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Sex Differences in Aggression within Adult Samples in Ghana





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Abstract

Previous studies into sex differences in aggression have suggested that in most patriarchal African nations, sex roles, and traditional beliefs have predisposed men and boys to dominate women. This circumstance has consequently restricted females from gaining access to resources that would make them less dependent on males. However, gender empowerment and traditional beliefs are not static. Ghana has undergone tremendous socioeconomic changes in the past twenty years, and has become one of the strongest economies in Africa, resulting in increased socioeconomic status for women.

The purpose of the current thesis was to examine sex differences in victimisation and perpetration of aggressive behaviour among different samples of adults in Ghana, including normal couples in domestic settings, prisons, and workplaces. A second purpose was to assess the relationship between mothers' and fathers' use of harsh punishment on their children and their retrospective account of their own experiences of harsh parenting in childhood. All participants represented the various ethnic and religious groups forming the fabric of Ghanaian society. Study I investigated sex differences in the perpetration and victimisation from low intensity intimate partner aggression (IPA) to ascertain whether the revised gender symmetry theory would hold in a community sample in Ghana, a patriarchal, non-Western nation. It involved a sample of 1,204 participants (602 males and 602 females) who filled in the DIAS-Adult questionnaire. In order to assess sex differences in aggressive acts in prison, a total of 1,717 inmates filled in the Prison Aggression Questionnaire in Study II. The third data set which assessed sex differences in workplace bullying, the effect of level of occupation on aggression, and mental health associated with workplace bullying, was measured with the Work Harassment Scale and the General Health Questionnaire. It involved 1, 273 employees from public institutions. The relationship between mothers' and fathers' harsh punishment of their children was assessed with the Brief Physical Punishment Scale in Study IV, which involved 1,202 respondents.

The overall reports suggested that the role of gender in aggressive acts may be better understood by examining traditional sex roles, the contexts in which aggressive acts occurred, and socioeconomic changes that focused on increasing women empowerment. In particular, the relationship between gender empowerment and aggression was highlighted in Study I, which found females perpetrating more physical, indirect, nonverbal, and cyber aggression than males, contrary to expectations of a patriarchal

nation. A high educational level was positively associated with both perpetration and victimisation of IPA. In prisons, all-sex-segregated settings where individuals have not voluntarily chosen to live together, (Study II), females were more often victimised from sexual aggression than males, even though there is a very strong anti-homosexual culture in Ghana. In prisons, males used more physical aggression than females, while females used indirect aggression more than males. There were no sex differences in frequency of victimisation from workplace bullying in Study III. Occupational status was significantly associated with bullying: junior staff members reported higher levels of victimisation from bullying and higher levels of psychological distress than senior staff members, highlighting the effect of settings on aggression. In study IV, the findings showed associations between mothers' and fathers' childhood experiences of harsh punishment and their current use of such disciplinary techniques on their own children. Exposure and transmission varied by sex in that males were more exposed to harsh punishment when they were young than females, and they also punished their own children more often than females.

The current thesis provides an analysis of sex differences in aggressive acts among adults in Ghana. The traditional view of men being the main aggressors in patriarchal Africa may be changing partly due to the improvements in the socio-economic status for women.

Key words: Sex differences, aggression, low intensity intimate partner aggression, bullying, prison, intergenerational transmission, harsh punishment, Ghana

Abstrakt

Enligt tidigare forskning om könsskillnader beträffande aggressivt beteende i afrikanska länder har könsroller och traditionellt tänkande gett upphov till att män och pojkar har en dominerande position i förhållande till kvinnor. Detta har förhindrat kvinnor från möjligheten att minska sitt beroende av männen. Maktförhållanden mellan könen och traditionella trosföreställningar är dock inte statiska. Ghana har genomgått enorma socioekonomiska förändringar under de senaste 20 åren, och landet har nu en av de starkaste ekonomierna i Afrika, vilket har förbättrat kvinnornas socioekonomiska ställning.

Syftet med föreliggande avhandling var att undersöka könsskillnader beträffande aggressivt beteende inom olika samspel av vuxna i Ghana, bland dem heterosexuella par i deras hem, vuxna av bägge könen i fängelser, och på arbetsplatser. Såväl utsatthet för andras aggression och att själv utföra aggression undersöktes. Ett annat syfte var att jämföra hur mycket mödrar och fäder agerade sina barn, och hur mycket de själva blivit utsatta för åga under sin barndom. Respondenterna representerade alla olika etniska och religiösa grupper i Ghana. I Studie I undersöktes könsskillnader beträffande utförande av och utsatthet för lågintensiv partneraggression (IPA) för att testa om den reviderade könssymmetriteorin skulle få stöd i Ghana, som är ett patriarkaliskt land. I studien deltog 1204 personer (602 män och 602 kvinnor), som fyllde i frågeformuläret DIAS-Adult. I syfte att undersöka könsskillnader beträffande aggressivt beteende i fängelser fyllde i Studie II 1717 fångar i frågeformuläret Prison Aggression Questionnaire. Med hjälp av en tredje datainsamling undersöktes i Studie III könsskillnader beträffande arbetsplatsmobbing, och skillnader i mobbing beroende på status i arbetsgruppen, och psykologiska konsekvenser av att bli utsatt för arbetsplatsmobbing undersöktes också. Undersökningsinstrumenten var här Work Harassment Scale och General Health Questionnaire. I studien deltog 1273 anställda vid statliga och kommunala institutioner. I Studie IV undersöktes skillnaden mellan mödrars och fäders fysiska bestraffning av sina barn med Brief Physical Punishment Scale. Det undersöktes även hur mycket de själva blivit utsatta för åga i sin barndom. I studien deltog 1202 personer.

Allmänt taget visade resultaten att för att förstå könsskillnader beträffande aggressivt beteende bör man beakta såväl traditionella könsrollsmönster, kontexten i vilken aggressionen utförs, och socioekonomiska förändringar som bidrar till kvinnors frigörelse.

Sambandet mellan kvinnors frigörelse och aggressivt beteende kom tydligast till synes i Studie I, i vilken det visade sig att kvinnor oftare utförde fysisk, indirekt, icke-verbal och cyber aggression än män, i motsatt till vad man kunde ha förväntat sig i ett patriarkaliskt samhälle. Högutbildade kvinnor utförde mer aggressivt beteende än lågutbildade i sin parrelation, vilket också är ovanligt. I Studie II undersöktes aggression i fängelser. Fängelserna i Ghana är könssegregerade. Kvinnor i fängelser blev mer utsatta för sexuell aggression än män, trots att det finns en stark opinion emot homosexualitet i Ghana. Män i fängelser utförde mer fysisk aggression än kvinnor, och kvinnor utförde mer indirekt aggression än män. I Studie III kunde inte konstateras någon könsskillnad beträffande arbetsplatsmobbing. Däremot var status i arbetsgruppen av betydelse. Arbetstagare med en lägre position upplevde mer arbetsplatsmobbing än arbetstagare med en högre position. I Studie IV fanns det ett samband mellan hur mycket en person hade blivit utsatt för fysisk åga i sin egen barndom och hur mycket personen i fråga ågade sina egna barn. Män hade blivit mer utsatta för åga än kvinnor, och de ågade också sina egna barn mer än kvinnor gjorde.

I föreliggande studie har en analys av könsskillnader beträffande aggressivt beteende bland vuxna i Ghana utförts. Den traditionella synen att män är de som utför mest aggression i det patriarkaliska Afrika håller på att förändras, sannolikt till en del pga. förbättringar i kvinnors socioekonomiska ställning.

Sökord: Könsskillnader, aggression, lågintensiv intim partneraggression, fängelse, arbetsplatsmobbing, fysisk åga, Ghana

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Tampere, Finland, November 2019

George Darko

List of Original Publications

Study I:

Darko, G., Björkqvist, K., & Österman, K. (2019). Low intensity intimate partner aggression in Ghana: Support for the revised gender symmetry theory in an African country, *Aggressive Behavior*, *45*, 52–61.
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Study II:

Darko, G., Björkqvist, K., & Österman, K. (2018). Within the walls of a human warehouse: Sex differences in aggression among prisoners in Ghana, *Journal of African Studies and Development*, *4*, 18–27.

Study III:

Darko, G., Björkqvist, K., & Österman, K. (2019). Workplace bullying and psychological distress in public institutions in Ghana, *European Journal of Social Science Education and Research*, *6*, 62–74.

Study IV:

Darko, G., Björkqvist, K., & Österman, K. (2019). Sex differences in the intergenerational transmission of harsh punishment of children, in Ghana, *European Journal of Social Sciences, Education and Research*, *6*, 104–111.

Author contribution

George Darko is the first author of all four studies (I–IV) included in this doctoral thesis. Darko is responsible for the data collection of all the studies. Statistical analyses have been made jointly within the research team.

