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Running head: GENDER-BASED VIOLENCE-SUPPORTIVE COGNITIONS

Gender-based violence-supportive cognitions in adolescent girls and boys: The function of violence exposure and victimisation

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Abstract

Violence against women and girls is widespread in the Caribbean, which may be due to heightened acceptance of such acts in this specific social context. In spite of this, studies investigating attitudes towards violence and their correlates among participants drawn from the region are missing. In order to address this void in the literature, we examined associations between violence exposure and victimisation and two gender-based violence-related cognitions (attitudes towards male physical domestic violence and social norms regarding physical violence against girls) as well as general beliefs about violence, using structural equation modelling. Participants were a sample of adolescent girls (n = 661; M_age = 13.15) and boys (n = 639; M_age = 13.22) from two Eastern Caribbean countries, Barbados and Grenada, recruited from 10 primary schools, nine secondary schools, and two youth offender centres. In considering that girls and boys were previously demonstrated to differ in their experiences as well as tolerance of violence, structural models were specified and tested separately for the two sexes. Results indicated that violence victimisation was positively strongly associated with attitudes towards male physical domestic violence and social norms regarding physical violence against girls among boys. Increased violence victimisation among girls, in turn, correlated with increased acceptance of social norms regarding physical violence against girls, but this relationship was weak. Violence exposure did not have any significant associations with any of the attitudinal variables included in the study. We discuss the importance of these findings for the development of appropriate gender-based violence prevention strategies for youths from the Eastern Caribbean.

Keywords: Gender-based violence-supportive cognitions; General beliefs about violence; Violence exposure and victimisation; Adolescents from Barbados and Grenada; Structural equation modelling
Introduction

Global Research on Gender-Based Violence (GBV) against Women

The United Nations has defined GBV as “violence that is directed against a woman because she is a woman or that affects women disproportionately. It includes acts that inflict physical, mental or sexual harm or suffering, threats of such acts, coercion and other deprivations of liberty” (The Convention on the Elimination of All Forms of Discrimination Against Women [CEDAW] General Recommendation [GR] No. 19 on violence against women [VAW], 1992). GBV against women, especially intimate partner violence (IPV), is one of the most widespread and costly but least recognised human rights violations in the world (Arias & Corso, 2005; Heise, Ellsberg, & Gottmoeller, 2002). Worldwide statistics indicate that 35.6% of women have experienced physical and/or sexual abuse, whereas regional estimates reveal the second highest prevalence of such violence among women from the Americas (World Health Organization [WHO], 2013). In considering that violence against women is often perpetrated by a relationship partner and may entail adverse consequences for both the maltreated women (see Campbell, 2002 for a literature review on health consequences of IPV) and the exposed children (see Holt, Buckley, & Whelan, 2008 for a review of literature on the impact of exposure to domestic violence on children), there has been a recent increase in scholarship exploring rates and patterns of domestic violence. Findings of cross-sectional population surveys show that between 10 and 50% of women had been physically assaulted by an intimate partner (Watts & Zimmerman, 2002). According to a WHO ten-country investigation, lifetime prevalence of physical or sexual partner violence oscillates between 15 and 71% (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006), suggesting considerable differences across regions.
Violence against Women in the Caribbean

GBV, and in particular physical and sexual violence, affects a significant proportion of women and girls in the Caribbean, with the risk of exposure to such violence being among the highest in the world (Jermiah, Gamache, & Hegamin-Younger, 2013; Jeremiah, Quinn, & Alexis, 2017; Reid, Reddock, & Nickening, 2014). Of the rare quantitative studies, Bott, Guedes, Goodwin, and Mendoza (2012) found that between 17 and 53.3% of women in Latin America and the Caribbean were affected by IPV. Further, in a self-report study assessing interpersonal violence in three Caribbean nations (Barbados, Jamaica, and Trinidad and Tobago), Le Franc, Samms-Vaughan, Hambleton, Fox, and Brown (2008) demonstrated that 73.4% of female participants had experienced violence victimisation, which was most frequently perpetrated in a relationship (66.7%). Interestingly, the supposition that general interpersonal violence and partner violence would commonly co-occur was not supported. This is in line with research suggesting that not all maritally violent men resort to interpersonal violence outside the home, indicating the importance of gender role stereotypes in IPV perpetration and differences in the emergence of various forms of violence (Anderson & Bushman, 2002; Holtzworth-Munroe & Meehan, 2004). Lastly, victimised women from Latin America and the Caribbean were found to be unlikely to seek help from a relevant institution, due to shame, fear of retaliation, not believing that anyone could help, and not knowing where to go (Bott et al., 2012). In Barbados and Grenada, the implementation of positive legal developments, such as the Domestic Violence Act (introduced in 1992 in Barbados and in 2010 in Grenada), is hindered, among others, by insensitive interviewing methods, insufficient provision of services, inconsistent training of staff, and overlooking important evidence by the authorities (Caribbean Development Bank [CDB], 2014, 2016a). This, in turn, can discourage women from reporting abuse.
GBV-Supportive Attitudes

