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DOMESTIC VIOLENCE ADMISSIONS TO
SOPAS ADVENTIST HOSPITAL,
ENGA PROVINCE, PAPUA NEW GUINEA

Johnnie Yates

Yale University

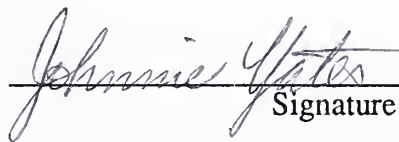
1995

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**Domestic Violence Admissions to Sopas Adventist Hospital, Enga Province,
Papua New Guinea**

**A Thesis Submitted to the Yale University School of Medicine
in Partial Fulfillment of the Requirement for the
Degree of Doctor of Medicine**

**by
Johnnie Yates
1995**

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Abstract

DOMESTIC VIOLENCE ADMISSIONS TO SOPAS ADVENTIST HOSPITAL, ENGA PROVINCE, PAPUA NEW GUINEA. Johnnie Yates (Sponsored by Nora Groce, PhD.) Department of Epidemiology and Public Health, Yale University, School of Medicine, New Haven, CT.

This study examined the pattern and severity of domestic violence admissions to Sopas Adventist Hospital, an 85 bed mission hospital serving the Enga cultural group of the highlands of Papua New Guinea. Three types of violence were of primary interest: wife-beating, husband-beating and violence between wives married to the same man (polygyny is practiced among the Enga.) Fifty-eight cases of domestic violence were found by chart review of a 14 month period. The victim's sex, age, admission and discharge dates, relationship to the aggressor, injury sustained, weapon used, and treatment were recorded from the victim's chart. Injuries were categorized as "severe" or "nonsevere" based on criteria used in previous domestic violence research. In 1993, 1.5% of all hospital admissions were due to domestic violence. Women were the victims in 49 of the 58 cases (85%). Wife-beating accounted for 33 (67%) of these cases and for 57% of all domestic violence admissions. Violence between co-wives was responsible for 16 (33%) of the cases with female victims and for 28% of all cases. Nine of the 58 cases (15%) involved husband-beating. All but two of the incidents were considered severe, and women sustained the most severe injuries and were hospitalized longer than men. Domestic violence is a public health issue in Enga Province and women were the primary victims in this hospital-based survey. They were more likely to be assaulted by their

husbands than by a co-wife. Ethnographies of highland Papua New Guinea cultures suggest that violence between co-wives is common and results from competition between them. The anthropological literature and cross-cultural studies on family violence also show that Enga culture contains several attributes which have been associated with high levels of domestic violence. Knowledge of the cultural determinants of domestic violence is necessary in order to develop effective treatment and prevention programs among traditional societies.

Acknowledgements

I would like to thank: Nora Groce, PhD for her encouragement and guidance throughout the entire course of this project; Steve Lutz, MD and John Watts, MBBS for their assistance and suggestions during my time in Papua New Guinea; Paco Munoz, MD and his family; James Ahn, YMS; Michel Linden, MBBS; and the staff at Sopas Adventist Hospital.

Introduction

Domestic violence is being increasingly recognized as a major public health issue in the United States. The former surgeon general declared the problem “extensive, pervading and entrenched,” with up to four million women assaulted by their partners each year (Novello, 1992:132). Although men are occasionally beaten by their wives, women account for over 95% of the victims of domestic violence and the lifetime prevalence of abuse has been estimated to be as high as 35% (Novello, 1992). Nearly half of the victims are injured and many sustain multiple injuries (Stark et al, 1979; American Medical Association, 1992). In addition, approximately one-fourth of victims receive medical care for their injuries and nearly 10% of victims seeking medical care are hospitalized (American Medical Association, 1992). One study revealed that violence was the leading cause of injury among women 15 to 44 years old presenting to the emergency room, and that a majority of these injuries appeared to be the result of domestic violence (Grisso et al, 1991).

Domestic violence, particularly wife-beating, occurs in more societies around the world than any other form of violence (Levinson, 1989). Masumura (1979), in a cross-cultural survey of 86 traditional societies, found that wife-beating occurred in 90 percent of his sample. Women in Western societies have been victims of physical assault and abuse throughout much of history (Gayford, 1977; Straus and Gelles, 1986) but domestic violence has been systematically studied only within the past twenty years (AMA Council on Scientific Affairs, 1992). While there has been a growing body of literature on domestic violence in the U.S. and in other Western countries, there has been comparatively little information on

domestic violence among traditional societies in developing countries (Erchak, 1984; Bowker, 1985; Campbell, 1985; Odujinrin, 1993).

One source of information on domestic violence in traditional societies has been the ethnographic and anthropological literature. Chagnon (1983) commented on the frequent wife-beating he observed among the Yanomamo of Northern Brazil, a group he dubbed “the fierce people” because of their aggressiveness. Chagnon believed that wife-beating among the Yanomamo was a way of demonstrating ferocity and potential violence in order to gain respect. (A similar theory was proposed to explain wife-beating in some highland Papua New Guinea cultures (Gelber, 1986)). Chagnon claimed that the women expected to be beaten and that some of them interpreted the beatings as a show of concern. In support of this claim he cited a conversation between two women comparing scalp scars. One woman told the other that her husband must truly care for her since she was beaten frequently on the head. Wife-beating was so common in Yanomamo marriages that Chagnon characterized a village headman’s marriage as “warm [and] enduring” because “he only [beat his wife] once in a while,” and only lightly (Chagnon, 1983:113).

Turnbull (1972), in his study of the Ik in Africa, observed that wife-beating was sanctioned in numerous situations, including if a wife cooked her husband’s food badly or brought it to him late. Not only was wife-beating legal but it followed a formal protocol. For example, a light stick was used by the husband if the wife’s ‘offense’ was minor. A switch made of thorny branches was used for more serious offenses and this type of beating was often the preliminary step to a divorce. Even though it was legal to beat one’s wife, the Ik considered it improper to draw blood during any episode of domestic violence (Turnbull, 1972). (The drawing of blood is

considered serious among some Papua New Guinea cultures as well (Strathern, 1972).

Ethnographies of Melanesian cultures and studies on sexual antagonism in the Papua New Guinea highlands also clearly document spouse abuse. Gelber (1986:25) observed that spouse abuse is so frequent in the highlands as to indicate a cultural pattern and “not simply the isolated excesses of a psychotic.” An early study of central highland societies reported that the punishment of wives typically included public beatings and humiliation (Read, 1954). For example, women suspected of adultery had “sticks thrust into their vagina, or...[were] tied [naked] to a post while men [threw] dirt and [urinated] on them.” (Read, 1954). Polygyny is practised in many highland cultures and tension and animosity frequently exists between wives married to the same man. The Kafe of the Eastern Highlands freely admit that having more than one wife leads to hostilities between husbands and wives or among co-wives (Faithorn, 1976) while the Melpa of the Western Highlands consider harmony between co-wives impossible (Strathern, 1972). Among the Enga, a minor slight between co-wives may lead to a fight ending with one wife urinating in the mouth of her defeated opponent (Read, 1954).

The accounts of domestic violence found in ethnographies are important because they document the existence of spouse abuse in the cultures they describe. They also show accepted levels of violence between spouses and among co-wives. However, the information in these sources is qualitative and there has been little systematic analysis of domestic violence. One exception is Odujinrin’s study of wife-beating in Nigeria, in which he found that 31.4% of wives were physically abused, a rate similar to that found in some Western countries. He concluded that further

research would be invaluable in helping to design rehabilitation programs for abused women and their families in developing countries (Odujinrin, 1993). Another exception is the study of child abuse and neglect among traditional societies, on which Jill Korbin has written extensively (e.g. Korbin, 1980; Korbin, 1981). Analyses using cross-cultural data banks (e.g. the Human Research Area Files) have been helpful in identifying variables that affect the frequency and severity of wife-beating in traditional societies (e.g. Masumura, 1979; Levinson, 1989). The information in these data banks is taken from primary ethnographic sources and coded with respect to many variables. However, because the ethnographies used in these data banks were not primary studies on domestic violence, the quality of information on the subject in these records is often inconsistent (Masumura, 1979).

The fact that many developing countries do not have the resources to keep statistics on family violence may be part of the reason there is limited research on the subject among traditional societies (Bowker, 1985). Erchak (1984) proposed additional reasons for this scarcity of information. First, he suggested that husband-wife violence was not a traditional subject of ethnographic investigation. He also noted that persons wishing to study a “negative” topic such as wife-beating might have encountered difficulties in obtaining cooperation from governments concerned about how their country and its people were to be portrayed. He also contended that anthropologists tended to downplay potentially negative characteristics of the people they studied. Similarly, they sometimes “fell in love” with the people and ignored unpleasant attributes (Erchak, 1984:331). Erchak suggested that there was also the possibility that very little domestic violence exists among traditional societies. (This last notion, however, is

not substantiated by the ethnographic literature.) Finally, the historical predominance of male researchers using male informants may have resulted in an underestimation of the significance of spouse abuse in the developing world (Campbell, 1985).