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1. Introduction

1.1 Aims of the Thesis

The purpose of this thesis is to assess sex differences in perpetration of and victimisation from aggressive behaviour among adults in four different contexts in Ghana, a patriarchal society where in the past, women faced restricted access to resources and power but have recently experienced increasing educational opportunities and better employment status. The individual goals of the four included studies are as follows:

- 1) To test Archer's (2018) revised gender symmetry theory in an African sample and investigate sex differences and possible effects of educational level on intimate partner aggression (IPA (Study I))
- 2) To assess sex differences and psychological distress associated with workplace bullying (Study II)
- 3) To investigate sex differences in aggression among prisoners (Study III)
- 4) To assess the relationship between mothers' and fathers' use of harsh punishment on their children and their retrospective account of their own experiences of harsh parenting in childhood (Study IV)

1.2 Definition of Aggression

Aggressive behaviour is a complex phenomenon to investigate, as questions about the behaviour quickly raise issues as to whose perspective – the victims', the perpetrators', or observers' – the assessment of the severity of the aggression should be based on. It may be perceived by some as having positive connotations, e.g., when used in economic terms as in "aggressive economic policies that turn a country round", and in some individual cases, "aggressively defending the truth". Similar aggressive acts may in one context require legal action while in another be perceived as extraordinary bravery. In some cases, the appropriateness or inappropriateness in the use of aggression is made difficult to gauge because not the least, aggressive behaviour can be justified as right from the perpetrator's point of view, or as wrong from that of the victim's.

Due to these complexities, an acceptable definition of aggression must be able to distinguish aggressive behaviour, first, as a 'behaviour', which is conceptually different from an emotional state. Second, a definition must be broad enough to capture the full range of hostile behaviours. In

addition, a definition should address the difference and similarity between the terms 'violence' and 'aggression'; while violence usually refers to physical harm, aggression, being the broader term, includes any type of harm, also psychological and emotional. However, these terms are (too) often used interchangeably. Aggression may best be seen as being on a continuum of severity with fairly minor acts of aggression) at the low end of the spectrum and severe violence such as homicide at the other, extreme end of the spectrum (Allen & Anderson, 2017).

Taken these conditions into consideration, the most commonly used definition of aggression is a behaviour intended to harm another person who is motivated to avoid the harm. This harm can take many forms such as physical injury, hurt feelings, or damaged social relationships (Bushman & Huesmann, 2010; DeWall, Anderson, & Bushman, 2012). Aggressive behaviour is often related to a range of individual and societal problems including deaths, and physical and emotional injuries. It can also have negative impact on those who simply witness the behaviour in action, and families and communities of the victims.

1.3 The Confluence of Nature and Nurture and Sex Differences in Aggression

The question as to why individuals use aggression is also a complex one, since untangling the cause of aggression should involve serious considerations of the influences of all aspects of human life concerning both societal and biological reasons for aggression. The most current major model to advance our understanding of aggressive behaviour is the General Aggression Model (GAM) (Allen, Anderson, & Bushman, 2018). It integrates the role of social, cognitive, personality, developmental, and biological factors on aggression, and addresses aggression with all the characteristics of an individual, e.g., their biology genes, personality attitudes, beliefs, behaviour scripts (Warburton & Anderson, 2015).

When this consideration is made, it corroborates some of the past investigations into the development of sex differences in aggression, e.g., both sexes of toddlers are able to exhibit the ability to choose and deliberately use physical aggression (PA) against their peers between the first and second years after birth (Tremblay, Japel, Pérusse, McDuff, Boivin, Zoccolillo, & Montplaisir, 1999). Both males and females usually reduce the use of PA from its highest levels between by the age of 4 (Archer, 2004). The use verbal aggression (VA) has been identified not only

as an aggressive act but also as a developmental stage which marks the beginning of a successful development of age-appropriate strategies for controlling physical aggressive behaviour. When verbal skills develop, it enables the expression of aggression without having to resort to physical aggression (Björkqvist, Lagerspetz, & Kaukiainen, 1992; Österman, 1999). Males typically show more face-to-face VA than females from early childhood to adulthood (Archer, 2004). This is attributed to the differences in their social groups, and as a result of different expectations and roles; males and females typically have distinct forms of VA that reflect these expectations and roles (Archer, 2004; Eagly, Wood, & Diekmann, 2000). On this account, males typically show more face-to-face VA than females, from early childhood to adulthood (Archer, 2004).

As children mature, the nature of aggression changes as they develop more advanced language and socio-cognitive skills, allowing them to use more indirect rather than direct forms of aggression (Björkqvist, 1994; Björkqvist et al, 1992; Lagerspetz, Björkqvist & Peltonen, 1988). Indirect aggression (IA) therefore increases from early to childhood into adolescence (Archer, 2010; Björkqvist, 1994; Cote, Vaillancourt, Baker, & Tremblay (2007), and is more common in girls than in boys (Archer & Coyne, 2005; Björkqvist et al, 1992; Österman & Björkqvist, 2009). Sex differences in IA increases from middle childhood to 17 years (Björkqvist 1992).

In regard to the sex differences in aggression, the GAM suggests that overall, adult males are generally more aggressive than females. This is especially true for physical aggression and violent behaviour (Warburton & Anderson, 2015). However, women are as physically aggressive as men when strongly provoked, and are more likely to use indirect forms of aggression (Björkqvist, 1994; Warburton & Anderson, 2015). Within intimate relationships, women are somewhat more likely to use physical aggression than men, though for different purposes and with different results, e.g., men are much more likely to strike with a fist (women with an open slap), which is one reason why intimate partner violence yields many more women requiring medical attention than men (Warburton & Anderson, 2015).

The effect of gender in aggression in adulthood has been well examined with different methodologies across different populations and settings, and these studies show that sex differences in aggression in adults appear to be dependent on the method of measurement, the form of aggression being measured, and the context in which a particular form of the

behaviour is used. When all these are considered, males were more targets of victimisation of low-intensity aggression in intimate relationship (Darko, Björkqvist, & Österman, 2019; Harris, 1992; Ndoromo, Österman, & Björkqvist, 2019), while both males and females endorse more frequent incidents of direct aggression toward males (Richardson & Green, 1999). When Richardson and Green (2006) conducted their studies to determine how the type of relationship influence the form of aggression used in interaction, they found that direct aggression occurred in romantic relationships, and indirect aggression more in the context of interactions with friends; individuals reported more direct aggressive acts toward intimate couples than toward same- or opposite- sex friends (Richardson & Green, 2006). This is an indication that the nature of the relationship is more significant in direct aggression responses than gender. It also shows that when aggression in intimate relationships, which mostly occurs in private and without pressure from the public, culture and roles, both sexes will equally use aggression if they feel the need to do so.

There is absolutely no indication from studies so far that adult females are incapable of using aggression against males. Rather, the source of aggression is attributed to factors within people and to the environment that might increase the possibility of aggression, together with processes that take place in the mind and brain during acts of aggression. Therefore, the current thesis argues that the focus on 'sex' as the main effect in sex differences in human aggression is a simplification, and suggests that examining the contexts in which aggressive acts occur can better explain observed sex differences in aggression.

1.4 Contextual Aspects of Sex Differences in Aggression

The study of sex differences in aggression in different contexts provides the opportunity to understand the historical and cultural background that might have led to the different ways males and females exhibit aggression in private and in public. Different settings also provide some clarifications of the extent to which aggression occurs within a particular cultural setting. For this reason, limiting the assessment of the sex difference in aggression to only aggression that occurs within intimate relations might not be helpful.

Much of the sex differences in aggressive acts may be explained by sex roles and social factors. Context provides the specific setting in which aggression occurs and set the limits to what is socially acceptable. Individuals act differently in different settings, and typically combine their

personal internal state with their environment to make appropriate behaviour decisions including the use of aggression. Aggression manifests differently depending on the context. Contexts may also determine the form, acceptability and the frequency of aggressive behaviour. Just as all forms of aggression occur in the context of relationship interactions, those interactions themselves occur within a situational context. Whether aggression will be used or not is influenced by an individual's (irrespective of sex) interpretation of situational factors and other aspects, such as cultural norms. Since social interactions occur within social contexts, the estimation of level of aggressiveness corresponds to the perceived context. Therefore, contexts may moderate intensity, acceptability, and frequency of the aggressive acts.

The presence of others set up expectations to behave in "appropriate" ways. Sex differences in aggression may simply reflect one's sex role. Sex role beliefs constitute the extent to which an individual conforms to the socially acceptable conventions or standards regarding beliefs, behaviour and attitudes about "masculinity", which has been associated with "dominance", "aggressiveness", and "power", and "femininity", related to "compassion", "caring" and "nurturance", characteristics not associated with aggression. Although masculinity predicts aggressiveness better than gender, sex roles have a greater impact on aggressive behaviour than sex alone (Kogut, Langley, & O'Neal, 1992).

Sex differences in aggression do not occur in a vacuum. One way to understand it is to look at the roles men and women ought to play in a given society. Cultural definitions and understandings of "male" and "female", and the roles they play in society can explain males and females' choices of forms of aggression and context where it is used, e.g., it is more acceptable for men to show masculine characteristics, which is largely associated with aggression in public in Ghana, while females are expected to show feminine features, also related to the accession to males. The cultural understanding of a "man" is associated with public show of "dominance", "power" and "aggressiveness" while being a "female" is related to publicly show "compassion", "caring" and "nurturance", characteristics not associated with aggression. Social norms allow males and females to demonstrate (or prohibit) these attributes in public. Consequently, the 'obvious' sex differences in aggressive behaviour could essentially reflect the relationship between sex roles and aggression. In this case, sex differences in aggression can be viewed as a reaction to one's sex role.

The implication is that women are more likely to use direct aggression in private since it is 'unseen' by the public, and more likely to use indirect forms of aggression in public because it is socially expected from them. This is especially true in the context of heterosexual intimate relationships, where women are more likely to use physical aggression than men away from the public view. Thus, in a cultural setting like Ghana, sex differences in aggression cannot be understood without recognising the cultural interpretation of the sex of perpetrators and victims. Thus, the perceived sex differences in aggression may reflect the relationship between sex roles and aggression, creating a perceived sex differences in the behaviour. Historical and cultural sex roles within a society personify the notion that males are aggressive and violent, and women are passive and submissive, thereby reinforcing traditional beliefs about men and women. Social norms produce the behaviour while culture explains it.