Drawing from the ecological framework (Bronfenbrenner, 1977), the increased incidence of general interpersonal violence in the contemporary Caribbean societies has been conceptualised as a remnant from the extremely violent and destructive colonisation process experienced by the region’s communities (Ashcroft, Griffiths, & Tiffin, 2013). Violence targeted specifically against women, in turn, may be explained by the existence of laws and community norms that condone gender inequality in relationships and cultivate patriarchy (Jeremiah et al., 2017; Jones, Trotman Jemmott, Maharaj, & Da Breo, 2014). To exemplify, sexual harassment of women remains a serious problem in both Barbados and Grenada, which may be partly due to the lack of criminal penalties for such acts (CDB, 2014, 2016a). It appears, therefore, that the lack of resources to defy male dominance, may lead to the disempowerment of women. Furthermore, people inhabiting the Caribbean region describe themselves as very religious, and religion has been considered as an important factor in family violence. On the one hand, religion can be a source of solace and support for victims, but on the other hand, conservative theological views can stop women from reporting incidents of abuse (obedience to husband) and provide justification for men who use physical violence to control their female partners in the name of religion. Violence against women and children in the Caribbean, thus, can be a male expression of power and control at both familial and societal levels (Ellison, Bartkowski, & Anderson, 1999; Gibbons, 2015; Rodríguez-Menés & Safranoff, 2012). Importantly, although societal norms do not necessarily correspond with an individual’s attitudes, norms can affect attitudes if they become internalised (Crandall, Eshleman, & O’Brien, 2002; WHO, 2009).

The influence of violence-supportive attitudes on violence perpetration, victims’ experiences of violence, as well as community responses to violence has been well documented in the literature (Pease & Flood, 2008). For example, men with increased misogynistic views
are more likely to engage in marital violence (O’Neil & Harway, 1997). Such beliefs among perpetrators, thus, may serve as psychological neutralisers, which allow men to deny the victim through construing violent acts as a rightful punishment for disobedience or means to control their wives’ behaviour, rather than harm (Heise et al., 2002; Sykes & Matza, 1957). In an attempt to understand the considerable discrepancy between the number of official IPV reports and self-reports in anonymous studies, research has also explored victims’ interpretations of violence. Women who hold traditional gender role beliefs were found to be less likely to report experiences of IPV (Ahrens, Rios-Mandel, Isas, & del Carmen Lopez, 2010; Harris, Firestone, & Vega, 2005), which may be explained by victims taking the blame for causing or provoking violence (Miller & Porter, 1983; O’Neill & Kerig, 2000). At the community level, violence against women was noted to be higher in contexts with increased acceptance of violence-supportive norms (Heise, 1998), which may result in failure to offer help to victims of GBV.

Although both sexes across different non-Western cultural settings were demonstrated to hold similar levels of attitudes supportive of violence against women (e.g., Khawaja, 2004; Khawaja, Linos, & El-Roueiheb, 2008; Koenig et al., 2003), quantitative investigations on the topic are scarce in the Caribbean. However, findings of a recent large-scale study using Round Four of the UNICEF Multiple Indicator Cluster Surveys data obtained from 39 low- and middle-income countries, show that the prevalence of attitudes accepting a husband beating his wife are among the lowest for females from the Caribbean (Tran, Nguyen, & Fisher, 2016). This indicates that even though Caribbean women may silently endure violence perpetrated against them, they do not necessarily internalise societal norms condoning IPV. Unfortunately, due to the lack of a male sample from the region in Tran et al.’s study, comparisons between the sexes were not possible.