In addition to helping us understand and help those affected by domestic violence, research on the subject in traditional societies is important for several reasons. First, the understanding of abuse in our own culture can be broadened by examining factors which increase or decrease the likelihood of abuse in other cultures (Korbin, 1981). This knowledge is especially useful when attempting to develop treatment and prevention strategies. In addition, the information is helpful in the culturally pluralistic United States where health care and social workers are increasingly exposed to people from different cultures (Erchak, 1984). A better understanding of other cultures helps to develop empathy and to provide compassionate care to people from those cultures. Korbin (1980:21) agrees with this notion and states that “an ability to transcend cultural boundaries...is equally important when [working] in remote areas of Oceania as when providing services in ethnic communities in Los Angeles.” She also points out that Western cultures are often on the extreme end of the cross-cultural continuum and therefore do not necessarily reflect the standard to which other cultures should be compared (Korbin, 1980). Finally, studies of domestic violence in different societies allow us to generalize our findings beyond the bounds of a single society (Levinson, 1989) and may help expand our understanding of other types of violence around the world (Gil, 1970).

In an effort to contribute to the data on domestic violence in traditional societies, this study will analyze admissions for domestic

violence at a hospital in Enga Province in the highlands of Papua New Guinea. In the highlands, male-female relations have been variously characterized as “tense and hostile” (Langness, 1967:162) and “ambivalent and antagonistic” (Brown and Buchbinder, 1976:1). Faithorn (1976:87) also commented on the “almost ubiquitous hostility between husbands and wives” in the region. Therefore, this area is fertile ground for studying domestic violence. More significantly, hospitalizations as a result of domestic violence are common throughout Enga Province (J. Watts, MBBS and S. Lutz, MD, personal communication). In addition to the physical and psychological trauma that the victims suffer, those who receive medical attention are competing for what are often scarce health care resources. Consequently these factors make domestic violence an important public health issue in the province and throughout the highlands.

Three types of domestic violence are of interest in this study: wife-beating, husband-beating and fighting between co-wives (wives married to the same man.) This last category is included for three reasons. First, polygyny is practiced in a significant proportion (25%) of married Enga men (Meggitt, 1965). Second, even though co-wives contribute to the economic potential of the same family unit, they often see each other as rivals. This competition can create stress within the family. The third reason is that, as mentioned previously, violence between co-wives is fairly common.

There are several objectives of this study. The first is to determine the pattern of hospitalizations at Sopas Hospital due to domestic violence, i.e., who does what to whom and how. The severity of violence will also be analysed because without this information, the true extent and significance of family violence in Enga society will not be known. This study will also examine whether the number of domestic violence admissions varies with

the season of the year (i.e. rainy season vs. dry season). Lastly, research on the determinants of family violence will be reviewed and the results of these studies will be applied to Enga culture, a culture infamous throughout Papua New Guinea for its aggressiveness and violence.

Whether or not domestic violence is considered a problem among the Enga is not at issue here. It is recognized that abuse is a culture-bound term and that the type of violent behavior as well as the degree of violence may influence whether an incident is considered abusive in a particular culture (Long, 1986; also see Korbin, 1980 or 1981 for excellent examples with respect to child abuse.) But however acceptable domestic violence may be to the Enga, the severity of injuries resulting from it, and the use of limited hospital resources to care for its victims warrant its examination. Because prevention is the ultimate goal of research on domestic violence, any interventions that are eventually developed must consider the cultural implications of the intervention (Kahn, 1980).

Materials and Methods

Enga Society

Before discussing study methods, a brief overview of Enga society is provided. More extensive accounts of various aspects of Enga culture can be found elsewhere (see Meggitt, 1965; Meggitt, 1977; Feil, 1984; Tumu et al, 1989).

Enga Province is located in the rugged central highlands of Papua New Guinea (Figure 1) and covers an area of 10,790 square kilometers (Wheeler, 1994). Wabag, the provincial capital, is the largest town and the

province's administrative center. According to census reports, approximately 180,000 people lived in Enga in 1980 (Tumu et al, 1989). Current estimates suggest it is home to nearly 195,000 people (Wheeler, 1994). The vast majority of people in the province belong to the Enga cultural/language group and speak one of the nine mutually intelligible Engan dialects (Tumu et al, 1989). The Enga comprise the largest single language group in Papua New Guinea, a country with over 740 indigenous languages (Ryan, 1973).

Most settlements are between 1500 and 2500 meters in altitude with population densities ranging from 5 persons per square kilometer of usable land in fringe areas to 159 persons per square kilometer in more fertile regions (Tumu et al, 1989).

Over 90% of Engans (and about 85% of all Papua New Guineans) live as rural subsistence farmers (Kyakas and Wiessner, 1992). Sweet potato is the staple crop and is cultivated by women. A strict division of labor exists between the sexes and women are responsible for most of the garden work, care of the children, and the time-consuming chore of raising pigs (an important animal in highland Papua New Guinea culture.) Men are in charge of making new gardens, chopping firewood, building houses and fences, and cultivating 'male' crops such as bananas, sugarcane, ginger and yams. Men are also responsible for warfare and clan protection, and have many social and political obligations (Tumu et al, 1989).

Pigs play a vital role in Enga culture and up to two-thirds of the sweet potato crop is fed to the pigs (Tumu et al, 1989). The animals are highly valued as a symbol of wealth and status and are used as exchange currency in bride prices and compensation payments (Rappaport, 1968). They are

consumed only during special occasions and therefore do not contribute significantly to the daily diet.

The largest Enga social group is the tribe, whose members trace descent through the male line to a common ancestor (Kyakas and Wiessner, 1992). The tribe rarely functions as a unit today and the most important social grouping outside of the family is now the clan (Tumu et al, 1989). Enga clans are patrilineal, i.e. the children belong to their father's clan and the women normally leave the clan when they marry. Clan territories cover up to 2 square miles and consist of residences, gardens, ceremonial grounds, and wild grasslands and forest (Meggitt, 1977). There are no Enga villages because houses are dispersed throughout the clan territory both for defensive reasons and to provide pigs with adequate foraging space (Meggitt, 1977). Each clan has an average of 300-400 members who are regarded as 'brothers and sisters' in the sense that they assist each other with various social and political obligations (Tumu et al, 1989). Clans are further divided into sub-clans, the members of which cooperate in raising smaller payments in many daily activities (Kyakas and Wiessner, 1992).

The Enga were first contacted by Europeans in the 1930s when prospectors passed through the area (Connolly and Anderson, 1987). In 1938 the colonial Australian administration set up a post at Wabag, thus establishing government presence and, presumably, control (Gordon and Meggitt, 1985). Despite subsequent development and the adoption of some Western customs, many Engans still live primarily traditional lives (Brown and Buchbinder, 1976; Feil, 1984). For example, most men and women continue to maintain separate residences although taboos on women entering men's houses are no longer observed (Feil, 1984). Traditional

men's houses, where several men of the same subclan slept, have also been replaced by private dwellings occupied by a man and his sons. Women's houses, often containing stalls for pigs, are located nearby. If a man has more than one wife, each wife has her own house (Feil, 1984). Most dwellings are still constructed of local materials and are without plumbing or electricity.

Men typically marry for the first time between the ages of 20 and 30 while women become brides between 15 and 18 years of age (Meggitt, 1965). In principle, marriage is prohibited between members of the same clan and this prohibition is observed in 92% of marriages (Meggitt, 1965). Polygyny is practiced by approximately one fourth of the married men and polygynous husbands tend to be older and wealthier than men with single wives (Meggitt, 1965). The average number of wives among polygynous males is 2 (Meggitt, 1965).

Enga Province is one of the most underdeveloped provinces in Papua New Guinea (Gordon and Meggitt, 1985). Tribal fighting continues to be common and the "law and order" situation is said to be worse in Enga than in most other provinces (Gordon and Meggitt, 1985). According to Meggitt (1977:182), the "desire of local groups to gain and to hold arable land has been the most powerful motive impelling [Engans] to make war on each other." To this day, land disputes remain a major cause of tribal fighting (Gordon and Meggitt, 1985). Alcohol abuse has also contributed to the problem and the sale or consumption of alcohol is now illegal in Enga. (Despite this prohibition, alcohol use is still common in the province.) The recent development of the Porgera gold mine in the western part of the province has created tensions between traditional land owners and mine

operators. It has also resulted in an influx of cash currency to those who have until recently lived outside of the cash economy.

Study Methods

Data was collected from March 1994 to May 1994 at Sopas Adventist Hospital, an 85 bed mission hospital which serves as the referral hospital for Enga Province. The hospital has been in operation since the early 1960s and is one of two major hospitals in Enga (the other facility being a district hospital at Wapenamanda, approximately two hours from Sopas.) The hospital is adjacent to Sopas village (see Figure 1), several kilometers west of Wabag, at an altitude of about 7500 feet. The hospital has a busy outpatient department (approximately 17,000 visits annually) and also administers several health centers and clinics throughout the province (Harrold, 1991).