For these reasons, individual societies differ in their general attitudes towards the appropriateness of using aggression as a means of resolving interpersonal conflicts, and some societies also tolerate higher levels of the use of aggression than others, which also reflects the strong influence of cultural environments on the expression of human aggressive behaviour. The social settings in which individuals live also influence their beliefs about aggression.

The meaning of aggression may reflect how attitudes about the behaviour is organised, and this may vary with national origin, e.g., individuals from the United States live in a relatively highly aggressive environment, and hence, have more experience of it; therefore they may regard aggressive acts as more justified than individuals in France (Richardson & Huguet, 2001). For this reason, the meaning of aggression would be different for citizens in these two nations. By analysing the cultural contexts in which aggression occurs, we may better understand sex differences in the behaviour.

These cultural variations in the perception of aggression makes the analysis of aggression scientifically challenging. The fact that even the term 'aggressive' can itself be used to express a particular point of view or to judge a cross-cultural variation along a peaceful-to-aggressiveness continuum, e.g., phrases like 'men are more aggressive than women', and 'Finland is more peaceful than Afghanistan', indicate how much both researchers and the public carelessly use the term "aggression".

Social roles have impact on actions and interactions, and the norms related with social roles regulate the show of aggressive responses (Eagly,

1983; Wood & Eagly, 2002); not the least, they stigmatise, encourage or discourage the use of aggression. Therefore, not only would the responses to aggressive acts differ from culture to culture, the expression of the behaviour would itself be influenced by the perpetrator's or the victim's belief system. When the social role of a particular sex is pitted against sex, sex role is a better predictor of aggression, and when sex role is removed or weakened via some situational limitation, sex differences in aggression tend to disappear (Richardson & Hammock, 2006). This is an indication that sex roles contribute a better understanding to sex differences in aggression than the biological sex of the victim or the perpetrator. Assessing sex alone cannot give a full understanding of the ways males and females exhibit aggressive acts. Sex can be relevant only within a particular social or cultural context. The interactions between males and females with social and cultural context may reveal more information that can help the understanding of the sex differences in aggression.

1.5 Sex Differences in Aggression in Heterosexual Intimate Relationships

The gender controversy in heterosexual intimate relationships is one of the enduring debates in IPA research; however, it also provides a unique setting in which to investigate the sex differences in aggressive acts between males and females. Researchers proposing asymmetry in IPA have long argued that most of the aggression that occur in intimate relationships are perpetrated by males (DeKeseredy, 2011; Dragiewicz & Lindgren, 2009). Violence against females are claimed to be results of males' attempts to preserve their dominance, since individual domination is vital for maintaining patriarchal domination at the societal level. IPA is consequently a reflection of power and control, caused by gender inequality and perpetrated by males against female victims (DeKeseredy, 2011; Dragiewicz & Lindgren, 2009; Dobash & Dobash, 1988; 2004).

This argument is largely supported by the historical division of labour into those who do most of the daily household work (mostly women) and those who work outside home (mostly men). This division of tasks created roles that define the characteristics of "men" and "women," and provided the standard by which their social relationship was shaped (Kray, Howland, Russel, & Jackman, 2016; Lindsey, 2015). It allowed males to earn and provide for the family income, which in turn endorses their control over the family's wealth. Dominance in the relationship by either

the male or female partner is associated with an increased probability of violence (Straus, 2008).

Currently, more researchers typically find 'gender symmetry', suggesting that men and women do experience and perpetrate aggression at similar rates in intimate relationships. IPA is simply an expression of conflict within the larger family structure (Gelles & Straus, 1988), therefore, by studying all aggression that occurs within the larger family setup, including those between couples, irrespective of the perpetrator's intent, sex differences in IPA may be better understood (Straus, 2009, 2011). Some recent surveys (e.g., Australian Bureau of Statistics, 2012; Bates et al., 2014; Black et al., 2011; Kar & O'Leary, 2010) support this argument.

The differences in conceptualization of IPA may have come about partly because of the different sources of data from which researchers draw their conclusions: asymmetry theorists have typically based their conclusions either on qualitative approaches in clinical studies or quantitative evidence obtained from crime and homicide data (DeKeseredy, 2011; Dragiewicz & Lindgren, 2009; Dobash & Dobash, 1988; 2004). Family conflict researchers, such as Straus and his colleagues, base their conclusions on acts-based surveys such as the Conflict Tactics Scale (Straus, 1979; Straus, Hamby, Boney-McCoy, & Sugarman, 1996).

These different data sources may have influenced the direction of the findings rather than sex. When the levels of aggression are estimated on the basis of criminal records, and when the emphasis is on the injuries of the victims, males form the majority of perpetrators with females as the victims (Grech & Burgess, 2011). On the other hand, when levels and types of aggression in IPA are based on representative community samples and not on extreme groups, studies find an overall larger percentage of females committing physical aggression against their partner (Australian Bureau of Statistics, 2012; Black et al., 2011).

Regardless of view, IPA is directly related to gender inequality (Reed, Raj, Miller, & Silverman, 2010; Stark, 2010); as gender equality and individualism increase, female victimization should decrease, while male victimization is likely to increase (Archer, 2006).

Archer (2018) attempted to bridge the gap between the two theories by suggesting a revised gender theory, which suggests that gender symmetry holds only for low intensity aggression, while as far as high intensity aggression resulting in physical injury or death is concerned, males are perpetrators to a higher degree than females. Gender symmetry should be expected to be found mainly in community and student samples in modern

Western nations, and linked to a relatively high degree of gender equality in the society in question (Archer, 2018). Thus, in developing countries with a patriarchal society structure, such as African countries, gender symmetry should not be expected to occur in community samples. However, this is only to the extent that gender inequality remains the same, constant. Perpetration of IPA in Ghana had been attributed to gender inequality among others including gender roles and socio-cultural factors. Nevertheless, due to a quarter of a century of relative stability and good governance, the literacy rate among 15–24-year-olds is 88% for males and 83% for females (UNICEF, 2012), and more women in paid employment than man. In a gender empowerment measure prepared by the World Economic forum (2013), the Global Gap index (GGI) place Ghana 76th out of 136 nations. In a recent IPA study conducted by Darko et al. (2018), women in Ghana were found to perpetrate more physical, indirect, nonverbal, and cyber aggressive acts against their male partners. This is a highly patriarchal nation and a community sample was used. This is another clear indication that there are more relevant influential factors on sex differences in aggressive acts than sex per se.

The intensity of aggression here is very crucial, since gender symmetry holds only for low intensity aggression, while as far as high intensity aggression resulting in physical injury or death is concerned, males are perpetrators to a higher degree than females.

1.6 Aggression in Institutional Settings: Prisons

Institutional aggression refers to acts or attempts to harm others within certain institutional settings, where restrictions, social roles and rules exists, e.g., prisons (Montasevee, 2016). The spectrum of aggression that occurs in these institutions ranges from physical aggression and sexual aggression to initiation rituals (Cooke, Johnstone, & Gadon, 2008). All types of prison inmates – men, women, juvenile, young and adult offenders exhibit some type of aggressive behaviour (Ireland, 1999).

Institutional aggression is particularly difficult for victims to avoid since they cannot readily remove themselves from the aggressive environment. In prisons, one of such institutional setting, the use of aggression has long been a challenging problem for prison authorities and nations. Estimates show that approximately 80% of inmates have been subjected to direct and / or indirect aggression in the previous month (Chan & Ireland, 2009; Ireland & Ireland, 2008).

1.6.1 Causes of Prison Aggression

Regardless of the personal characteristics of those who go to prison, experiences within the prisons environments themselves contribute to how prisoners behave. There are poor physical conditions, often unreasonably strict conditions, and when rules are unfairly applied, it increases frustration and stress, which potentially leads to conflicts. Heightened rates of aggression are mostly likely to occur during the period immediately following prison visits (McGuire, 2018). Places where prisoners are engaged in purposeful activities, which they consider to be of value to them (workshops, education classes, rehabilitation programmes) are less likely to be sites of aggression than places with less focused objectives or less formal ground-rules (McGuire, 2018). This may be because they feel the positive activities that they engage in contribute to society, thereby paying for their crimes, but it may also be due to supervision issues, since places where inmates are able to hide behaviours are the most likely places where conflicts occur.

Two factors are commonly used to explain institutional aggression: dispositional factors and situational factors (for a review, see Camp, Gaes, Langan, & Saylor, 2003; Drury & DeLisi, 2010; Morris, Longmire, Buffington-Vollum, & Vollum, 2010). Dispositional factors suggest that aggression occurs due to the characteristics of individuals who go to institutions, such as prisons, with their beliefs, values, social norms, and history of criminality, in combination with characteristics such as their sex and age (Irwin & Cressey, 1962). This implies that a person's life experiences can predict antisocial behaviour and misconduct during confinement. Inmates who have had violent experiences will be more likely to engage in interpersonal violence than inmates with less violent personalities and experiences. Therefore, prison aggression is an expression of past tendencies and experiences (DeLisi, Trulson, Marquart, Drury & Kosloski, 2011).

