime reporting and determine whether female victims tend to pursue alternative crime reporting mechanisms (such as third party reporting through community groups).

Similar uncertainty surrounds the finding that assault victims living in rural Malawian communities were less likely to notify the police. Although this result was in the predicted direction, the current data are insufficient to shed further light on what might explain this result, be it higher levels of social cohesion as a function of increased togetherness in rural areas or simply police proximity. Future studies might helpfully seek to disentangle the different causal mechanism that could account for this pattern.

The final noteworthy finding is that reporting assault to the police in Malawi was strongly associated with whether the victim's household contained a working phone. To the author's knowledge, this is the first time phone availability has been quantitatively examined in a resource-limited setting as a determinant of victim reporting behaviour, although previous studies have used proxy measures (Bennett and Wiegand 1994). In comparable Western studies, no such relationship is observed (Skogan 1994) and invariably the question is understandably omitted; universal access to phones is rightly assumed. The findings reported here suggest that phone inaccessibility may be a significant obstacle to reporting crime in low-income settings such as Malawi. Put in rational choice terms: the opportunity costs associated with contacting the police through some other means outweigh the perceived benefits of crime reporting.

Further research on the association between phone availability and victim reporting in countries such as Malawi is warranted, and timely. It is timely because since 2005 when the data analysed here were collected, sub-Saharan Africa has witnessed an explosion in the availability of mobile phones (Aker and Mbiti 2010; Porter 2012). If access to a phone is causally related to victims' decision to report crime to the police, then we might expect that increases in the number of phones will be positively associated with victim reporting rates (and possibly increases in mobile phone theft!). Collecting primary data on this topic and using the findings reported here as a baseline with which to compare would allow this hypothesis to be tested.

Limitations

This study has several limitations. Shortcomings with some of the variables used here were described previously. More generally, the survey data were cross-sectional and thus accuracy is dependent on the willingness and honesty of respondents. They also relate to the specific time at which the data were collected and, 10 years on, may therefore not be generalizable to present day. Given the noted paucity of research in resource-limited settings, then this limitation is considered acceptable. Moreover, to the author's knowledge, more recent data suitable for the analysis performed is unavailable as the latest Malawi Integrated Household Survey (2010/11) did not contain the questions on security and safety that formed the basis of this analysis.

Conclusions

There is a lighter side to the dark figure of crime. Evidence that crime victims often fail to inform the police stimulated a mass of criminological research designed to document, understand and address crime underreporting; the discovery of crime's dark figure has advanced efforts to reduce it. The same cannot be said of many resource-limited settings such as Malawi. Here, a lack of suitable data means little is known about the extent and correlates of victim reporting. This places significant constraints on the design and targeting of interventions intended to encourage it. The findings of this study provide a novel insight into the reporting patterns of assault victims in Malawi and the factors associated with a greater likelihood of informing the police. The results contain a mixture of correlates that are consistent with the findings of previous Western research and others that seem to reflect the distinctive characteristics of Malawi. More generally, it is hoped that this study might help contribute to greater attention being paid to the research possibilities in hitherto understudied developing settings, and the subsequent benefits both to research and policy.

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