**Experiencing and Witnessing Violence and Attitude Formation in Relation to Violence against Women**
One of the key mechanisms leading to increased acceptance of gender-based violence appears to be intergenerational transmission, whereby children’s observations of their parents’ violent behaviour lead to violence in their adult relationships (Stith et al., 2000). Theoretical elucidation of the process has been offered by social learning theory (Bandura, 1977; Bandura, Ross, & Ross, 1962). Specifically, children’s learning occurs through direct behavioural conditioning and imitation of behaviours displayed and/or reinforced by others. Thus, children raised in violent families where they observe aggressive behaviours or experience violence themselves, are more likely to tolerate violence and become violent adolescents/adults compared with children from non-violent homes (Flood & Pease, 2009). According to a WHO (2009) report, tolerance of interpersonal violence is likely to be acquired in childhood, through witnessing violence in the family and being subject to corporal punishment which can eventually be seen by children as an effective conflict resolution strategy. Support for the link between victimisation and perpetration is offered by way of research that found violent offending (Fox, Perez, Cass, Baglivio, & Epps, 2015) as well as IPV (Ireland & Smith, 2009) in adulthood to be a function of abuse experiences in childhood.

Violence-accepting attitudes were shown to act as a mediator in the relationship between childhood experiences of violence and violent behaviour (Markowitz, 2001). This effect appears to be stronger for boys than girls, i.e., they are more likely to condone and perpetrate violence against women having been exposed to violence themselves (Flood & Pease, 2009). Directly exploring the relationship between childhood exposure to violence and attitudes supporting violence against women in a mixed-sex adult sample, recent research indicated that such exposure has a significant positive effect on rape myth acceptance. In this particular analysis, however, violence exposure and victimisation across different settings (at home, school, and in the neighbourhood) were included as a single variable (Debowska, Boduszek, Dhingra, Kola, & Meller-Prunska, 2015). More recently, Debowska, Boduszek, and
Willmott (2017) found a statistically significant association between attitudes towards male sexual violence and child sexual abuse within a sample of 1123 male prisoners. Similar research exploring the formation of attitudes towards physical violence against women is currently missing.

The importance of studying the impact of childhood violence on aggressive attitudes and behaviours in the Caribbean context is highlighted by the high prevalence of child abuse, and in particular physical abuse, in the region (Imbusch, 2011; UNICEF, 2006; WHO, 2016). Between 2008 and 2013, 861 cases of physical abuse were recorded in Barbados, making it the second most common type of abuse in the country (UNICEF 2015a). With 525 reported cases during the period 2009-2013, physical abuse was the most common type of child maltreatment in Grenada (UNICEF 2015b). Although only approximately 1-2% of Barbadian and Grenadian children come into contact with child protection services (CPS), self-report studies indicate a much higher proportion of youths who experience ill-treatment. For instance, a survey conducted by the Barbados Statistical Service (2014) revealed that 75% of children aged 2-14 years were subject to at least one type of violent punishment by a household member in the 30 days preceding the survey, whereas severe physical punishment was experienced by 6% of children. Further, in spite of attempts to reduce its occurrence, corporal punishment is lawful and, in fact, widely used and accepted in Barbados and Grenada. Physical punishment of boys can be particularly severe, and is frequently justified as an attempt to make them ‘tough’ (Le Franc, 2001). Given the widespread acceptance of disciplining children, and especially boys, by means of force, the incidence of physical abuse may be significantly underreported in the two countries (CADRES, 2014; End All Corporal Punishment of Children, 2017). The detrimental effect of childhood violence on violent behaviour has been demonstrated by Marshall-Harris (2011), who found that of the 274 juveniles brought before the Juvenile Court in Barbados between 2006 and 2010, 79 came from violent families. The association between
childhood violence and pro-violent attitudes among Barbadian and Grenadian youths remains to be assessed.

**The Present Study**

In recognising that traditional gender role stereotypes contribute to unequal relationships and violence against women, the CEDAW obliges states to transform stereotypes which place either sex in the position of inferiority. CEDAW GR No. 19 explicitly states that attitudes and practices which perpetuate violence ought to be identified and addressed through appropriate public information and educational programmes. Indeed, school-based attitude-changing programmes, such as Safe Dates in the United States, were demonstrated to effectively reduce violence perpetration (WHO, 2012). However, designing and implementing suitable preventive strategies is significantly hindered by the lack of context-specific awareness of factors that shape such attitudes.