The situational model attempts to explain aggression in institutional settings as due to factors within the institutions themselves (see Cooke, Wozniak, & Johnstone, 2008). The prison authorities' deprivation of the inmates' liberty, autonomy, goods and services, heterosexual relationships, and security, lead to increased stress for inmates and as a result, some inmates act aggressively to minimise stress and attempt to gain some control over the social limitations placed on them (Megargee, 1977).

The forms of aggression that commonly occur in prison settings can vary and may include severe physical abuse, such as slaps, punches and intentional burning with cigarettes (Ireland, 2002a). Irrespective of the causes and forms of aggressive acts in prison, research consistently indicate that most individuals who go to prison typically are less educated than the general population, e.g., official statistics from the UK show that 52% of male offenders and 72% of female offenders have no qualifications whatsoever, and approximately, half of all prisoners have literacy skills at or below level 1 and nearly two thirds have the same difficulties with regard to numeracy skills. A high rate of 67% were unemployed at the time of their imprisonment (Bruton-Smith & Hopkins (2014). If lack of education and job characterise individuals who go to prison, one wonders why prison authorities and governments do not focus on improving peoples' lives through education and job creation as a crime preventive measure.

Although neither the dispositional nor the situational model accounts for all circumstances that may lead to aggressive acts, both theories offer some explanations of how external causes, e.g., extra judicial, harsh treatment of inmates, can lead to one engaging in aggressive acts. Enforcing stricter rules of control influences inmates to act aggressively rather than it discourages them from it (Drago, Galbiati, & Vertova, 2011; Listwan, Sullivan, Agnew, Cullen, & Colvin, 2013).

1.6.2 Sex Differences in Aggression among Prison Inmates

Much of the previous work done on aggression in prisons has focused on male young offenders, followed by studies focussing solely on adult men, and those assessing combined samples of men and women (Ireland, 2002). The idea that females can also be aggressive was recognised by Björkqvist and Niemelä (1992). Since Ireland and Archer (1996) published their findings which highlighted the importance of bullying behaviours among adult women prisoners, more and more later studies compare responses of women directly with men (Ireland, 2012).

Sexual aggression in prison is challenging to assess because of the perception of homosexual sex acts and the stigma attached to it in some cultures. Since male and female prisoners are typically separated from each other, any sexual activity within a group of same-sex prison inmates is perceived as a homosexual act. For these reasons, sex is also used as punishment and deterrence.

Depending on methodology and how questions are phrased, between 1% and 40% of prison inmates have experienced sexual victimisation

(Wolff, Shi, & Bachman, 2008). Rates of physical victimisation among prison inmates in correctional settings vary significantly by gender. For example, in a study conducted to estimate the prevalence rates of inmate-on-inmate aggression with a total of 7,221 men and 564 women in the United States, the prevalence rate of physical violence in the previous six months were equal for males and females (Wolff, Blitz, Shi, Siegel & Bachman, 2007).

In another study conducted by Wolf, Blitz and Shi (2006), using audio-enhanced, computer-assisted (audio-CASI), weighted assessments of prevalences were constructed by sex and facility size. Rates of sexual victimisation varied by gender, age, perpetrator, question wording, and facility. Frequency of inmate-on-inmate sexual victimization in the previous 6 months were highest among female inmates (212 per 1,000), more than four times higher than male rates (43 per 1,000). Consistent with the American studies, Wolff, Shi and Blitz (2008) found in an Australian sample that 34 percent of male prisoners and 24 percent of the female inmates reported having been physically assaulted at any time during their imprisonment, and seven percent of both genders had been threatened with sexual assault. What is clear in these studies is that as males perpetrate physical aggression among themselves, more sexual aggression is used by females.

Similarly, when Ireland and Archer (1996) conducted their series of studies on bullying in British prisons, they looked at aggressive acts in prison from forms of bullying that include gossiping and ostracism, which are important to the concept of indirect aggression. In this study, women reported using indirect forms of aggression more frequently than men did. This corroborates with what Björkqvist (1994) had found earlier in his work on indirect aggression.

In 2011, the annual rates of aggressive acts in male prisons in the United Kingdom was 180 incidents per 1,000 prisoners compared with 167 in female prisons. Until 2008, the rates in female prisons were consistently higher than in male prisons. The trend has now reversed with rates in male prisons now being higher (Ministry of Justice, 2012). The rate of extreme forms of aggression by male prisoners in the United Kingdom have consistently been much higher than in female prison populations (Ministry of Justice, 2012).

1.7 Intergenerational Transmission of Physical Punishment

1.7.1 *Definition of Physical Punishment*

Physical punishment (PP) is viewed as any punishment by a parent or other legal guardian in which physical force is used and aimed at causing some degree of pain or discomfort, irrespective of how light the pain might be (Commissioner for Human Rights, 2006; Maguire-Jack, Gromoske, & Berger, 2012). A broad range of acts including hitting (“smacking”, “slapping”, “spanking”) of children with the hand or with an implement - a whip, cane, stick, belt, shoe, wooden spoon, etc., falls into this definition (United Nations Committee on the Rights of the Child, 2006). Milder forms such as pulling the child’s hair or ear as punishment also qualify as PP. Harsh parenting is a broader concept than PP, and may include also verbal and psychological abuse, inferring psychological rather than physical pain.

1.7.2 *The Transmission Process*

There are several ways by which the use of aggression may be passed on to the next generation. One of the most influential elements of transmission of aggression is by parents’ own childhood experiences of discipline, since parents are likely to use similar forms of discipline on their own children (Sanapo & Nakamura, 2011; Wang, Xing, & Zhao, 2014). Parents who subject their children to harsh discipline tend to transmit beliefs about harsh treatment to their children (Seay, Laudan, Adriana, & Kimberly, 2016), whilst children who witness domestic violence between parents are more likely to shape their behaviour towards conflict resolution through the use of aggressive acts, since the witnessing of violence “normalises” the use of aggression to solve conflicts between family members (Ragin, Pilotti, Madry, Sage, Bingham, & Primm, 2002). In addition, intergenerational transmission may also be facilitated by environment in which aggression as conflict resolution mechanism is supported and reinforced (Herrenkohl, Sousa, Tajima, Herrenkohl, & Moylan, 2008). Cultural norms and expectations drive parents to treat boys and girls differently, for instance in terms of physical punishment. Many cultures raise boys to be more physically active than girls, a situation which may provoke the punishment of boys to occur more often. Indeed, studies into sex differences (between sons and daughters) in the prevalence of harsh punishment have found boys to be more exposed to the treatment than girls (e.g., Afifi, MacMillan, Boyle, Taillieu, Cheung, & Sareen, 2014; Douglas & Straus, 2006).

Physical punishment is associated with a large number of harmful health associations; a meta-analysis of 111 studies established a link between spanking and 13 out of 17 negative outcomes, most notably aggression, antisocial behaviour, and depression (Gershoff & Grogan-Kaylor, 2016). PP is also associated with increased risk for alcohol abuse, divorce, suicidal ideation, and suicide attempts during adulthood (Österman, Björkqvist, & Wahlbeck, 2014). Furthermore, PP is associated with somatic illnesses later in life, such as asthma (Hyland, Alkhalaf, & Whalley, 2013; Lau, Liu, Cheung, Yu, & Wong, 1999), cardiovascular disease, and cancer (Fuller-Thomson & Brennenstuhl, 2009; Hyland et al., 2013). For these reasons, a growing number of countries are now banning PP of children in all settings, including the home. On a global scale, 56 nations have protected children by law from PP in all settings. Unfortunately, only 10% of the world's children are protected by law (Global Initiative to End All Corporal Punishment of Children, 2019).

Intergenerational transmission is seen as a method in which earlier generations, whether purposely or not, help shape the behaviours and attitudes of subsequent generations (van Ijzendoorn, 1992). Therefore, by assessing mothers' and fathers' present behaviours and their accounts of their past experiences of how they were disciplined as children, harsh punishment across generations may be better understood. This view is corroborated by studies which consistently show that individuals who experienced PP as children are more likely than others to use similar disciplinary techniques with their own children (Bailey, Hill, Oesterle, & Hawkins, 2009; Berlin, Appleyard, & Dodge, 2011), even accounting for explanatory models such as hostile personality or the temperament of the child (Muller, Hunter, & Stollak 1995; Simons, Whitbeck, Conger, & Chyi-In, 1991). Children learn how to behave aggressively within the family through modelling and identification processes (Bandura, 1973, 2001). They will then display these learned behaviours in their adulthood.

It has been suggested that girls may be more vulnerable than boys to the impact of harsh parenting, and that they would experience greater psychological distress in the context of parent-child conflict (Chung, Flook, & Fuligni, 2009); girls who experienced family violence also have been found to be at greater risk of manifesting internalizing behaviour problems (Sternberg, Lamb, Guterman, & Abbott, 2006). However, others have found that boys are more receptive to harsh punishment than girls ((Deater-Deckard, Lansford, Dodge, Pettit, & Bates, 2003).

There are sex differences in the ways of transmission between fathers and mothers; some have found an association between exposure to PP during childhood and the current use of such measures for mothers, but not for fathers (Cappell & Heiner, 1990). Both mothers' and fathers' use of PP is predicted by their own disciplinary childhood experiences, but the predictive power was stronger for mothers than for fathers (Muller et al., 1995). Mothers who experienced PP by their own mothers were more likely to approve the use of PP with their own children, while fathers' present use of PP with their children was related to their exposure to paternal PP in the original families (Lunkenheimer, Kittler, Olson, & Kleinberg, 2006). These findings are consistent with a sex-specific social cognitive learning model, which views the role modelling effect as facilitated by gender identification. Individuals tend to model their behaviours according to the role played by their same-sex parent (Kwong, Bartholomew, Henderson, & Trinke, 2003).