Sopas Hospital maintains a listing of discharges for each month. The information contained within the discharge records include the patient's name, sex and age, identification number, admission and discharge dates, admission and discharge diagnoses, and a section for comments. These listings were reviewed for patients with an admission or discharge diagnosis of any form of trauma during the period from January 1, 1993 to May 2, 1994. This period was selected because of the relatively easy access to records for this time; data from February 1993 could not be found and were therefore not included.

Inpatient charts for all trauma hospitalizations were then retrieved and reviewed for evidence of domestic violence. For the purposes of this study, violence was defined as the nonaccidental use of physical force with

the intention of hurting another person (see Gil, 1970 or Straus and Gelles, 1986 for similar definitions). Cases were included in the study only if the admitting note (usually prepared by a health extension officer) unambiguously reported that the victim was assaulted by his/her spouse (or former spouse), or that a woman was assaulted by a co-wife. (The admitting notes were surprisingly thorough in this respect and sometimes included descriptions of the circumstances leading to the assault.) From the patients' charts the author recorded admission/discharge dates, the victim's sex and age, relationship of the perpetrator to the victim, injury sustained, weapon used, and treatment provided. The history and circumstances leading to the incident were noted when available.

The term 'spouse abuse' is applied only to violence that occurs between husbands and wives, and 'co-wife conflict' refers to violence between co-wives. 'Domestic violence' as used in this paper refers to both spouse abuse and co-wife conflict; in an attempt to reduce redundancy, it will be used interchangeably with 'family violence.' Furthermore, Enga men and women do not typically share a common residence. Therefore, usage of the word 'family' will not imply cohabitation. Instead, it will indicate marital ties and obligations as well as the contribution of family members to a single economic unit (typically headed by the husband). This usage of the term is consistent with Bulmer's concept of a "domestic group" with a common authority in domestic matters (e.g. Bulmer, 1971).

While abuse is sometimes defined as a pattern of behavior rather than a single episode of violence, the incident resulting in hospitalization was considered definitive of abuse in this study. (Generally, resultant hospitalization or even physical injury is not necessary for an act to be considered abusive.) This approach was used mainly because the violent

incident resulted in an injury which was serious enough to warrant admission to the hospital. In addition, similar criteria for defining wife-beating has been used in other studies (e.g. Levinson, 1983). Moreover, because of the hospital's basic record-keeping system it was not possible to review previous admissions of the subjects in this study.

The acts of violence were divided into 'nonsevere' and 'severe' violence similar to the classification by Straus and Gelles (1986) but with the acknowledgement that even the nonsevere injuries were serious enough to require hospitalization. Nonsevere violence consisted of pushing or grabbing. Severe violence included hitting, biting, choking, or the use of a weapon. An intermediate classification of violence was not included because of the difficulty of grading subtle differences in severity using the information contained in the hospital charts. The most serious injuries were grouped into five categories: fractures; amputations; severed tendons; loss of consciousness; and puncture wounds resulting in pneumothorax.

Finally, the number of days each victim was hospitalized was determined and the number of domestic violence admissions for each month of the study was calculated. (See the Appendix for raw data.)

Results

Fifty eight cases of domestic violence fit the inclusion criteria stated above. General characteristics of the victims are listed in Table 1. Women were the victims in 49 (85%) of the 58 cases. The mean ages of the women and men in this study were 29.3 and 31.2 years respectively. The relationship of the aggressor to the victims is shown in Table 2. Husbands were the aggressors in 33 of the 49 cases (67%) with female victims and in

57% of all cases in this study. Of the 33 incidents with female victims, only one involved a former husband. Violence between co-wives was the next most common type of violence, accounting for 16 of the 49 cases (33%) with female victims and 28% of total cases. Within this category, six (37%) of the aggressors were the first wife while 7 (44%) were the second wife. The order of the co-wife in three cases was not known. There were nine incidents (15% of all cases) of husband-beating; in one of these cases the aggressor was a former spouse. No victims were admitted more than once during the time covered in this study. When the perpetrator is categorized by sex, regardless of the relation to the victim, 33 (57%) were men and 25 (43%) were women. The average length of hospital stay was 12.6 days: 8.3 for men and 14.1 for women.

The categorization of violent acts is presented in Table 3. Only two incidents fit the nonsevere violence category and a husband was the aggressor in both cases. [This small number is undoubtedly due to sample bias as the study is based on hospital admissions and therefore included only injuries serious enough to warrant hospitalization. It is assumed that the majority of domestic violence injuries seen in the outpatient department are of the nonsevere kind. This pattern would be consistent with that found in the U.S. where most victims of domestic violence do not require admission to a hospital (Flitcraft, 1990). Although no records are kept for outpatient encounters, this assumption was anecdotally confirmed by the health extension officers who are the primary providers in the clinic. In addition, many of the victims of severe violence were also injured in a nonsevere manner but the severe violence constituted the main reason for admission.]

Nearly two-thirds (36 of 58, or 62%) of the cases involved the use of a sharp weapon. The 'bushknife,' a large all-purpose knife ubiquitous throughout the highlands, was the most common weapon used (64%), followed by the axe. In cases where women were the aggressors, 21 of 25 (84%) used a knife or axe. The remaining 4 women used a stick (one woman), stones (two women) or their hand (one woman). Therefore, all but one of the women who were the aggressors used some form of weapon to inflict injury. This is in contrast to the men, of which 61% used some type of weapon; the remaining 39% used their own body, i.e. caused injury by pushing, hitting or choking.

The differences in methods used by the aggressors are reflected in the types of serious injuries sustained by the victims (Table 4). Soft tissue injuries, including lacerations, were excluded from this list because they were often multiple and occurred in most of the victims (frequently in combination with other types of injuries). Fractures were the most common of the 'severe' injuries among both sexes, occurring in 3 of 9 men and 13 of 46 women. Tendon injuries were not uncommon in this sample and one woman had her Achille's tendon severed, a traditional form of punishment in the Western Highlands (Strathern, 1972). Three women had a body part amputated with a bushknife (all were attacked by their husbands). One woman had her her leg cut off while another had her hand amputated. Amputation of the nose is a practice unique to the Enga as a form of punishment for adultery and one woman who was accused of being unfaithful had her nose cut off.

Three women lost consciousness after being beaten by their husbands and one man was unconscious after an assault by his wife. Two of the women were reported to have been unconscious for up to two hours. The

third woman was in the third trimester of pregnancy and gave birth to a stillborn child shortly after admission.

The number of domestic violence admissions for each month is displayed in Figure 2. The greatest number of cases per month (8, or 14% of all domestic violence admissions for 1993) occurred in September. This accounted for nearly 3% of all hospital admissions for that month. Six cases were seen both in January and October 1993, each accounting for 10% of domestic violence admissions that year. In 1993, 1.5% of all hospital admissions were due to domestic violence. During the rainy season (April to November) 31 cases were admitted with 8 occurring during the typically wettest months of March and April (1993). During the dry season (May to October) 27 cases were admitted, 4 of which occurred during June and July (1993), usually the driest time of the year.

Discussion

Spouse Abuse -- Wife-Beating

The results of this study were consistent with research in the U.S. which demonstrated that the majority of violent incidents within the family is inflicted by men and directed towards women (Straus, 1976; Straus et al, 1980). It is possible that more wives sought medical treatment for injuries than their husbands, thus biasing the sample by overrepresenting women. However, the fact that a similar pattern was observed in non-hospital based studies (e.g. Odujinrin, 1993) makes this unlikely. The majority of the violent men in this study used a weapon but over a third beat their wives without using a weapon. When compared with female homicides in the

United States, these rates are comparable to Chimbos' (1978) results in which one-third of female homicides by men were due to beatings without the use of a weapon.

Among the Enga, adultery is often cited as the reason for husband-wife violence (Kyakas and Wiessner, 1992). The same can be said for the Eastern Highlands, where Berndt (1962) found that most fights between adults were due to adultery. In the Eastern Highlands most of the cases presented before the village courts were also related to allegations of infidelity. In an analysis of 77 traditional societies, ethnographies of 45 of these societies indicated that adultery gave rise to wife-beating (Masumura, 1979). However, for some of these groups, the abuse may have represented the protection of property rather than an expression of sexual jealousy (Dobash and Dobash, 1979).

Adultery is strongly condemned in Enga society but the definition of adultery is complicated by the fact that men are allowed to have second wives. What one might consider adultery in one culture can therefore be seen as the prelude to obtaining a second wife in a polygynous society. Enga women cannot be married to more than one husband -- therefore if a man, regardless of his marital status, has sexual relations with a married woman, this would be considered adultery. A married man, on the other hand, can have relations with an unmarried woman if he is trying to obtain another wife. It is interesting to note that Enga women do not mention adultery *per se* as a problem because it is seen by them as a second-wife problem (Kyakas and Wiessner, 1992).

Among the Enga traditional punishment of adulterous wives include cutting off the nose or ear. In the Western Highlands, Strathern (1972) described an incident in which a man known for his violent behavior shot

his adulterous wife with arrows and cut her Achilles's tendon with an axe. Most Enga husbands, however, demand compensation from the lover and beat the wife without causing permanent disability (Kyakas and Wiessner, 1992).