Child victimisation and violence against women appear widespread in the Caribbean (Barbados Statistical Service, 2014; Bott et al., 2012; CADRES, 2014; Imbusch, 2011; Le Franc et al., 2008), but there is a lack of research exploring the effect of violence exposure and victimisation history on GBV-supportive cognitions, including those referring to the use of physical violence against women and girls. In view of this void in the current literature, the primary aim of the study was to verify, using structural equation modelling (SEM) framework, whether childhood violence exposure and victimisation in the family form a significant direct association with GBV-supportive cognitions (attitudes towards male physical domestic violence and social norms regarding physical violence against girls) and general beliefs about violence, in a sample of male and female adolescents from Barbados and Grenada. Attitudes toward violence perpetrated by boys (i.e., social norms regarding physical violence against girls) and adult men (i.e., attitudes towards male physical domestic violence) were measured separately to verify whether acceptance of violence against females is context-dependent, even
when the change in context is subtle, and differently associated with external criteria. Further, since GBV is predominantly experienced by females and perpetrated by males (as evidenced by data collected worldwide, e.g., Arias & Corso, 2005; Heise et al., 2002 and specifically within the Caribbean context, e.g., CDB, 2016b), and past research identified a stronger effect of violence exposure on violence acceptance for boys than girls (see Flood & Pease, 2009), we tested the model separately among girls and boys. We predicted that violence exposure and victimisation would have a stronger correlation with the two GBV-supportive cognitions among boys than girls. We also hypothesised that violence exposure and victimisation would be related to general beliefs about violence for both sexes.

Method

Sample and Procedure

The study involved 1300 adolescents (aged 10 -17 years) from Barbados and Grenada. The sample included 639 boys (age in years: M = 13.22, SD = 2.02, Mdn = 13, Mode = 14) and 661 girls (age in years: M = 13.15, SD = 2.04, Mdn = 13, Mode = 13). Participating youths came from both rural (75.9%) and urban (24.1%) areas of the two Eastern Caribbean countries. Ethical approval was granted by the University of Huddersfield Ethical Board. The Ministry of Education, Science, Technology and Innovation (Barbados) and the Ministry of Education and Human Resource Development (Grenada) granted permission for conducting the project. We recruited adolescents from 10 primary schools (22% of all participants), nine secondary schools (69.9%), and two youth offender centres (5.1%). The research team purposively selected participating institutions and directors of all establishments agreed to take part. Local researchers delivered printed self-reported surveys to the institutions and distributed them among adolescents using opportunistic sampling method. Data collection was anonymous and occurred in classroom settings. Parental consent was obtained prior to participation. Additionally, local researchers provided participants with verbal and written summary of the
informed consent, and gave them verbal instructions on how to complete the survey. Youths were also informed that participation was voluntary, and that they did not have to inform anyone of the specific reason for not participating (one of the options was to return a blank questionnaire). In line with the duty of care, participants were told how to access support services in the event of distress, re-traumatization, or the need to report concerns about risk of harm. A local researcher collected surveys and debriefed study participants. Participation was without any form of reward.

Materials

**Violence exposure in the family** was assessed using five items: (1) Has anyone in your family ever hurt your mum or sister’s/brother’s feelings by calling them names, swearing, yelling, threatening them, or screaming at them? (2) How often has anyone in your family hurt or tried to hurt a pet in your home on purpose? (3) How often has anyone in your family broken or destroyed something on purpose, such as punching a wall, smashing a picture, or something similar? (4) How often has anyone in your family done something to hurt your mum or sister’s/brother’s body, such as hitting them, punching them, kicking them, choking them, shoving them, or pulling their hair? (5) How often has anyone in your family threatened to use a knife, gun, or other object to hurt your mum or sister/brother? Participants were instructed to answer how often (1 = never, 2 = sometimes, 3 = often, 4 = almost always) they witnessed such acts performed by adult family members. Scores ranged from 5 to 20, with higher scores indicating greater violence exposure. In the current sample, composite reliability for the scale was 0.70 for boys and 0.67 for girls.