Despite the negative impact of PP on children, some nations still tolerate its use. In Ghana, PP is only partially banned in schools, because head teachers and their deputies are allowed to administer PP to children (Abenyega, 2006). The use of PP deemed to be "justifiable" and "reasonable" by adults are allowed by law to be used on children (Global Initiative to End All Corporal Punishment of Children, 2019). Unfortunately, this official permission to allow PP on children has contributed to widespread acceptance of PP in Ghana.

To reject PP is in Ghana regarded as allowing a child to 'spoil'. This is a culturally accepted belief in Ghana, which is also transmitted to children; e.g., when children's attitudes towards PP were examined in Ghana, 66% thought the behaviour to be an important part of their socialization process. They felt that parents have a responsibility to punish them, despite the fact that they felt emotional pain if they felt the punishment was unjust (Imoh, 2013). As a typical way of transmission, they are also given the authority to punish their younger siblings and cousins making sure PP is carried on into future generations.

Harsh parenting is not only part of a parent-child relationship in the Ghanaian social and cultural context. It is also a belief system legitimised by law and entrenched in the Ghanaian culture. By putting discipline at the centre of a child's upbringing, important cultural and social expectations are met. Unfortunately, the justification to continue the practice promotes a transmission of a culture of violence passed on from one generation to the next. To eliminate the practice is to reject a cultural

norm. Providing an alternative meaning and understanding of a 'good' child will help to develop alternative ways of treating children appropriately

1.8 Cultural Context: Ghana

The research was conducted in Ghana, situated on the West African coastline with a current population estimated to be 30.42 million, of which 51% is female (World Population Review, 2019). Ghana is a multicultural nation with a variety of ethnic, linguistic, and religious groups. The literacy rate among 15–24-year-olds is 88% for males and 83% for females, and the prevalence of female genital mutilation is 0.5% (UNICEF, 2012).

Over the past decade, Ghana adopted a number of national development policies, which specifically focused on poverty reduction and female empowerment. These include Ghana Poverty Reduction Strategy I and II, 2003-2005 (Ghana Ministry of Gender, Children and Social Protection, 2019), and the adaptation of the Millennium Developmental Goals (MDGs), a UN initiative established to, among other things, eradicate extreme poverty and hunger, and promote gender equality and empowerment of women (United Nations Millennium Development Goals Report, 2008). The target of halving extreme poverty was met in 2006, ahead of the 2015 deadline.

Due to these policies and a quarter of a century of relative stability and good governance, Ghana has one of the strongest economies in Africa. The World Bank (2018) projects Ghana's economic growth to increase to 7.6 percent in 2019, driven by both the oil and non-oil sectors.

Women have been the main beneficiaries of this economic success, a far cry from previous times when women in Ghana faced restricted access to resources and power. In the 1980s, only 17% of women were registered in the country's universities (Owusu-Ansah, 1994). Currently, the percentage of women enrolled in schools and universities has been growing, and it is now equal to that of men. The current literacy rate for females is practically equal to the rate for males. Employment figures for women are generally as high as those of men (UNICEF, 2012).

How much these developments influenced the sex differences in the use of aggression was not previously known. All previous studies investigating the sex differences in aggression in all contexts have so far focused almost entirely on men as perpetrators and women as victims, and have found very high rates of aggression against females (e.g., Amoah, 2007; Aniwa, 1999; Bowman, 2003; Cantalupo, Martin, Pak, & Shin, 2006;

Ghana Demographic and Health Survey, 2008). With the exception of Próspero, Dwumah, and Ofori-Dua (2009) and Ndoromo et al. (2017), no study had investigated women as perpetrators of IPA in Africa.

Despite the reported staggering rate of aggression against females, 2,474 husbands were physically assaulted by their female partners in 2011, an increase of 62 percent from 1,528 cases the previous year (GhanaWeb, 2012). Overall, 60 percent of women in Ghana feel that their husband/partner has a right to hit them for at least one of a variety of reasons, including going out without telling him, arguing with him, and refusing to have sex with him. This view could surely influence how females themselves tolerate or use IPA. Ghana therefore provides a suitable context to understand the complexity of sex differences in aggression

The current thesis consists of four studies. The main purpose was to examine the sex differences in victimisation and perpetration of aggressive behaviour in four different contexts. This purpose was addressed in Studies I-IV. Quantitative research designs were applied in all studies. A summary of designs and topics is provided in Table 1.

2. Method

Table 1. presents a summary of methods used in the articles, and the objectives of each study.

Table 1.
Research Approaches and Main Measured Concepts in the Studies Conducted

Study I

Method: Questionnaires ($n = 1,204$)

Object of the study: Revised gender symmetry theory, intimate partner aggression

Study II

Method: Questionnaires ($n = 1,273$)

Objects of the study: Psychological distress, workplace bullying, sex differences

Study III

Method: Questionnaires ($n = 1,717$)

Objects of the study: Sex differences in aggressive behaviour

Study IV

Method: Questionnaires ($n = 1,202$)

Objects of the study: Harsh punishment of children, intergenerational transmission, sex differences

2.1 Participants

Four datasets formed the basis of Studies I-IV. Procedures for data collection are provided below followed by a more detailed description for each study.

All participants were drawn from three different cities in Ghana: Tamale, Nsawam, and Accra, to represent the various ethnic and religious groups forming the fabric of Ghanaian society. Tamale is the fourth largest city of Ghana, with most residents being Muslims. Nsawam is situated in the southern part of Ghana and populated mostly by the largest ethnic group in Ghana, the Akans. Data were also collected from the capital,

Accra, which has a mixed population comprising all the ethnic groups in Ghana. These cities also host some of the largest prisons in Ghana, so data for Study III were also collected from these cities. Thus, the samples should be regarded as relatively representative for Ghanaian society of today. All participants were either males or females over 18 years old. Other sociodemographic variables collected included education and employment.

In Study I, Archer's (2018) revised gender symmetry theory was tested in an African country. All participants were over 21 years old. The sample was drawn in the following way. Individuals from three different cities in Ghana representing the various ethnic and religious groups forming the fabric of Ghanaian society were selected. The sampling technique was based on seeking out participants in person, in markets, streets, workplaces, and women-only meetings; not on sending out questionnaires by mail. Two main principles were applied: (1) to identify places where females and males could be found separately, so they could respond independently and without being influenced by their partner, and (2) to reach out to as varied societal strata as possible, in order to ensure representativeness. The inclusion criterion was to include as wide a variety of participants as possible to make the sample representative for the population, all heterosexual couples in the cities of Tamale, Nsawam, and Accra; the exclusion criterion was to exclude individuals who would create an imbalance in representation.

To allow respondents to complete the questionnaires independently, without any influence or interference from their partners, the research assistants went to places where couples would typically not be seen together, for example, to areas in the markets where cultural expectations largely prohibit men from buying and selling, and to meetings of women-only organizations.

With regards to males, due to potential cultural sensitivities about victimization from physical aggression, data were obtained by meeting them individually, either in the street, or visiting them at their workplace, shop, office, at home during their partner's absence, and in some cases, while meeting them in arranged places of their choosing. After obtaining their consent, all participants who could not read or write had their questionnaires translated into their native language and filled out by the research assistants, whereas the majority who were literate filled in the questionnaires by themselves.

A total of 1,204 participants (602 males and 602 females) were selected from three different cities in Ghana: Tamale, Nsawam, and Accra.

The participants were aged over 21 years and involved in intimate heterosexual partner relationships. They all voluntarily agreed to participate in the study. The following social demographic data were also collected: sex, age, education, employment status, number of years in the current relationship, number of persons in the household, and for women, whether pregnant.

The age difference between males (mean age 44.8 yrs., SD 13.4) and females (mean age 43.4 yrs., SD 13.6) was not significant. The participants' level of education was first coded as either having (1) no education, or finished (2) middle school, (3) secondary school, or (4) university/polytechnic. In order to obtain cell sizes of reasonable similarity, this categorization was changed to a dichotomic one, with either higher education (university/polytechnic) or lower (below university/polytechnic). Regarding educational level, males and females did not differ from each other. More females (79.2 %) than males (73.9%) were employed [$\chi^2_{(1)} = 4.74, p = .029$].

In Study II, the psychological distress associated with workplace bullying was assessed. The sample was drawn from individuals from five different ethnic groups in three different cities in Ghana, representing the main ethnic and religious groups forming the fabric of Ghanaian society, and drawn from the public sector (teachers, nurses, and office staff). The sampling technique was based on approaching participants in person. No questionnaire was sent by mail. Two main principles were applied: (1) to identify individuals who were employed within the public sector; (2) to reach out to as varied societal strata as possible, in order to ensure representativeness. The inclusion criterion was to reach a variety of participants as wide as possible to make the sample representative for the employees in public institutions in the cities of Tamale, Nsawam, and Accra; the exclusion criterion was to exclude individuals who would create an imbalance in representation.

To allow respondents to complete the questionnaires independently, without any influence or fear from their bullies, the research assistants asked participants individually and privately if they would like to answer some questions about workplace bullying.