Husbands inflicted the most severe violence, even though they were less likely than women to use a weapon. For example, the three amputations and the two chest stabbings/pneumothoraces in the sample were caused by husbands. Research in the U.S. (Straus et al, 1980; Saunders, 1986) as well as cross-cultural comparisons (Levinson, 1989) have also shown that wives sustain more severe injuries than husbands. The greater average size and strength of men is the most probable reason for this trend. A contributing factor may be that when men engage in violence against their wives, they may be drunk and therefore have less control. Alcohol abuse has been shown to increase the frequency of wife-beating (Lester, 1980) and it is reasonable to assume it can affect its severity as well. Because alcohol is prohibited in Enga Province it is difficult to assess the true extent of its use in incidents of family violence. However, anecdotal reports (Kyakas and Wissner, 1992; Gordon and Meggitt, 1985) as well as this author's personal observations indicate that it plays a significant role in wife-beating in Enga Province.

In a cross-cultural analysis of wife-beating worldwide, Levinson (1989) found that beatings due to adultery were the most severe. Although information for the reason for violence was available in only a few cases in this study, they support Levinson's findings. For example, one Enga woman had her nose cut off by her husband as punishment for adultery, and another was stabbed in the chest by her husband during a dispute over the woman's infidelity.

Death due to wife-beating is not uncommon in the highlands (Kyakas and Wiessner, 1992; Strathern, 1972). Similarly in the U.S. a woman is more likely to be killed by her partner than by a stranger (American Medical Association, 1992). Although there were no deaths due to spouse abuse in this study, evidence from traditional societies in other countries suggest that the same pattern is present in the developing world. Beattie (1960) studied 19 cases of female homicide in Uganda and found that in 8 cases, the husband or former-husband committed the murder. Bohannan (1960:252), in his analysis of homicides in Africa, wrote that "the most apparent institution to be involved with homicide is the domestic institution...[and] when men kill women...it is overwhelmingly their wives who are the victims." As evidence he cited that among the Nyoro, two-thirds of female homicide victims were deserting wives or mistresses; and among the Luo, accidental deaths due to excessive disciplining of wives was common. Chagnon (1983) also reported that although the punishment of Yanomamo wives was usually adjusted to the severity of the 'crime' (i.e. the wife's shortcomings), some men killed their wives either accidentally or intentionally.

Although men often severely assault their wives, there are limits to this behavior. These limits are related to two forces -- one, the self-interests of the husband; and two, compensation that he must pay to the wife's kin. A husband who kills or permanently disables his wife has eliminated something of value to himself -- a producer of crops, raiser of pigs and the caretaker of his children (Strathern, 1972). Meggitt (1965:157) noted that "a man cannot hold, let alone improve, his place in the exchange system if he has no wife to help him cultivate gardens and raise pigs." The effects of the loss of production may be ameliorated if the man has another wife but it

would still be difficult to maintain the same level of production. The fear of the loss of a producer is apparent in the following passage from Strathern's (1972) work in the Western Highlands:

Several stories from the past describe how a husband with supporters from his sub-clan would...carry [a runaway wife] back to his place, trussed up like a pig, and set on her; kicking the genital area or perhaps stuffing her vagina with an irritant such as a mass of ants. Usually, however, the accounts end with the comment that the husband was afraid to take too drastic measures lest the wife run away again.

Similarly, a husband may "beat a lazy wife...[but this] has limited effectiveness since it often provokes the woman into running home to her kin." (Berndt, 1962). The same situation holds for the Kapauku Papuans of Irian Jaya, where husbands commonly punish wives and may seriously wound them for offenses such as adultery. However, a Kapauku man is rarely a "tyrant" because an overly harsh husband might cause his wife to leave him (Pospisil, 1958).

It is perhaps the concern over loss of production that is the stimulus for seeking medical attention. Husbands may be concerned that their wives would be permanently disable or at least unable to work for an extended period if they do not receive care. Women can take the initiative and present to the hospital without their husbands. However, at Sopas Hospital there is a 75 kina (\$75) 'fight fee' for injuries sustained in tribal or domestic fights and women are less likely to have this money. They therefore tend to be brought in by their husbands or family members.

Divorce provides another way for abused women to leave their husbands. Meggitt (1965) reported a divorce rate of 6.5% for men and 7.7% for women. Kyakas and Wiessner (1992) reported a higher rate (about 22%) in their sample of over 100 women. However, none of these women divorced their husband because of abuse (25% of the divorces were the result of second-wife problems.) Divorces, when they occurred, tended to occur early in the marriage (Meggitt, 1965). After having children women usually did not push for divorce because the children typically stayed in the husband's clan. In addition, many people may have an interest in keeping a marriage together (e.g. because of exchange ties) and therefore pressure the woman into staying with her husband. Meggitt (1965:147) observed that "at the possibility of divorce, a wife's kin are usually anxious to send her back to her husband."

Compensation is the other factor limiting the severity of wife abuse. If a husband kills his wife, he is required to give death payments to his wife's kin. (If the wife's and husband's clans are actively at war against each other, these transactions are suspended (Strathern, 1972)). The wife's lineage is entitled to compensation not only in death but if blood is spilled during a violent incident (Meggitt, 1965). This is because by spilling blood, the husband has harmed a substance which the wife shares with her kin (Strathern, 1972). Strathern (1972:252) reported a case among the Melpa in which a woman abused by her husband repeatedly went to her kin for assistance only to be told, "if your husband really draws your blood, then you can come home." Among the Enga, a wife's kin may ignore her complaints of abuse, claiming that exchange ties are more important than her personal comfort (Meggitt, 1965). With respect to the compensation involved, Meggitt (1965:142) stated that "ideally, the husband should at once

bring [the wife] a gift of a piglet axe, or pearlshell to hand over to her father as compensation for the injury to her." Occasionally a severe injury or death may be symbolized by a demand for blood payment, escalating to a tribal war.

Limitations also exist for women who kill their husbands or co-wives. For example, if a woman kills her husband, the deceased husband's brothers may kill the wife in revenge, or at least demand compensation from her kin (Strathern, 1972). If one wife kills her co-wife, the husband gives payment to the dead woman's lineage and may demand payment to himself from the clan of the wife who killed the other wife (Strathern, 1972). In cases of co-wife conflict resulting in bloodshed but not death, the guilty wife may be required to transfer one of the pigs for which she is responsible to the other wife.

Assault and homicide are illegal in Papua New Guinea and punishable by law. However, the police in Enga Province are often powerless and unable to enforce national or provincial law (Gordon and Meggitt, 1985). A separate level of justice exists in the form of village courts. Before contact with Europeans, conflicts between husbands and wives were handled by the family or within a circle of close relatives. If the problem could not be settled, women often resorted to protest action (e.g. returning home) although this action could lead to further violence (Kyakas and Wiessner, 1992). With the influence of colonial administration, village courts became commonplace throughout the highlands and were established in order to settle disputes before they erupted into large-scale feuds (Gordon and Meggitt, 1985).

Adultery cases were commonly brought before village courts and although a woman's lover is typically made to pay some form of

compensation to the husband, women receive most of the blame and punishment (Berndt, 1962). Village court magistrates were always men and their decisions invariably went against the women (Gordon and Meggitt, 1985). Because settlement of disputes through the courts favored those skilled in public-speaking, Enga women were at a further disadvantage (Kyakas and Wiessner, 1992). In the Western Highlands, court councillors sometimes even beat adulterous women as punishment, or required that *they* compensate their husbands. For example:

One case...ended in a recommendation that the lover pay one pig to the husband, and that the wife should ask for her kin to provide another pig to the husband. [She] prevaricated, pointing out how distant her home was and what a long way she would have to go, and the injunction was not pressed, for fear that if she did go she would...run away. [The councillor] instead gave her a beating. (Strathern, 1972:240).

In Enga Province the effectiveness of the village court system is questionable and Gordon and Meggitt (1985:23) stated that the courts were “commonly believed by the magistrates, kiaps and police to have disintegrated for all practical intents, with bribery and corruption allegedly rife.”

Spouse Abuse -- Husband-Beating

Husband-beating was the least common of the three types of family violence examined in this study. Information as to whether the husbands were married to more than one wife, while generally not available in this study, would have been useful since co-wife conflict can result in violence against a husband (Kyakas and Wiessner, 1992). Several U.S. studies have

indicated nearly equal rates of husband-beating and wife-beating (Council of Scientific Affairs, 1992) but these studies do not take into account the proportion of the husband-beating incidents that were acts of self-defense. Saunders (1986), in his study of 52 battered women in the U.S., found that about 40% of the women who inflicted severe violence against their husbands claimed to do so out of self-defense. Information on the history of victimization of the Enga women who attacked their husbands would therefore be enlightening.