**Violence victimisation in the family** was measured using three items indexed on a 4-point Likert scale (1 = never, 2 = sometimes, 3 = often, 4 = almost always). For the purpose of the current study, physical victimisation is operationalized as the use of physical force that may affect child’s health, survival, development, or dignity. Emotional victimisation refers to the
failure to provide a developmentally appropriate and supportive environment. Sexual victimisation pertains to the involvement of a child in sexual activity that he or she does not fully understand, or is unable to consent to, or is developmentally unprepared for (definitions taken from Butchart, Phinney Harvey, Kahane, Mian, & Fürniss, 2006, p. 10). One question in the present study inquired into experiences of physical violence (How often has an adult in your family done something to hurt your body, such as hitting you, kicking you, or beating you up?); one question assessed emotional violence experiences (How often has an adult in your family hurt your feelings by making fun of you, calling you names, threatening you, or saying things to make you feel bad?); and one question measured experiences of sexual violence (How often has an adult in your family, touched your private parts when you didn’t want them to, made you touch their private parts, or forced you to do something sexual you didn’t want to?). Local researchers familiar with the Caribbean culture assisted with phrasing the above questions. Possible range of scores was from 3 to 12, with increased scores indicating more violence victimisation experiences. Composite reliability for the scale was 0.71 for the male sample and 0.65 for the female sample.

**Attitudes towards male physical domestic violence** was assessed using five items with four response options (1 = *it’s really wrong*, 2 = *it’s sort of wrong*, 3 = *it’s sort of OK*, 4 = *it’s perfectly OK*). Items were drawn from the Attitudes towards Domestic Violence Questionnaire (Fox & Gadd, 2012), with the omission of items referring to female-on-male violence. The specific items were: (1) Do you think it is OK for a man to hit his girlfriend or wife if he says he is sorry afterwards? (2) Suppose a woman really embarrasses her boyfriend or husband, do you think it is OK for him to hit her? (3) Do you think it is OK for a man to hit his girlfriend or wife if he thinks she deserves it? (4) Suppose a woman hits her boyfriend or husband, do you think it is wrong for him to hit her back? (5) Do you think it is OK for a man to hit his girlfriend or wife if he is drunk? Scores ranged from 5 to 20, with higher scores
indicating increased acceptance of male domestic violence. In the current study, composite reliability for the measure was 0.76 among boys and 0.71 among girls.

**Social norms regarding physical violence against girls** were assessed with five items indexed on a 4-point Likert scale (1 = *it’s really wrong*, 2 = *it’s sort of wrong*, 3 = *it’s sort of OK*, 4 = *it’s perfectly OK*). Items were taken from Adolescent social norms regarding violence and gender – prescribed norms (Foshee, Linder, MacDougall, & Bangdiwala, 2001): (1) It is OK for a boy to hit his girlfriend if she did something to make him mad, (2) It is OK for a boy to hit his girlfriend if she insulted him in front of friends, (3) A girl who does things that could makes her boyfriend jealous deserves to be hit, (4) Sometimes boys have to use violence to get their girlfriends under control, (5) It is OK for a boy to hit a girl if she hit him first. Scores ranged from 5 to 20, with higher scores indicating increased acceptance of violence against girls. Composite reliability for the scale was 0.82 for boys and 0.78 for girls.

**General beliefs about violence** were measured with four items indexed on a 4-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). Items were taken from the Revised Normative Beliefs Measure – General belief questions (Huesmann & Guerra, 1997): (1) If you’re angry, it is OK to say mean things to other people, (2) In general, it is OK to yell at others and say hurtful things, (3) It is usually OK to push or shove other people when they make you angry, (4) Sometimes a person doesn’t have any choice but to fight. Scores ranged between 4 and 16. Higher scores indicate greater acceptance of the use of interpersonal violence. In the current sample, composite reliability for the total scale was 0.74 for both boys and girls.

**Plan of Analysis**

Descriptive statistics, including M, SD, Mdn, and Mode, were calculated using SPSS version 23. Differences between boys and girls were examined using independent samples t-
tests with Bonferroni correction. The effect size statistic (Cohen’s d) was calculated for all significant results.