A total of 1,273 (654 females, 618 males) employees from three different cities in Ghana: Tamale, Nsawam, and Accra completed the questionnaires. . Participants were selected from the five main ethnic

groups in Ghana: Akan - 260 females, 264 males; Ewe – 114 females, 80 males; Mole-Dagbane – 79 females, 85 males; Guan – 91 females, 94 males; Ga-Adangbe 110 females, 96 males. In addition to this, 31 females and 28 males with disability also participated. The sample should be relatively representative for Ghanaian society of today.

Since all prison facilities in Ghana are security areas, requiring security clearance for any person to enter, written permission was sought and obtained from the representative of the director of the Ghana Prison Service before the interviews for Study III were conducted. Interviews were held in 10 facilities: Nsawam Central Men's Prison, Nsawam Female Prison, Senior Correctional Centre (Accra) for boys, Tamale Men's Prison, Tamale Female Prison, Kumasi Male Prison, Kumasi Female Prison, Sunyani Male Prison, Sunyani Female Prison and Sekondi Male Prison. These prisons were selected for two reasons: first, because they fall under the control of the national prison authorities, and second, they are among the largest, where most inmates have long-term sentences, including life sentences. They are also the most overcrowded ones. Our female research assistant visited the female prisons, while the male research assistants went to the male prisons for the interviews. The data collection took place within the prison premises. Each participant filled in the questionnaire individually, in the absence of prison officials and other prisoners, and no unauthorized prison official or other inmate saw the questionnaire. This procedure was followed to prevent a potential retaliation in response to what the participants said.

In Study IV, the relationship between mothers' and fathers' use of harsh punishment on their children and their retrospective account of their own experiences of harsh parenting in childhood was assessed. A total of 1,202 respondents (couples consisting of 601 females and 601 males) who were over 21 years of age and had children, volunteered to participate in the study. They were selected in order to match the social and educational strata in Ghana.

The age difference between males (mean age 44.8 yrs., SD 13.4) and females (mean age 43.4 yrs., SD 13.6) was not significant. The participants' level of education was coded as either having (1) no education, or finished (2) middle school, (3) secondary school, or (4) university/polytechnic. Regarding educational level, males and females did not differ from each other.

2.2 Measures

2.2.1 *Test of Archer's (2018) Revised Gender Symmetry Theory in a Ghanaian Sample*

In order to assess the sex differences in intimate partner aggression (IPA), the Direct Indirect Aggression Scale for Adults (DIAS-Adult: Österman & Björkqvist, 2009) was used. It measures both victimization and perpetration of seven forms of aggression in intimate partner relationships: physical, verbal, indirect, nonverbal, sexual, cyber, and economic aggression. The response alternatives are from 0–4 (never, almost never, seldom, sometimes, and often). The original form of the instrument is presented in Österman and Björkqvist (2009).

In the present study, the subscales of verbal aggression and sexual aggression did not receive satisfactory internal consistency, and they had to be excluded altogether from further analysis. From the subscale of physical aggression, the item of “hitting” had to be excluded, also for the sake of reliability. Hitting was obviously so common, that it did not discriminate between high and low aggressive participants. However, due to its central position in IPA, it was analysed separately. From the subscale of cyber aggression, two items regarding sending e-mails with an aggressive content also had to be excluded, since e-mail is not common yet in Ghanaian society. Thus, the subscale of cyber aggression came to measure aggressive mobile phone text messages either directly to the partner or about the partner to others.

2.2.2 *Psychological Distress Associated with Workplace Bullying*

The experience of workplace bullying was measured with the Work Harassment Scale (WHS-24) (Björkqvist & Österman, 1994). The instrument was introduced in Björkqvist, Österman, and Hjelt-Bäck (1994) and in Björkqvist, Österman, and Lagerspetz (1994). Participants assessed how often they felt they had been exposed to 24 types of degrading and oppressing activities by their colleagues during the last half year, on a 5-point scale (0 = never, 1 = seldom, 2 = occasionally, 3 = often, and 4 = very often). In the instructions, it was emphasised that these activities must have been clearly experienced as a means of harassment, not as normal communication, or as exceptional occasions.

When the reliability of WHS-24 in the current sample was assessed with Cronbach's alpha, it did not reach a sufficient internal consistency ($\alpha > .70$).

It was obvious that a detailed item analysis had to be conducted and the number of items had to be reduced. An exploratory factor analysis with a three-factor solution (principal component, varimax rotation with Kaiser normalisation) was conducted, explaining 29 % of the variance. The loadings of the individual items of the three factors were $> .40$.

The items with high loadings in factor 1 were selected for a revised version of WHS, a seven-item version, here referred to as WHS-7, which yielded an internal consistency score of $\alpha = .79$. This version was used in the present study.

To examine the association between workplace bullying and mental health, the 12-item version of the General Health Questionnaire (GHQ-12, Goldberg, 1988) was added to the test battery, as an indicator of psychological distress. The GHQ-12 has been used extensively in various settings across different cultures (Kim, Cho, Park, Hong, Sohn, Bae et al. (2013). The GHQ is usually scored as a Likert scale (Goldberg & Williams, 1994; Politi, Piccinelli, & Wilkinson, 1994). The psychometric properties of GHQ-12 have been examined (Glozah & Pevalin, 2015), and it has been used in studies in Ghana (Abledu & Abledu, 2012; Kekesi & Badu, 2014), and in South Africa (Bernstein & Trimm, 2016). In the current study, the α -score of the measure was $.76$.

2.2.3 Effect of Harsh Prison Conditions on Prisoners

The participants completed a paper-and-pencil questionnaire (Prison Aggression Questionnaire, PAQ; Darko, Björkqvist, & Österman, 2015) with 35 individual items. The questionnaire consisted of two parts: one measured victimization from other prisoners' aggression, and the other measured perpetration of aggression against other prisoners. Both parts included five subscales: (1) Physical Aggression, (2) Verbal Aggression, (3) Indirect Aggression, (4) Property Aggression, and (5) Sexual Aggression. Please note that the scale for the measurement of victimization from Physical Aggression did not meet an acceptable reliability, and, accordingly, it was excluded from further analysis.

2.2.4 Sex Differences in Intergenerational Transmission of Harsh Punishment

Harsh punishment was measured with an expanded version of the Brief Physical Punishment Scale (Österman & Björkqvist, 2007) (Study IV). The added items were culture specific and selected in order to match common practices of disciplinary methods in Ghana. There were two versions of the

scale: in the first version, respondents were supposed to assess, on a five-point scale, ranging from 0 (never) to 4 (very often), how often they were exposed to certain disciplinary measures when they were children. This version was thus retrospective. In the second version, they were to assess (on the same five-point scale) how often they exposed their own children to the same disciplinary practices. The respondents were asked: “When you were a child, did an adult subject you to any of the following things?” The items, 12 in number, were as follows: (1) pull your hair, (2) pull your ear, (3) hit you with the hand, (4) hit you with an object, (5) throw an object at you that could hurt you, (6) scream at you or curse you, (7) refuse to talk with you, (8) refuse to give you food or water, (9) threaten not to love you, (10), call you stupid or lazy, (11) threaten to beat you, and (12) walk out on you or leave the house. All of the items did not measure PP, some of them measured verbal or psychological violence. As a whole, they were intended to measure typical forms of harsh parenting in Ghana.

In the second version, the respondents were asked whether and how often they had used the same disciplinary measures against their own children. The reliability of the scales was assessed with Cronbach’s α . It was .82 for the retrospective version (i.e. how often the respondents themselves had been exposed to harsh parenting as children), and .72 for the present-day version (how often they exposed their own children to the same disciplinary measures). The two scales will be referred to as “Punishment of Generation I” and “Punishment of Generation II”. Please note that the same individuals served as respondents, in both cases.

2.3 Ethical Considerations

The studies adhere to the principles concerning human research ethics of the Declaration of Helsinki (World Medical Association, 2013), as well as guidelines for the responsible conduct of research of the Finnish Advisory Board on Research Integrity (2012). The collected data are stored according to the regulations of the European Commission Data Protection (2016). Participation was voluntary without any form of economic or other incentive, all participants were adults, and the research was conducted with informed consent, strict anonymity and confidentiality. All data material and the completed questionnaires are stored in accordance with international research practice.

3. Overview of the original publications

3.1 Study I: Low Intensity Intimate Partner Aggression in Ghana: Support for the Revised Gender Symmetry Theory in an African Country

There are on-going controversies about whether there is a sex difference in aggressive behaviour in heterosexual intimate relationships. On one hand, the traditional gender asymmetry theory suggests women are the primary targets of aggression perpetration and that most of this abuse are perpetrated by men (e.g., Dobash & Dobash, 2004). On the other hand, Straus and his colleagues (Gelles & Straus, 1988; Straus, 1999, 2004, 2006, 2008, 2009, 2011; Straus & Gelles, 1992; Straus, Gelles, & Steinmetz, 1980), and other studies based on the Conflict Tactics Scale (Straus, 1979) identified 'gender symmetry', suggesting that the use of aggression in intimate relationships is symmetrical and reciprocal, with males and females being more or less equally aggressive. This finding has been corroborated by others (Australian Bureau of Statistics, 2012; Bates, Graham-Kevan, & Archer, 2014; Black et al., 2011; Kar & O'Leary, 2010).