Chimbos (1978) found that women who killed their husbands almost always used a weapon. While there were no deaths in this study, nearly all of the women who beat their husbands seriously enough to be hospitalized used a weapon (usually a bushknife or axe.) A similar pattern was found for co-wife conflicts. There are at least two possible explanations for the nearly universal use of weapons by the women in this study. First, Enga women are at a size and strength disadvantage when fighting men. By using weapons they may compensate for this disadvantage (assuming that the man is unarmed.) Second, because women spend most of their time engaged in garden- or housework using tools and knives, these instruments are always at hand. This latter theory may explain the use of weapons between co-wives who fight. Perhaps another indication for the use of weapons is the fear of retaliation by the husband -- if women inflict severe violence, an immediate reprisal may be less likely and allow the woman to leave or seek assistance (Saunders, 1986). As with wife-beating or the killing of a spouse, women are required to pay compensation (often paid by their kin.)

Co-Wife Conflicts

The anthropological literature has documented that violence between co-wives is common in polygynous societies. Therefore, the high percentage of hospitalizations due to co-wife conflict was not surprising. Kyakas and Wiessner (1992) noted that the only aspect of married life that Enga women consistently complained about was the “second wife problem.” Meggitt (1965) reported that one-fourth of Enga men practiced polygyny, but Kyakas and Wiessner (1992) found that over half of the women they interviewed claimed to have had a second wife problem during their life. Although this difference may be partly due to the nonrandom sample in the latter study, Kyakas and Wiessner claim that it is because many men have attempted to marry more than one wife but were unsuccessful due to subsequent divorce or the forcing away of a wife. This claim is corroborated by their analysis of 22 women’s stories in which second wives were mentioned: 8 women divorced because of the second wife and 8 women drove the other wife away. Therefore, only six of the women remained married to a man with another wife; the unsuccessful marriages were generally not mentioned by the men (Kyakas and Wiessner, 1992).

The main reason for problems between co-wives stems from the inherent conflict of interest between men and women regarding additional wives. Men benefit from polygyny by the resultant increase in both production (crops, pigs, children) and exchange ties. While an Enga man’s status is not directly elevated merely by having more than one wife, it is raised if he has more food, more exchange ties and more pigs to exchange because of the addition to his labor force. Exchange ties are important because they provide the avenues (e.g., the Enga *tee*) through which males

become 'big men' and because they help establish peaceful relations among hostile groups. Moreover, a polygynous man improves his chances of having enough sons to establish a patrilineage bearing his name (Meggitt, 1965).

In contrast, women see another wife as competition for the husband's favor (Strathern, 1972). Although this favor may be sexual, it is more often related to the family's resources (Berndt, 1962; Gelber, 1986). Thus, the first wife will not only receive less help with the garden work and less land for her garden, but she will also have to share her pigs. A consequence of this decrease in the first wife's production is that there is less for her husband to trade with her natal clan (Gelber, 1986). In the Western Highlands, a married woman is neither fully affiliated with her natal group nor fully integrated into her husband's clan (Strathern, 1972). The woman therefore maintains interests in both groups, and trade with her natal group strengthens her ties with them. This relationship is important since she may rely on her lineage for assistance in helping her husband become a big man, or she may seek refuge or protection from an abusive husband with them. (There is considerable variation among highland groups in the strength of a woman's ties with her kin. For example, Bena Bena women in the Eastern Highlands essentially become full members of their husband's group at marriage (Langness, 1969). The situation in Enga is closer to that in the Western Highlands.) In addition, exchange with a wife's family can elevate her status (Feil, 1987). An Enga woman's affiliation with her natal group is an especially sensitive and vital one because her natal clan is typically a traditional enemy of the husband's clan: thus the Engan adage, "We marry those we fight!" (Meggitt, 1964:218).

Based on the information presented above, it might be assumed that first wives are usually the aggressors in co-wife conflicts. However, a nearly equal number of first and second wives were the aggressors in this study. This finding does not necessarily disprove the assumption since the wife requiring hospitalization was not necessarily the one who initiated the violence. Furthermore there were 6 subjects for whom it was not known if they were the first or second wife. It should be noted that first wives in the highlands do not automatically receive privileges or favors over the second wife (Strathern, 1972).

Although it is common, violence is not an inevitable result of competition between co-wives and there are occasions where the first wife may not only agree to a second wife, but actually help the husband obtain one. For example, this might occur if an Enga woman were infertile, or if she wanted to help her husband become a big man (Kyakas and Wiessner, 1992).

Protest by a wife or covert magic is often used to drive away co-wives (Kyakas and Wiessner, 1992). The disadvantage of protest is the potential for a violent response by the husband. If nonviolent means to drive a co-wife away failed (or even as a first attempt) a wife may resort to violence, as demonstrated by one woman's story:

The next time he tried to marry a second wife I threw dirt all over the pork at the wedding feast and carried away a whole side of pork. The woman knew that she would have too many problems with me in the future and went home...

The last time he tried to marry a second wife, I speared her during the wedding feast and dragged her into the pig rooms and locked the door...(Kyakas and Wiessner, 1992).

Arrangements which lessen the potential for co-wife conflicts do exist. For example, co-wives do not live together in the same residence. In addition, a woman traditionally resided in a group with other women married to other men, thus providing her with company other than her co-wife as well as an informal support group (Strathern, 1972).

As mentioned previously, co-wife conflicts can lead to compensation payments (by the aggressor or her natal clan) and can also be brought before a village court. In the Western Highlands, compensation for violence between wives is paid only for specific injuries and there is no attempt to resolve general differences between co-wives (Strathern, 1972). In contrast, Berndt (1962:369) reported a case in the Eastern Highlands where two wives were taken to court in an attempt to end their constant fighting:

The two women were made to sit down in the middle of a circle of men and a court began. [Village officials] cross-questioned them but elicited no reasons for their constant quarrelling...They were made to lie down and [one official] beat them with a cane; after this [the other official] told them not to quarrel in the future but to live amicably. Then he closed the court.

Despite consequences such as compensation and disfavor by the husband, trouble between wives is such an accepted part of married life that it is occasionally a source of amusement and entertainment for some highlanders (Strathern, 1972; Kyakas and Wiessner, 1992).

Seasonal Variation

The number of admissions did not vary significantly between the rainy and dry seasons. However, when the typically wettest months (March/April) were compared with the typically driest months (June/July), there were twice as many (eight) admissions during the wetter period. Six of these eight cases involved wife-beating and two were the result of co-wife conflict. Because activity patterns are linked to seasonal changes (Feil, 1984), this difference may relate to the number of domestic violence admissions. Waddell (1972) noted that time spent on subsistence food production during the wet season was half of that spent during the dry season. Women contributed 92% of the time spent on open fields so that their garden work consequently decreased by about half during the wet season (Waddell, 1972). It then follows that during the wettest months, with significantly less garden work to do, women spend more time at home and have more opportunities for contact with men. This increased contact may increase the potential for conflict between family members. Access to the hospital during the wet or dry seasons can also influence the number of admissions for a month. However, one would expect a decrease in admissions during the rainy period when road conditions are poor and travelling is difficult; just the opposite was found in this study.

Another seasonal factor that can influence the incidence of domestic violence is the time that ceremonial exchanges, particularly the *Enga tee*, occur. Conflict between spouses over the distribution of pigs and other valuables can lead to violence during this time (Gelber, 1986; Kyakas and Wiessner, 1992). The *tee* festivals usually occur during harvesting times and are held at intervals of up to several years (Waddell, 1972). To this

author's knowledge there were no such festivals during the period covered in this study.

It was not clear why the highest number of admissions occurred in September as this was not an unusual month with respect to rainfall or festivals.

Determinants of Domestic Violence

Although an accurate estimation of the incidence or prevalence of domestic violence among the Enga cannot be made based on the results of this study, the high percentage of hospital admissions that are due to domestic violence suggests that it is common. Furthermore, it has been shown in this study that the violence inflicted can be severe. These patterns lead us to question what aspects of Enga society create and support this level of domestic violence.

Various studies have attempted to identify the determinants of family violence but no clear pattern has emerged (Campbell, 1985). The lack of consistent correlations underscores the complexity of societies and their manifestations of violence, and also indicates that numerous factors (cultural, environmental, psychological) are involved. Although correlations between societal characteristics and violence do not tell us anything about causation, they are useful as starting points for testing theories regarding causality. Because most of the research on the determinants of domestic violence has been on wife-beating, and because wife-beating was the most common type of violence in this study, it will be the focus of the following discussion.

In a cross-cultural survey of 86 traditional societies, Masumura (1979) documented the existence of wife abuse in 77. He created three categories for abuse -- absent, infrequent, and common -- and looked for correlations between the different levels of wife abuse and several cultural variables. He found that wife abuse correlated significantly with societies in which theft, homicide, feuding and overall societal violence were common (Masumura, 1979). (Feuding was defined as “blood revenge following a homicide,” as opposed to warfare, “an armed contest between two independent political units, by means of organized military force, in the pursuit of a tribal or national policy.” (Masumura, 1979:48)). The indicator of overall societal violence was “The Aggression Index,” a composite score measuring eighteen types of behavior including: antagonism among groups within the society; riots; assaults; murder; torture of others; war; suicide; rape; and infanticide.