We performed structural equation modelling (SEM) to investigate the relationship between two exogenous latent variables (violence exposure and violence victimisation) and three endogenous latent constructs (attitudes towards male domestic violence, social norms regarding violence against girls, and general beliefs about violence), separately for the male (see Figure 1) and female (see Figure 2) sample. We analysed the data using Mplus version 7.4 (Muthén & Muthén, 1998-2015) and used the following statistics to assess model fit: chi-square ($\chi^2$), standardised root mean square residual (SRMR), root mean square error of approximation (RMSEA; Steiger 1990) with 90% confidence interval (90% CI), Comparative Fit Index (CFI; Bentler, 1990), and Tucker-Lewis Index (TLI; Tucker & Lewis, 1973). A non-significant chi-square ($\chi^2$) and values above 0.90/0.95 for the TLI and CFI are considered to reflect an acceptable/good model fit (Bentler, 1990; Hu & Bentler, 1999; Vandenberg & Lance, 2000). RMSEA and SRMR values less than 0.05 indicate good fit, whereas values of up to 0.08 are considered reasonable errors of approximation in the population (Browne & Cudeck, 1989).

The use of Cronbach’s alpha has been criticised within a latent variable modelling context given the tendency to over- or under-estimate scale reliability (Raykov, 1998). In order to show a more accurate assessment of the internal reliability of all measures included in this study, we estimated the composite reliability. Values greater than 0.60 are considered acceptable (Diamantopoulos & Siguaw, 2000).
<table>
<thead>
<tr>
<th>Variable</th>
<th>Boys</th>
<th>Girls</th>
<th>t value</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violence exposure in the family</td>
<td>7.83 (2.82) 7 5 5-20</td>
<td>7.41 (2.47) 7 5 5-20</td>
<td>2.83*</td>
<td>(.16)</td>
</tr>
<tr>
<td>Violence victimisation in the family</td>
<td>4.35 (1.89) 3 3 3-12</td>
<td>4.07 (1.55) 3 3 3-12</td>
<td>2.96*</td>
<td>(.16)</td>
</tr>
<tr>
<td>Attitudes towards male physical domestic</td>
<td>9.42 (3.79) 9 5 5-20</td>
<td>7.91 (2.97) 7 5 5-20</td>
<td>7.88*</td>
<td>(.44)</td>
</tr>
<tr>
<td>violence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General beliefs about violence</td>
<td>8.90 (2.85) 9 8 4-16</td>
<td>7.94 (2.56) 8 8 4-16</td>
<td>6.22*</td>
<td>(.35)</td>
</tr>
<tr>
<td>Social norms regarding physical violence</td>
<td>10.16 (4.19) 10 5 5-20</td>
<td>8.22 (3.33) 7 5 5-20</td>
<td>9.08*</td>
<td>(.51)</td>
</tr>
<tr>
<td>against girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Bonferroni correction (* p < .01)
Results

Descriptive Statistics and t-tests

Descriptive statistics, including means (M), standard deviations (SD), medians (Mdn), modes, and minimum and maximum observed scores, for violence exposure, violence victimisation, attitudes towards male physical domestic violence, social norms regarding physical violence against girls, and general beliefs about violence are presented in Table 1. All statistics are presented separately for male and female participants. Independent samples t-test results revealed that boys scored significantly higher than girls on all variables. These results along with the above-cited literature revealing sex differences in GBV-supportive cognitions, indicate that the proposed structural equation model should be tested separately for males and females, rather than including sex as a covariate in a single model.

Structural equation models for boys and girls

The overall model fit for the structural model for boys ($\chi^2_{199} = 418.96$, $p < 0.05$, RMSEA = 0.04 [90% CI 0.04/0.05], SRMR = 0.04, CFI = 0.93, TLI = 0.92) and girls ($\chi^2_{199} = 343.04$, $p < 0.05$, RMSEA = 0.03 [90% CI 0.03/0.04], SRMR = 0.05, CFI = 0.94, TLI = 0.93) was satisfactory based on all fit statistics. Standardized factor loadings and regression weights for boys and girls are presented in Figure 1 and 2 respectively. All factor loadings were statistically significant ($p < 0.001$) and above the value of 0.40.

Results for boys indicate that violence victimisation in the family formed strong positive statistically significant association with attitudes towards male physical domestic violence ($\beta = 0.61$, $p < 0.01$) and with social norms regarding physical violence against girls ($\beta = 0.47$, $p < 0.05$), but weak statistically non-significant relationship with general beliefs about violence. Violence exposure in the family did not form statically significant associations with any endogenous variables included in the model.
Results for girls show no statistically significant correlations between any of the exogenous and endogenous variables except between violence victimisation in the family and social norms regarding physical violence against girls. Girls who reported violence victimisation in the family developed increased acceptance of physical violence against girls ($\beta = 0.23$, $p < 0.05$).