In order to bridge the gap between these two theories, Archer (2018) suggested a revised gender symmetry theory, according to which gender symmetry holds only for low intensity aggression, while as far as high intensity aggression resulting in physical injury or death is concerned, more males than females dominate perpetration. He further proposed that gender symmetry should be expected to be found mainly in community and student samples in modern Western nations, and linked this to a relatively high degree of gender equality in the society in question. He supported this view in his (2008) cross-national sample of students from 32 nations. As a consequence, in developing countries with a patriarchal society structure, such as African countries, gender symmetry should not be expected to occur in community samples.

In the current study, sex differences in the perpetration and victimization of low intensity intimate partner aggression (IPA) were investigated in Ghana. The purpose was to test Archer's (2018) revised gender symmetry theory in another African sample and investigate possible effects of educational level and employment on intimate partner relationship (IPA) especially in the light of rapidly developing Ghanaian society. The sample consisted of 1,204 adults (mean age 44.1 yrs., SD 13.5), 602 males and 602 females. IPA was measured with the Direct Indirect

Aggression Scale (DIAS-Adult, Österman & Björkqvist, 2009) questionnaire, which measures perpetration and victimization of physical, indirect, nonverbal, cyber, and economic aggression in a relationship.

There were two main findings of the study: first, contrary to expectations and based on previous studies of IPA from Ghana, and the fact that Ghana is a highly patriarchal society, females perpetrated more physical, indirect, nonverbal, and cyber aggression than their male partner. Secondly, and also contrary to expectations, a high educational level was also associated with high levels of aggressive behaviour, especially in the case of women who perpetrated more physical, indirect, nonverbal, and cyber aggression than their male partners than the other way around.

Male victimisation from low intensity IPA was previously observed only in Western countries. This is the second study to report men being more victimized by low intensity IPA than women in an African nation. Ndoromo, Österman, and Björkqvist (2017) found in a sample comprising 420 intimate partners in South Sudan, an African nation, that males reported being victimized from both physical and verbal intimate partner aggression to a greater extent than females. These findings suggest a need for yet another “revision” since low intensity IPA is not only Western, more egalitarian societies phenomenon but may be universal. The link between growing socioeconomic status needs to be stressed here as it seems gender symmetry in aggression in intimate relationship depends on gender equality. More studies are needed from developing countries on other continents to see whether similar findings occur there.

Data collection for this current study, Study I, was conducted simultaneously with the data collection by Ndoromo, Österman & Björkqvist (2017) in South Sudan. Both the present author and Ndoromo belong to the same research group, led by Kaj Björkqvist and Karin Österman. The findings made by Ndoromo and the present author should be regarded as simultaneous.

3.2 Study II: Within the Walls of a Human Warehouse: Sex Differences in Aggression among Prisoners in Ghana

A prison is a powerful social institution that has the potential of transforming people in a positive way. However, many prison settings have become places of unlawful, extra judicial punishment for inmates who are already being held accountable for their actions. Many inmates

face harsh prison conditions despite the known negative impact of such treatment.

Ghana has a total of forty-five prison establishments, including twelve major male prisons and seven major female ones. The total prison population (including pre-trial detainees and remand prisoners) is approximately 14,467, and the population rate (per 100,000 of the national population of 27.57 million) is 50. The percentage of pre-trial detainees and remand prisoners of the total prison population is 13.8% as of May 2018; the female prison population is approximately 1.3% of the prison population; 0.9% are juveniles/minors/or young prisoners; and 6.6% of convicted prisoners are foreigners. The official capacity of the Ghanaian prison system is 9,875; the occupancy level, based on official capacity, is 146.5% (World Prison Brief, 2018; Ghana Prisons Service, 2015).

The primary challenges the prison authorities face is the persistent lack of funds. This has resulted in insufficient budget allocation for reformation programs, poor accommodation structures unsuitable for long detention of people, and extremely outdated prison structures built 400 years ago and originally constructed for 200 slaves, which currently holds 740 male and female prisoners (Ghana Prisons Service, 2015). Consequently, the prison authorities are unable to provide for the basic needs of prisoners and ensure that former prisoners do not reoffend. Day-to-day discipline is overseen by the prisoners themselves.

Recently, there have been reports of the prison service moving from warehousing of inmates to correction and treatment of offenders. This change in philosophy would allow the execution of sentences in a humane manner to reduce recidivism, offering opportunities to prisoners to develop their skills through vocational training, moral and formal education, encouraging public/private participation in the provision of skills training, improvement in the welfare of prisoners (i.e. health care, clothing, bedding, feeding, recreation, and library facilities) and the protection of rights of prisoners (Ghana Prisons Service, 2015). Regrettably, because of to lack of funds, only few fortunate inmates benefit from this change. Neither parole nor halfway houses exist. Bail has such stiff conditions that defendants seldom are able to benefit from it. The system is characterized by slow police investigations, protracted court trials, increasing numbers of remand prisoners and a high rate of prison overcrowding.

Ghana's prison system is facing serious overcrowding and conditions which do not meet international standards. For example, 3,000 inmates are

awaiting trial and have not been convicted of a crime. Prisoners are locked up for 12 hours a day, 365 days a year, in cells meant to accommodate a half, a third or a quarter of the numbers squeezed into dark, poorly ventilated and unhygienic spaces (Amnesty International, 2011). Punitive prisons conditions can generate the settings for inmates in which aggression is used to resolve conflicts among prisoners.

The aim of this study was to investigate aggressive behaviour in prisons in Ghana, with a special focus on sex differences in both victimization and perpetration of aggression. A total of 1,717 inmates of which 299 females (17.4 %), and 1,418 males (82.6%) took part in the current study. Participants were selected from 10 prison facilities in Ghana, among a total prison population of 14,467. These figures include inmates serving life sentences, terminal sentences, pre-trial detainees, and remand prisoners. The educational level of participants was coded as either having (1) no education, (2) elementary school (3) secondary school, or (polytechnic/university). Most female prisoners, 13.8% had secondary education and only 0.2% had polytechnic/university education. With respect to males, majority of them (66%) had secondary school level education while 1.8% had polytechnic/university education. The age difference between males (mean age 26.5 yrs., SD2.4) and females inmates (mean age 26.6 yrs., SD2.5) was not significant.

The participants completed a paper-and-pencil questionnaire (Prison Aggression Questionnaire, PAQ; Darko, Björkqvist, & Österman, 2015) consisting of 35 items. The questionnaire consisted of two parts: one for the measurement of victimization from other prisoners' aggression, and the other for the measurement of perpetration of aggression against other prisoners. Both parts consisted of five subscales: (1) Physical Aggression, (2) Verbal Aggression, (3) Indirect Aggression, (4) Property Aggression, and (5) Sexual Aggression. Please note that the scale for the measurement of victimization from Physical Aggression did not meet an acceptable reliability, and it was excluded from further analysis.

The findings suggest that overall, the perpetration of indirect and physical aggression was more common than the rest of the aggression forms, and their use varied significantly by biological sex. Males perpetrated significantly more physical aggression on their fellow prisoners than females did, while females used indirect aggression more than males did, supporting the findings of previous studies (e.g., Björkqvist, 2018). Those who did not perpetrate aggression themselves

were more likely to be stigmatized, bullied and seen as cowards, corroborating a previous finding by Ireland and Qualter (2008).

These results are not surprising, since prison authorities in Ghana delegate their job of supervising prisoners to specific other prisoners who have influence and power over the rest of the inmates. Therefore, the use of physical aggression can be seen even as a legitimate method to address those who violate rules and show disrespect for prisoner “bosses” and prison authorities. In such circumstances, inmates accept the logic of aggression as the norm. Perpetration of aggression in prisons, though, is not always driven by non-material gains such as power, respect, and control. It can also be motivated by material gains such as cigarettes, food and drugs.

Another noteworthy finding was females reporting higher scores on victimization from female-on-female sexual aggression. This can be explained by traditional expectations about female sexuality. Females who are ‘bold’ enough to have multiple sexual partners, are seen as ‘loose’ women by the larger society. When prison supervision is not adequate, and inappropriate touching goes unpunished, a prison provides a rare environment for females to loosen their sexual restrictions, and allows them to demonstrate sexual activity and sexual liberalization. Attitudes towards sexual aggression may have a direct impact on whether a victim reports this type of aggression. Myths such as “real” men should be able to fend off attack; only gay men are victims and/or perpetrators, and others including homosexuality being “evil” and “not Ghanaian”, may inhibit male inmates from reporting for fear of being viewed a gay or weak. Victims of aggression may not report for fear of being further sexually victimized. Unfortunately, lack of reporting could intensify victimization.

3.3 Study III: Sex Differences in Workplace Bullying and Psychological Distress in Public Institutions in Ghana

In study III, the experience of workplace bullying was assessed with the Work Harassment Scale (WHS) (Björkqvist & Österman, 1994). The instrument was introduced in Björkqvist, Österman, and Hjelt-Bäck (1994) and in Björkqvist, Österman, and Lagerspetz (1994). Participants assessed how often they felt they had been exposed to 24 types of degrading and oppressing activities by their colleagues during the last half year, on a 5-point scale (0 = never, 1 = seldom, 2 = occasionally, 3 = often, and 4 = very often). In the instructions, it was emphasised that these activities must have

been clearly experienced as a means of harassment, not as normal communication, or as exceptional occasions. To determine the relationship between workplace bullying and mental health, the 12-item version of the General Health Questionnaire (GHQ-12, Goldberg, 1988) was added to the test battery, as an indicator of psychological distress.