The correlation between wife abuse and homicide may have been the result of a “built in” relationship since wife abuse included homicidal attacks by men on their spouses (Masumura, 1979). However, the correlations with the other variables were considered free of this bias. In contrast to warfare, the frequency of feuding was significantly correlated with the frequency of wife-beating. It may be that feuds with the wife’s kin sometimes provoke a man to beat his wife. In cultures such as the Enga where wives are from hostile clans this is certainly possible. Meggitt (1977) noted that Enga warfare was often due to land disputes but that it also resulted from attacks on clan members or from inadequate compensation for a death or injury. Conversely, wife abuse may precipitate feuds with the wife’s kin, particularly if a husband kills or severely injures his wife.

The relationship between wife-beating and theft and homicide suggest that different kinds of aggression may be related to one another because they all indicate a society's inclination towards violence or crime (Masumura, 1979). This idea would be consistent with the 'culture of violence' theory which claims that cultures that are generally more violent should have more family violence (Wofgang and Ferracuti, 1967; Levinson and Malone, 1980). This theory was only partially supported by Levinson (1989) who found that contrary to Masumura's research, homicide did not have a positive correlation with family violence. However, abuse was strongly correlated with painful female initiation ceremonies; women fighting with other women (e.g. co-wife conflicts); and acquaintance violence (e.g. drunken men brawling) (Levinson, 1989). He also found that the severity of spouse abuse was related to a warfare ethos in which military feats added to a man's prestige.

If wife abuse is interpreted as a manifestation of male dominance, the incidence of wife-beating should be higher in cultures where female subordination is greater. It then follows that if male dominance is greater in patrilineal societies, wife abuse should be more frequent in these societies. Masumura (1979) tested this hypothesis and found a positive but nonsignificant correlation between wife abuse and patrilineal descent. In contrast, Lester (1980) significantly correlated wife-beating with low female status and Smith (1990:268) found that wife-beating in the United States resulted from "an adherence of battering husbands to an ideology of patriarchy." (Patriarchy was defined as having two components: men have more power and privilege than women, and this ideology was legitimized (Smith, 1990); it is also common among patrilineal societies.) In patrilineal cultures, married women are often without local support

from their lineage and this isolation may have a permissive effect on violence against them (Gelber, 1986).

Although the results for a relationship between wife-beating and female subordination (or low female status) have been conflicting, this subject deserves closer scrutiny since much has been written about the inferior status of women in highland Papua New Guinea (Strathern, 1972; Langness, 1974; Langness, 1977; Gelber, 1986; Feil, 1987). Evans-Pritchard (1965) commented that it is difficult to objectively assess the status of women in traditional societies without being biased by one's own experiences and practices. However, a more objective evaluation can be undertaken if 'female status' is broken down into specific components rather than being used as a broad, ill-defined term. Whyte (1978) proposed nine components of female status: property control, kinship power, value of women's lives, value of women's labor, domestic authority, separation of the sexes, control of marriage and sex, fear of women, and male-female joint participation. Because each of these different components may be related to wife-beating in different ways, testing each of them separately would provide more useful information.

Levinson (1989) conducted a study testing various hypotheses using data collected from 90 traditional societies throughout the world and compiled by the Human Research Area Files. He concluded that domestic authority, defined as "inequality in making decisions involving the use of family resources, the children, family life-style..." was the strongest predictor of wife-beating frequency (Levinson, 1989). (Recall that domestic authority was one aspect of Whyte's determinants of female status.) Similarly, Yllo (1984) found that in the United States, spouses who reported equality in decision power had a low frequency of violence in family

conflicts. Violence by husbands in Yllo's study was highest where husbands were dominant in decision power. Levinson (1989) also found that economic inequality was a strong predictor of wife-beating frequency because it correlated with domestic authority. Based on this information he concluded, "wife beating occurs more often in societies in which husbands have the economic and ultimate decision-making power in the household and adults often resolve conflicts with each other by fighting with one another." Therefore if domestic and economic authority are salient features of female status, it appears that low status is indeed associated with wife-beating.

How does Enga society fit in with these results? The Enga fit the profile of a culture in which men have the economic and domestic power, and where violent conflict resolution is present. Meggitt (1965:220) concluded that Enga men had "won their battle and have relegated women to an inferior position." An Enga woman remains a jural minor throughout her entire life and is thus the responsibility of her father, brother or husband (Meggitt, 1965). Furthermore, since Enga society is patrilineal and the woman's lineage is considered an enemy, women have little in the way of local support (Gelber, 1986).

[Despite their apparent lack of power and prestige, Enga women do have some influence because relationships with them are necessary to forge the all-important exchange partnerships (Feil, 1987). Men have the final say in pig distribution during these exchanges but women can have considerable influence in private since they cultivated the sweet potato and raised the pigs through which their husbands gain prestige (Tumu et al, 1989; Kyakas and Wiessner, 1992). It is therefore perhaps more accurate to describe male-female relationships among the Enga in terms of public and

private roles: men play an active role in public matters and the influence of women is restricted to the private arena (Kyakas and Wiessner, 1992).]

Tribal fighting is common in Enga society and frequently conforms to Masumura's "feuding." There are several reasons why clans and individuals fight rather than resolve their problems nonviolently. First, fighting unites a clan to defend not only its land and property but its reputation as well (Tumu et al, 1989). Second, a warfare ethos (found by Levinson to be related to wife-beating severity) exists and men gain prestige through their prowess in battle. Leadership in war is not the only qualification to become a big man but it is often a major one (Tumu et al, 1989). Third, many men seem to enjoy the excitement of fighting and the unity it brings (Tumu et al, 1989). In addition, there is a great deal of peer pressure for young men to fight and some may even fight for an allied clan in order to gain experience (Tumu et al, 1989).

Two other correlates of wife abuse according to Levinson (1989) were fighting among women (i.e. co-wives) and drunkenness. Co-wife conflict is present among the Enga and in polygynous societies throughout the highlands of Papua New Guinea. With respect to drunkenness and alcohol abuse, it is clear that it is a problem in Enga Province. This is publicly evident in the roadblocks at the province borders where police search vehicles and persons for alcohol. In addition, women's life stories suggest that domestic violence has been greatly affected by alcohol abuse (Kyakas and Wiessner, 1992).

Conclusions

Enga women comprised the vast majority of the victims of domestic violence in this study. Wife-beating was the most common type of domestic violence resulting in hospitalization, followed by violence between co-wives. Husband-beating was the least common and it was not known what percentage of these incidents were due to self-defense. Over half of the men and nearly all of the women used a weapon to inflict injuries, and women received the most severe injuries. There was no clear seasonal variation although there were twice as many hospitalizations during the two wettest months when compared to the two driest months of the year covered in this study.

Enga society contains many of the characteristics which have been associated with increased frequency and severity of domestic violence, especially wife-beating. However, as Levinson (1989) pointed out, family violence cannot be blamed on 'culture' without an understanding of the environmental factors and historical processes responsible for shaping a particular culture.

This study used a hospital-based population as its focus and an accurate estimate of the community prevalence of domestic violence cannot be made. Since most incidents of domestic violence do not require hospitalization (Flitcraft, 1990), if one were to use the percent of hospital admissions due to domestic violence as an indicator of its community prevalence, one would greatly underestimate the extent of the phenomenon among the Enga. In addition, the number of subjects in this study is an underestimate of domestic violence admissions since some victims may have claimed that their injuries were due to accidents in order to avoid the

expensive fight fee. Data on those who received outpatient treatment were not available because records are not systematically kept in the clinic. However, if this information were available it would still underrepresent the prevalence because not all victims seek medical attention. Furthermore, because of the bias inherent in using a hospital-based sample, the severity of violence found in this study may not be representative of that found in the community.

The Enga culture described in the early anthropological literature (e.g. Meggitt, 1964; Meggitt, 1965; Meggitt, 1977) was used as the ethnographic present in this paper. Much of this information attempted to describe Enga society prior to contact with Europeans. Although more recent literature (e.g. Feil, 1984; Kyakas and Wiessner, 1992) has shown that many Engans still live traditionally, their practices and lifestyles have undoubtedly changed over the past thirty years. Rapid development and Western influences are major catalysts in shaping current Enga society. Therefore, basing the ethnographic present partly on references describing “pre-contact” culture, while unavoidable in this study, limits the conclusions that can be drawn from data collected more recently.

In instances where data on Enga culture were not available, information from other highland Papua New Guinea societies were used to illustrate a point. Some of the cultures (e.g. the Melpa of the Western Highlands) are similar to the Enga in many respects but it should not be assumed that highland societies are homogenous. There is considerable variation among them and even within a single cultural group (Gelber, 1986; Feil, 1987; Hays, 1993). For example, much of the research on the Enga (e.g. Meggitt’s work) is based on the Mae-Enga in the central part of the province. This region is also where the present study took place. While

the Mae-Enga are the “proto-typical” Enga group, there are other groups (e.g. Raiapu Enga) which practice variations on the Mae-Enga theme.