Figure 1. Structural equation model of violence-supportive cognitions among boys. EXP = Violence exposure in the family (measured by items X1-X5); VIC = Violence victimisation in the family (measured by items X6-X8); ADV = Attitudes towards male physical domestic violence (measured by items X9-X13); BEL = General beliefs about violence (measured by items X14-X17); NOR = Social norms regarding physical violence against girls (measured by items X18-X22). All factor loadings for X1-X22 are statistically significant at $p < .001$.

* $p < .05$, ** $p < .01$. 
Figure 2. Structural equation model of violence-supportive cognitions among girls.
EXP = Violence exposure in the family (measured by items X1-X5); VIC = Violence victimisation in the family (measured by items X6-X8); ADV = Attitudes towards male physical domestic violence (measured by items X9-X13); BEL = General beliefs about violence (measured by items X14-X17); NOR = Social norms regarding physical violence against girls (measured by items X18-X22). All factor loadings for X1-X22 are statistically significant at p < .001.
* p < .05.

Discussion

Violence, including gender-based violence (GBV), is widespread in the Caribbean, which is considered, in part, to be a remnant of extremely violent colonisation history (Ashcroft et al., 2013; Imbush, 2011). Although GBV and interpersonal violence in general may arise
due to increased acceptance of aggressive behaviour, empirical investigations into violence-supportive cognitions are scarce. Further, extant research reports a significant association between adverse childhood experiences and externalising as well as internalising problems in adolescence and adulthood (see Debowska, Willmott, Boduszek, & Jones, 2017 for a review). However, less is known about the effect of childhood violence exposure and victimisation on violence-supportive cognitions, especially those related to physical violence in intimate relationships. In this study, therefore, we aimed to specify and test a structural model assessing the relationships between childhood violence exposure and victimisation in the family and three violence-related attitudinal outcome variables (attitudes towards male physical domestic violence, social norms regarding physical violence against girls, and general beliefs about violence) within a sample of girls and boys from the Eastern Caribbean. We tested the model separately for males and females, which revealed differential associations between study variables for the two sexes.

Among boys, childhood violence victimisation in the family formed strong significant positive associations with attitudes towards male physical domestic violence and social norms regarding physical violence against girls. More specifically, the results indicated that boys who reported higher rates of victimisation were more likely to see physical violence against women and girls as acceptable. This is in line with the tenets of intergenerational transmission of violence and social learning theories (Bandura, 1977; Bandura et al., 1962; Stith et al., 2000), whereby children experiencing violent treatment are seen as likely to tolerate and perpetrate violence in their future relationships. Therefore, timely recognition and prevention of child victimisation may have a long-term positive effect on reducing the rates of both child maltreatment as well as GBV-supportive attitudes, subsequently leading to developing safer and more nurturing parent-child and intimate relationships. Moreover, given the increased acceptance of GBV among boys compared with girls in the current investigation, it seems that
adolescent boys, and in particular those with a history of violence victimisation who may grow to perceive violence as an efficient conflict resolution strategy, should be targeted for GBV prevention. Research demonstrates that especially effective in this respect are school-based programmes, such as Safe Dates programme in the United States and the Youth Relationships Project in Canada, which address gender norms in children and youngsters before they become internalised and integrated into their system of values (WHO, 2009). In considering gender-based inequalities and the patriarchal structure of the Caribbean societies (CDB, 2016b; Jeremiah et al., 2017; Jones et al., 2014), engaging men as partners in such prevention in order to present a new vision of masculinity to adolescent boys appears especially promising in this social context. The Caribbean Male Action Network (CariMAN), an affiliation of Caribbean men working with men to build their awareness of gender justice, already addresses some of the above issues. However, a wider outreach of such initiatives, with the focus on developing partnerships with schools in the region, would increase participation of adolescent boys in GBV prevention and allow for involving them in constructive conversations about power in intimate relationships. Future research should aim to evaluate the effectiveness of such prevention methods, as well as make recommendations for improvements and scaling-up of the programme into new settings.