A total of 1,273 employees in three public institutions in Ghana took part in the study. Victimisation from bullying was measured with an abbreviated version of the Work Harassment Scale (WHS-7, Björkqvist & Österman, 1994), and the association between workplace bullying and mental health was assessed with an indicator of psychological distress (General Health Questionnaire, GHQ-12, Goldberg & Williams, 1988). The participants were over 18 years of age, and all were employed in the public sector. They all voluntarily agreed to participate in the study. Data on the level of occupation (junior vs. senior staff member) were collected. The age difference between males (mean age 40.4 yrs., $SD = 11.6$) and females (mean age 40.2 yrs., $SD = 11.3$) was not significant. Females formed 52.4 % of the participants compared to males forming 47.6%, and there were more male (52.3 %) than female (47.7%) senior staff members. Until this study, there was no official record on workplace bullying in Ghana.

The results showed no sex difference in the experience of workplace bullying in the examined sample. This is an intriguing result given that Ghana is a highly patriarchal society. In a recent study conducted by Darko et al. (2019), more males than females were found to be victimised from low intensity aggression in intimate partner relationships. Therefore, the current study, which found that male and female employees were equally often victimised at both junior and senior staff levels, may reflect a trend in Ghana where victimisation from workplace bullying was based on other factors than sex as such.

Workplace bullying is undeniably common (Branch, Ramsay, & Baker, 2013). However, prevalence rates vary considerably across studies (Carter, Thompson, Crampton, Morrow, Burford, Gray, & Illing, 2013), and the culture in which the study is conducted. Rates are also determined by how questions are put, and which definition of bullying is provided for the study in question (Carter et al., 2013). Most studies conducted within Europe show that between 10% and 15% of the workforce are exposed to workplace bullying (Zapf & Einarsen, 2011); North American studies report similar prevalence rates (Keashly & Jagatic, 2011). In Finland, there is a reported 20.3% of public sector employees working in 12 Finnish ministries experiencing work-related bullying multiple times per month,

whereas 11.3% reported experiencing personal-level bullying (Venetoklis & Kettunen, 2015). A review of 88 prevalence studies across 20 European countries found huge variation, reporting prevalence between 0.3% to 86.5%. In a South African study of bullying in the mining industry, 27% of employees were bullied over the previous 6 months, and 39.6% reported a negative act over the previous week (South African Board for People Practices, 2018). These discrepancies may be due to the definition used and the wording of research items (Zapf, Escartín, Einarsen, Hoel, & Vartia, 2010).

Studies of sex differences in workplace bullying have also been inconsistent, e.g., in a study conducted in the EU-27 countries, women reported being bullied or slightly bullied more often (4.4%) than men (3.9%) e.g., in the Netherlands (females 9.4%, males 6.3%), Finland (females 8.2%, males 4.2%), and in Denmark (females 3.9%, 2.5% males). In some countries, no sex difference was found, e.g., Germany (both females and males 4.6%). However, in a few countries, men reported being bullied at least to some extent more often than women, e.g., France (females 8.4%, males 10.5%) and Greece (females 2.8%, males 3.7%) (Vartia-Väänänen, 2013). These differences could indicate that gender-related experiences of workplace bullying may be cultural and country-specific.

3.4 Study IV: Sex Differences in Intergenerational Transmission of Harsh Punishment of Children in Ghana

Harsh parenting is a broader concept than physical punishment since it may include also verbal and psychological abuse, inferring psychological rather than physical pain. Physical punishment (PP) is a concept used to describe any punitive act meted out by a parent by or other legal guardian in which physical force is used and intended to cause some degree of pain or discomfort, however light the pain might be (Commissioner for Human Rights, 2006; Maguire-Jack, Gromoske, & Berger, 2012). This typically involves a broad range of acts including hitting (“smacking”, “slapping”, “spanking”) children, with the hand or with an implement - a whip, cane, stick, belt, shoe, wooden spoon, etc. (United Nations Committee on the Rights of the Child, 2006). Milder forms such as pulling the child’s hair or ear as punishment also qualify as PP. The transmission of harsh practices is typically studied across generations by assessing the relationship between mothers’ and fathers’ present behaviours and their retrospective account of their own experiences of harsh parenting in childhood. Intergenerational transmission is defined as ways in which earlier

generations, deliberately or not, influence attitudes and behaviour of subsequent generations (van Ijzendoorn, 1992).

Study IV assessed the relationship between mothers and fathers (Generation 1) use of PP on their children (Generation 2) and their retrospective account of their own PP experiences by their parents in childhood. A total of 1,182 couples (591 females and 591 males) who were aged over 21 years and had children, volunteered to participate in the study. They gave assessments about their individual experiences of harsh punishment as children, and their subsequent use of similar disciplinary methods on their own children as parents.

The findings showed association between mothers and fathers childhood experiences of physical punishment and their current use of the disciplinary technique on their own children. Exposure and transmission varied by sex in that males were more exposed to physical punishment when they were young than females, and also physically punished their own children more than females. The use of physical punishment is a shared cultural value that is rooted as part of the Ghanaian national values. However, continuity in the use of physical punishment across generations may be broken if younger generations of parents learn to use alternative ways of disciplining a child.

Physical punishment is associated with a large number of adverse concomitants, and for this reason, an increasingly number of countries are now banning it against children in all settings, including the home. Cultural expectations could drive parents to treat boys and girls differently in terms of PP. Many cultures raise boys to be more physically active than girls, and may also provoke punishment more easily. Indeed, studies into the sex differences (between sons and daughters) in the prevalence of harsh punishment have found boys to be more exposed to the treatment than girls (e.g., Afifi, MacMillan, Boyle, Taillieu, Cheung, Sareen, 2014; Douglas & Straus, 2006).

In the late 1970s, the Ghana Education Service (GES) partially banned the use of PP in all schools, but permitted head teachers or their deputies to administer it to pupils (Agbenyega, 2006). The 1998 Children's Act allows adults to use any punishment that is "justifiable" and "reasonable", including violent punishment (National Laws on Labour, Social Security and Related Human Rights, 1998). Many in Ghana believe that rejection of PP as a discipline is a Western notion that risks 'spoiling' a child (Antonowicz, 2010). In Ghana, a good child is defined by how much they 'respect' adults (Imo, 2010).

4. Conclusive Remarks

This thesis has examined sex differences in aggressive behaviour among adults in different contexts in Ghana. The studies were conducted not to provide historical justification of “what happened”, but to offer some understanding as to how sex differences in aggression in a patriarchal African nation can be better understood.

Much has been written about the way females are treated in patriarchal nations. This includes how the lack of access to resources fueled by culture and traditional beliefs predispose men and boys to dominate. Perpetration of aggressive acts against females is directly attributed to females’ dependent on males for almost all aspects of their lives. Nonetheless, this state of affairs is likely to change when conditions are right, e.g., when gender equality increase, and access to a fair and just distribution of resources will make females less dependent on males. This would create an individual and independent female. As individualism increase, female victimization should decrease, while male victimization increases. This tendency has previously been found only in developed nations.

Things are changing in Ghana. The country has had a stable democracy for the past 30 or so years, resulting in socioeconomic transformation and creating greater opportunities in terms of education and jobs for females. Ghana ranked 24th among 136 nations on economic participation and opportunity in terms of gender empowerment (World Economic Forum, (2013). Ghana is ranked 59 among 144 nations in the Global Gender Gap Index (GGI) with a score of 0.706 (cf. the US 45th with a score of 0.722). Ghana has a large gender gap in terms of education, but a small economic gender gap, primarily due to the high levels of participation by women in low-skilled work (Global Gender Gap Report, 2013). The impact of all these changes on sex differences in aggression is that women have received more education and jobs, and have gained control of their own incomes. The socioeconomic transformation has made men more redundant. Women took over the provision of home-keeping and with it, the authority and power men had over them. It appears that they also are less willing to tolerate aggression from men.

The current research has contributed towards an understanding of how the views related to men and women influence behaviours of individuals. These roles are not exclusively determined by biology but fully entrenched within the understanding of the concepts of being a “man” and a

“woman”. Roles rationalise forms of behaviour which may create conflict between the sexes, e.g., not recognising the opinions of women in intimate relationships. This has nothing to do with being a biological man, but with sex roles, contributing to conflict. A way, probably the best way, to improve women’s situation in patriarchal nations is to create gender equality, and by changing the generalised gender views that typically define “man” and “ woman”, by limiting women’s opportunities. Every nation has its own traditions, behaviours and attitudes that are generally considered acceptable and appropriate. These are constructed by people, and can therefore be reformed by people. The current thesis highlights the relationship between women empowerment and aggression in a patriarchal African nation. An important future direction is to determine if Ghana’s experience is unique or similar to other patriarchal nations going through comparable socioeconomic changes. The current thesis attests to the growing emancipation of women in Ghana. Placing these results in a historical context, modern educated women do not want to relive the experiences of their mothers and grandmothers.

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Sex Differences in Aggression within Adult Samples in Ghana

The current thesis examines sex differences in victimisation and perpetration of aggressive behaviour among different samples of adults in Ghana, including normal couples in domestic settings, prisons, and workplaces. It also examines sex differences in the use of harsh punishment against children. The participants represented the various ethnic and religious groups forming the fabric of Ghanaian society. Contrary to expectations within a patriarchal nation like Ghana, women were more often physically aggressive towards their husbands than the opposite. The overall findings suggest that the role of gender in aggressive acts may be better understood by examining traditional sex roles, the contexts in which aggressive acts occur, and socioeconomic changes in society which are increasing women's empowerment.