Conflicts within family relationships are inevitable in any part of the world but violent resolutions of these conflicts are not (Gelles and Straus, 1979; Levinson, 1989). Examining societies in which domestic violence is infrequent can add to our knowledge of the determinants of family violence. In Levinson’s (1989) survey based on ethnographies in the Human Research Area Files, he found 16 societies in which the frequency of wife-beating was low. One of the factors associated with infrequent wife-beating was the presence of immediate protection for the wife (Levinson, 1989). This finding has clear implications for developing programs aimed at preventing wife abuse. Immediate protection is not available for Enga women and it would be interesting to see if it exists in any patrilineal societies.

The effect of socioeconomic change as a result of development is another issue that is relevant to family violence in traditional societies. Potential consequences of development, such as social isolation and alcoholism can place additional stress on a family (Korbin, 1981). In fact, many older Engans state that “what troubles [them] more than anything else [about development] is not giving up the old or adapting to the new, but being torn between the demands of the two worlds, each with its own strengths and weaknesses.” (Tumu et al, 1989:61). In addition, social change can not only alter the frequency of violence but it can create new definitions or types of violence as well (Levinson, 1989).

The next step in the examination of domestic violence among the Enga should be an attempt to determine the community prevalence of domestic violence by interviewing Engans where they live and work.

Campbell (1985) pointed out that the information in most cross-cultural studies has been gathered by male researchers using male informants. Therefore, documenting the perspective of women, the main targets of domestic violence, is essential in any further research. Obtaining this information among peoples such as the Enga, where women have limited public roles, will be challenging.

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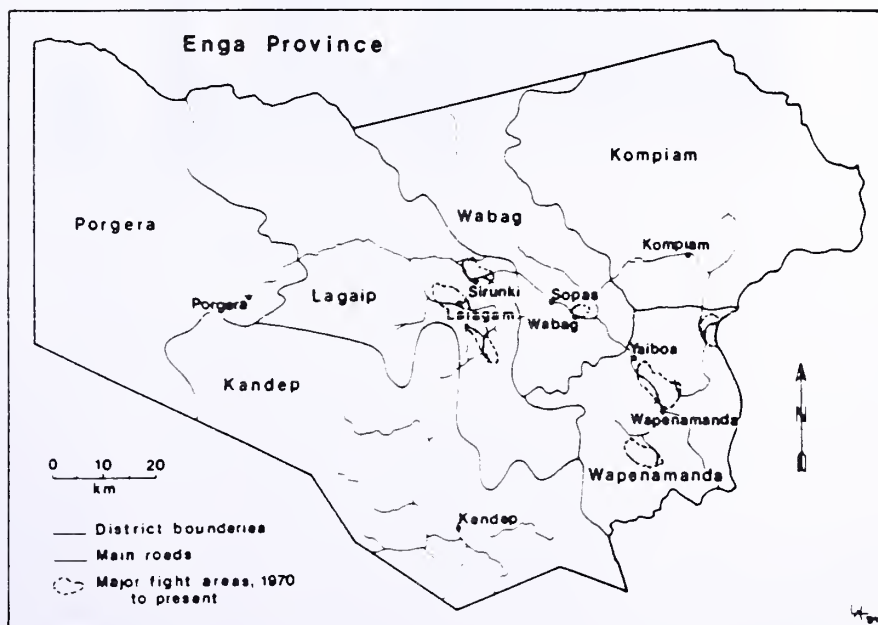
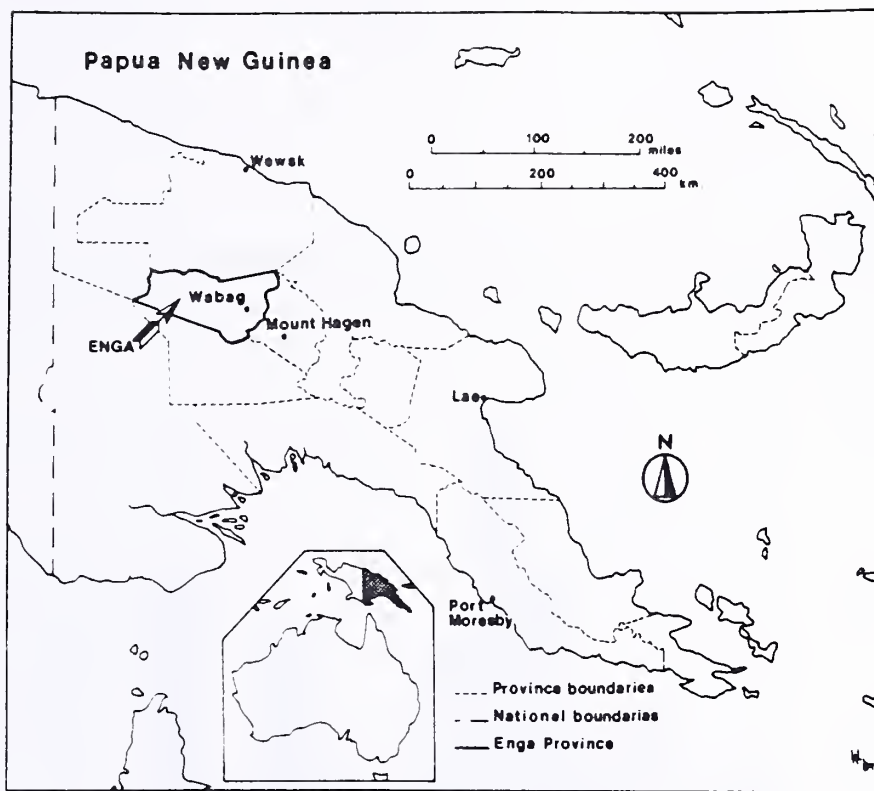


Figure 1. From Gordon and Meggitt, 1985.

Figure 2. Hospital admissions due to domestic violence per month

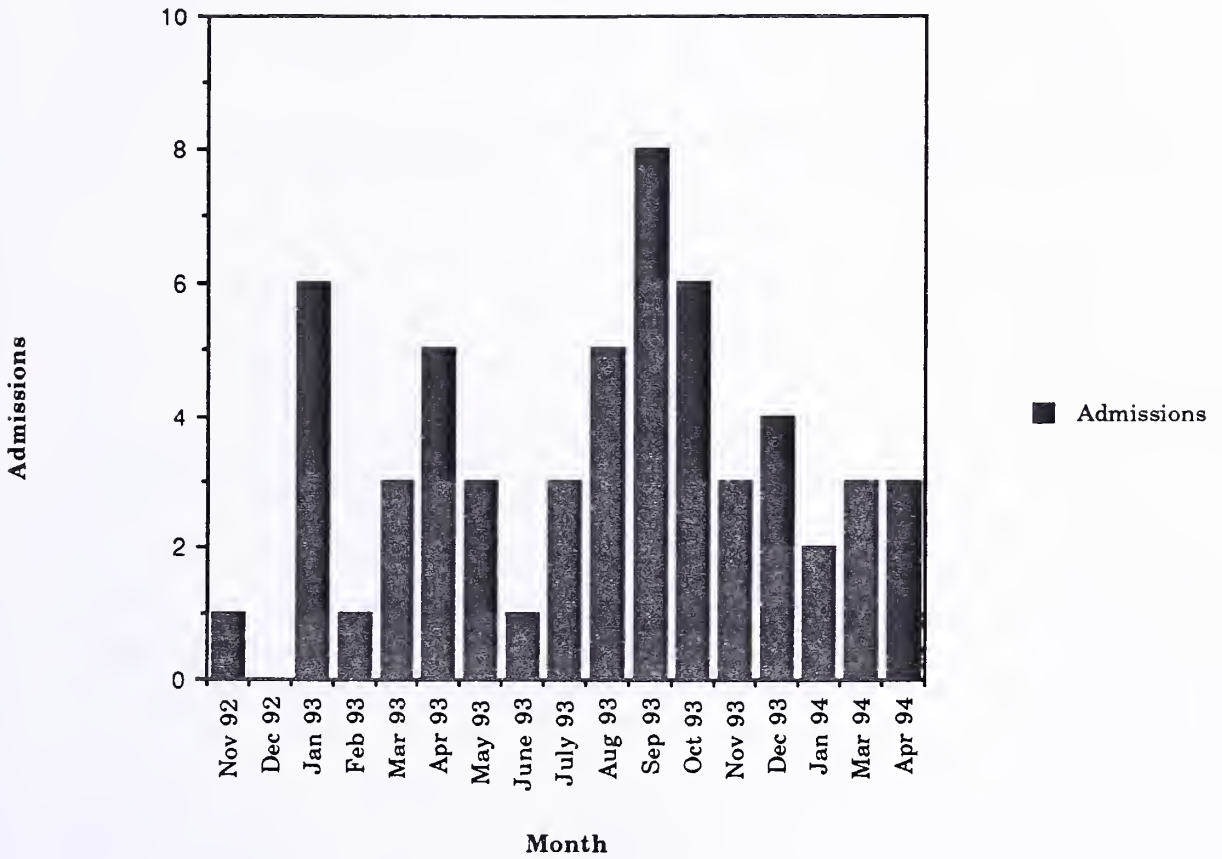


Table 1. Characteristics of Subjects.