In the female sample, the only significant relationship was between violence victimisation and social norms regarding physical violence against girls, in that girls with a history of maltreatment were more accepting of such violence. Thus, it may be that girls experiencing violence in the family, consider abusive treatment a norm regardless of context in which it occurs, including intimate relationships. Nevertheless, it must be noted that the association detected here was statistically significant yet weak and hence more studies are needed to corroborate the finding. Interestingly, familial victimisation was not related with greater acceptance of physical domestic violence. Although prior research exploring such a
relationship is lacking, recent empirical evidence demonstrated low acceptance of wife beating among Caribbean women (Tran et al., 2016), in spite of the frequent occurrence of IPV in the region (Le Franc et al., 2008). One possible explanation of differential associations between child victimisation and attitudes towards domestic violence and violence against girls, is that the process of violence normalisation may apply across settings (i.e., violent treatment first experienced in the family is also accepted in romantic relationships) but not across victim types (i.e., abuse of girls does not expand into accepting marital abuse of women). Therefore, adolescence appears to be a critical period for intervention among girls (and those abused in the family in particular), to prevent them from developing attitudes condoning IPV and increase reporting rates (in line with research by Ahrens et al., 2010 and Harris et al., 2005). Indeed, past research suggested child abuse to be a strong risk factor of adult victimisation (e.g., Schaaf & McCanne, 1998; Walker, Freud, Ellis, Fraine, & Wilson, 2017), and GBV-supportive cognitions may be key to explaining this relationship. Lastly, keeping in mind that abused females in Latin America and the Caribbean are unlikely to seek help from a relevant institution, due to fear, shame, and not knowing how to access support services (Bott et al., 2012), it is mandatory that GBV prevention aimed at adolescent girls seeks to equip them with the necessary knowledge and confidence should they ever have to deal with abusive treatment. We recommend that future large-scale, longitudinal quantitative research among females from the Caribbean investigates the mediating role of GBV-supportive attitudes in the relationship between victimisation in childhood and adulthood, and how the circle of abuse may be broken through exposure to attitude-changing and confidence-building prevention.

Worthy of note, disconfirming our initial predictions, violence exposure and victimisation did not associate with general beliefs about violence in either sample of youths. This is interesting and may suggest that child abuse affects a narrow selection of violent cognitions. More specifically, experiencing familial violence can be translated into increased
acceptance of violence in romantic relationships only, indicating the multi-faceted nature of violence and the need to focus on addressing its type-specific aetiology and expressions. Support for the supposition that pro-violence attitudes are contingent on context is provided by prior research demonstrating that general interpersonal violence and partner violence do not commonly co-occur (Le Franc et al., 2008) and that not all maritally violent men use violence outside the home (Anderson & Bushman, 2002; Holtzworth-Munroe & Meehan, 2004). Another intriguing finding in the current study pertains to the lack of significant correlations between exposure to family violence and any of the three attitudinal variables, suggesting that the process of internalisation of violence-related norms is affected mainly by personal victimisation experiences. Although this assertion should be explored further with more diverse samples of participants, Litrownik, Newton, Hunter, English, and Everson (2003), in a study with 682 children, reported that witnessed and directly experienced family violence had independent, non-interactive effects on subsequent problem behaviour.

The current study is not free from limitations. First, we relied on self-report scales to measure concepts included in the investigation. Although this could have resulted in biased responses, research evidence in the area of child victimisation indicates that self-report surveys elicit more honest answers than face-to-face interviews (Rumble, Ramly, Nuryana, & Dunne, 2017). Second, the design of the study was cross-sectional and hence temporal dimension of associations reported here could not be established. As such, longitudinal research is needed to corroborate the findings. It is also recommended that future investigations control for severity of abuse, as well as focus on abuse experienced in different social contexts (e.g., in school, in the neighbourhood).

**Conclusion**

The present study, using structural equation modelling, investigated associations between childhood violence exposure and victimisation and three violence-related attitudinal
variables among adolescent girls and boys from Barbados and Grenada. Although violence is widespread in the Caribbean, this was the first research to explore correlations between such constructs in youths from the region. Results revealed that violence victimisation formed strong positive statistically significant correlations with attitudes towards male physical domestic violence and social norms regarding physical violence against girls. In the female sample, violence victimisation was related to increased acceptance of social norms regarding physical violence against girls. It is envisaged that the findings will inform researchers and practitioners designing, implementing, and evaluating GBV prevention strategies for adolescent audiences in the Eastern Caribbean.
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