	<u>No. of Subjects</u>	<u>Mean Age</u>	<u>Average Length of Hospital Stay (Days)*</u>
Total	58	29.6	12.6
Male	9 (15.5%)	31.2	8.3
Female	49 (84.5%)	29.3	14.1

* Two outliers (one male, one female) with hospital stays over 100 days were excluded.

Table 2. Relationship of the aggressor to the victim.

<u>Aggressor</u>	<u>Number of cases</u>
Husband	33 (57%)
<i>Current</i>	32 (97%)
<i>Former</i>	1 (3%)
Wife	9 (15%)
<i>Current</i>	8 (89%)
<i>Former</i>	1 (11%)
Co-wife	16 (28%)
<i>First</i>	6 (37%)
<i>Second</i>	7 (44%)
<i>Unknown</i>	3 (19%)
Total	58 (100%)

Table 3. Violent acts committed.

	Type of Domestic Violence		
	Wife-beating	Husband-beating	Co-wives
Nonsevere Violence			
Pushed/grabbed/shoved	2	0	0
Severe Violence			
Kicked/bit/hit	9 ^a	0	0
Hit with something	5	2	2
Beat up	1	0	0
Choked	1	0	0
Cut with knife or axe	15 ^b	7	14 ^c

a -- 27.3% of all wife-beating cases.

b -- 45.5% of all wife-beating cases.

c -- 87.5% of all cases involving co-wives.

Table 4. Types of severe injuries sustained by victims.

Injury	Victim	
	Male^a	Female⁺
Fracture of arms/legs/face	3 ^a	13 ^b
Pneumothorax	0	2
Amputation	0	3 ^c
Tendons cut	2	5
Loss of consciousness	1	3

^a -- Four males sustained only lacerations or soft tissue injuries and are not included in this table.

⁺ -- Some of the women received multiple injuries, e.g. two women had both fractures and severed tendons.

a -- 30% of all male victims.

b -- 28% of all female victims.

c -- Three women had their nose, leg and hand amputated respectively.

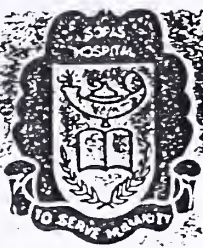
Appendix

EngaData

F	56	1/18/93	H	R pneumothorax	Digging stick	Fight over axe (1/17/93 @ noon)	1/27/93	9
F	35	1/25/93	H	Ulnar fx (closed)	Foot	Fought w/ husb on 1/22/93	1/26/93	1
F	35	1/22/93	H	Head lac; ulnar fx	Wood	Reportedly unconscious 2 hrs	1/25/93	3
F	26	11/20/92	H	R ulna/rad fx; R tib/fib	Knife	R hand amputated	1/15/93	56
M	35	1/1/93	W	R ulnar fx	Wife's head		1/15/93	14
F	38	1/11/93	H	L temporal lac	Knife		1/11/93	0
M	30	1/6/93	W	Lacs of arm, forehead	Axe	Axed by wife while asleep	1/8/93	2
F	19	2/1/93	H	Blunt injuries	Foot	Kicked in head, unconscious 30"	3/2/93	29
F	39	3/11/93	2W	Comp patella fx	Knife		3/31/93	20
F	30	3/24/93	H	Trachea fx?	Hands	Strangled 2/22/93,dysphagia, pain on inspiration	3/29/93	5
F	30	3/19/93	H	Blunt inj; MS changes	Stone	Hit several times on head	3/22/93	3
M	29	4/14/93	W	Tendons severed L han	Knife		4/19/93	5
F	32	4/3/93	H	Soft tissue injury	Pushed	Pushed to ground, unconscious 2 hrs	4/5/93	2
F	35	5/10/93	H	Knife wound R thigh	Knife		5/31/93	21
F	26	5/26/93	H	R radius fx	Hand	Husband 'twisted' hand 5/21/93	5/27/93	1
F	35	4/11/93	2W	L patella fx	Stone		6/2/93	52
F	26	7/17/93	H	Cellulitis	Knife;mouth	Bit by husband on 7/10/93	7/21/93	4
F	38	5/25/93	H	L ulna fx; head lacs	Knife	Fight w/ husband over 2nd wife	7/30/93	66
F	38	4/6/93	H	Fx maxillary sinuses	Fist	Punched in face, R eye	7/29/93	114
F	25	7/16/93	XH	L should/R clav inj	Axe		7/17/93	1
F	25	6/24/93	1W	L wrist tendon cut	Axe		7/16/93	22
F	24	8/24/93	1W	LOC; stillbirth	Stone	PIG2 mom stoned on head, side	8/30/93	6
F	27	7/27/93	H	R leg paralysis	?	Beaten in May, can't move R leg since	8/6/93	10
F	28	8/8/93	H	L nostril cut	Mouth	Bitten on nose	8/9/93	1
F	50	8/13/93	H	Mult blunt injuries	Stick	Kicked, hit on back, hands, shoulders, abdomen	8/18/93	5
F	36	8/23/93	H	L little finger lac	Knife	Fight after tried to get \$ from his acct	8/24/93	1
F	30	8/29/93	H	Contusions	Fists	"fisted her on L sigmoid, twitched her neck"	8/30/93	1
F	20	9/15/93	#W	Facial/scalp lacs	Knife	"Chopped on head by another wife"	9/21/93	6
F	29	9/6/93	H	R lower leg a/n/t cut	Axe	Bro-in-law raped daughter and she was calling for	9/27/93	21
M	27	9/18/93	W	Stab wound LLQ;hemo	Pocketknife	Pt found unconscious	10/1/93	13
M	24	9/28/93	W	Wound R ear	Knife	Attacked by wife and relatives	1/30/94	134
F	24	9/28/93	1W	Deep lac L side neck	Knife		10/4/93	6
F	25	10/4/93	H	Blunt injury L chest	Fists		10/6/93	2

EngaData

F	17	9/24/93	2W	Cmp fx, ten cut R foot	Axe	Chopped on sole of R foot	10/6/93	12
M	32	9/21/93	XW	R metacarp fx, ten cut	Knife		10/6/93	15
F	27	9/20/93	2W	Rad fx:hand/neck lac	Axe		10/12/93	22
F	20	10/12/93	2W	Chest/back lacs	Knife		10/15/93	3
F	22	10/11/93	H	R ulna/rad fx	Boot	Kicked on R forearm	10/18/93	7
F	38	10/18/93	H	L wrist, tendons cut	Knife		10/29/93	11
F	23	10/26/93	1W	L knee lac	Axe		10/29/93	3
M	50	11/3/93	W	Nose fx:facial lac	Stick		11/6/93	3
F	26	11/15/93	H	R shoulder disloc	Axe	Chopped by husband 4 mos previous (didn't arrive	11/18/93	3
M	22	12/13/93	W	L chest wound	Pocketknife		12/15/93	2
F	30	12/16/93	H	Multi lac to neck, head	Axe		12/20/93	4
F	?	11/29/93	1W	Wounds to head/should	Knife			
F	30	4/30/94	#W	Stab wound L flank	Knife			
F	30	3/24/94	H	Nose cut off	Knife	Accused of being unfaithful		
F	25	3/6/94	H	Wound L buttock	Axe	Fight over \$ she got from selling coffee she picked	3/16/94	10
M	32	3/5/94	2W	Wound R post neck	Knife	Went to garden w/ 2W, 1W came, gave him sugarc	3/7/94	12
F	25	1/27/94	H	L leg amputation	Knife		3/2/94	34
F	25	1/8/94	H	R labial hematoma	Foot	Kicked by husb 3 days prior	1/17/94	9
F	27	10/31/93	H	R Achilles tendon cut	Knife		1/7/94	68
F	25	12/22/93	#W	PTX; L post chest lacs	Knife		1/5/94	14
F	?	4/16/94	1W	Inj/lac R eye/nose	Knife		4/16/94	0
F	28	4/5/93	H	L ulnar fx	Stick		4/13/94	8
F	23	12/15/93	H	L ulnar n cut;R tib#	Axe			
F	20	5/2/94	2W	Abd/chest lac;abd punc	Dagger	Multi facial, chest, abdominal injuries		
F	35	4/26/94	2W	R forearm tendons cut	Knife			



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JANUARY	78	307	1184	104	48
FEBRUARY	79	229	1,074	99	45
MARCH	77	270	1,276	121	40
APRIL	91	326	1,451	75	54
MAY	74	300	1,528	80	48
JUNE	71	281	1,023	85	42
JULY	89	297	2,592	86	41
AUGUST	82	285	1,027	84	59
SEPTEMBER	89	283	1,359	100	58
OCTOBER	82	239	1,912	87	58
NOVEMBER	87	176	2,022	109	48
DECEMBER	78	273	819	85	34
TOTALS	977	3,266	17,267	1,125	575

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