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Article

Social network correlates of IPV acceptance in rural Honduras and rural Uganda☆

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ABSTRACT

We investigated the household-level social network correlates of acceptance of intimate partner violence (IPV) in rural, agrarian settings of Honduras and Uganda, two low-income countries with unequal access to resources based upon gender. We collected complete social network data in each location (Honduras in 2014 and Uganda in 2012), across a diverse range of relationships, and then created a measure of household cohesion by calculating the degree to which members of a household nominated each other as important social connections. Our measure of IPV acceptance was based on 4 questions from the Demographic Health Survey to assess the conditions under which a person believes that it is acceptable for a man to perpetrate physical violence against his wife or partner and we coded a person as positive on IPV acceptance if they answered positively to any of the four questions. We used logistic regression to calculate the odds that an individual accepted IPV given (1) household level cohesion and (2) the proportion of the household that accepts IPV. We found individuals from more cohesive households were less likely to accept IPV controlling for the overall level of IPV acceptance in the household. Nevertheless, those in households more accepting of IPV were more likely to personally accept IPV. In stratified analyses, when household IPV acceptance was especially high, the benefit of household cohesion with respect to IPV was attenuated. The design and implementation of interventions to prevent IPV should consider household structure and norms rather than focusing only on individuals or couples.

Introduction

Globally, approximately 30% of women who have ever been in an intimate relationship have reported physical or sexual violence by an intimate partner (WHO, 2013). There is a growing body of evidence that intimate partner violence (IPV), and attitudes accepting of IPV, are socially clustered, supported by community and family social practices, and transmitted through families (Shakya et al., 2016, 2017). For example, people who have witnessed IPV as children are more likely to experience or perpetrate it as adults (Sambisa, Angeles, Lance, Naved, & Thornton, 2011), and female victims of IPV are more likely to report attitudes accepting of IPV (Hindin, Kishor, & Ansara, 2008b). While previous research has inferred social clustering of IPV acceptance through individual-level questions or aggregated measures at the level of states or other area units, few studies have used social network data to investigate these behavioral and attitudinal clusters.

Conceptual model

The pattern of social ties in which a person is embedded, and the normative beliefs and practices of those to whom s/he is connected, may clearly affect an individual's beliefs and practices. In social norms theory, *reference groups* are those to whom an individual turns for information on the expected ways of behaving within group-specific

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contexts (Ajzen & Fishbein, 1973; Shakya, Christakis, & Fowler, 2014). *Descriptive norms* are the behaviors commonly practiced in a group, and are supported through observation of what the majority of others are doing (or not doing) (Cialdini, Reno, & Kallgren, 1990). *Injunctive norms,* on the other hand, reflect the expectations of the community, and are often reinforced through perceived social or individual consequences in the form of sanctions. Because of the threat of sanctions, the proscribed behavior may rarely be observed, making it difficult to ascertain whether the behavior is simply uncommon or is actually against an underlying social norm (Borsari & Carey, 2003). Sanctions can be positive for compliance, and can include social rewards such as approval or inclusion in social groups. They can also be negative for non-compliance, and may be as overt as stoning or as subtle as quiet disapproval, or may simply consist of the withholding of social rewards (Bell & Cox, 2015).

Social network analysis is a powerful tool for investigating social norms among specific groups because it can identify the people to whom individuals are most closely connected and these people's salient characteristics. For example, previous work on latrine adoption in India demonstrated the social clustering of behaviors through social network analysis as well as the positive relationship between injunctive norms and the level of connection within a community (Shakya et al., 2014). There may be multiple reference groups for any given behavior, and social network analysis can be used to at least partially identify those groups and the levels and directions of their influence. The ability of social network analysis to identify these groups, however, will depend upon the questions used to elicit the social networks, the utility of those questions in capturing the relevant relationships, and the scale of the network study (Shakya et al., 2016; Shakya, Christakis, & Fowler, 2017).

While a community may be opposed to IPV, families within that community may accept it (Shakya et al., 2016). If there are injunctive norms at the community level against perpetrating IPV, but IPV is occurring within families, then family-level norms may contribute to its continuation (Shakya et al., 2016). The family may be at least one of the reference groups to which individuals (subconsciously or consciously) turn for information on behavioral expectations regarding IPV. IPV is as an example of a practice that, because it often takes place in the privacy of the home, is generally less detectable than practices such as child marriage. With such practices, the varying influences of different reference groups is particularly important. Previous research has in fact pointed towards the possibility of an "inner norm" within the family that is supportive of IPV, versus an "outer norm" within the community that opposes it (Shakya et al., 2016). Thus, family-level characteristics, as opposed to those within the greater community, can offer important insights about factors that contribute to IPV in different contexts. However, families cannot easily change their views or practices if community norms are against it, as in the case of female genital cutting (Vogt, Mohmmed Zaid, El Fadil Ahmed, Fehr, & Efferson, 2016).

Research on violence has shown that family cohesion, defined as emotional support and positive communication, can be protective against violence among youth (Gorman-Smith, Henry, & Tolan, 2004), possibly by providing protection against social stress, an environment of security, strong parental monitoring, and positive family communication (Kliewer et al., 2004). Consistent with the findings on family cohesion, research on community-level violence has also identified community social cohesion as an important factor in violence prevention (Kennedy, Kawachi, Prothrow-Stith, Lochner, & Gupta, 1998). While cohesive communities may protect against violence by providing a warm and nurturing environment, it is also hypothesized that more socially cohesive communities are able to maintain social control through the creation and maintenance of injunctive norms which can be used effectively to discourage violence (Kennedy et al., 1998). This sort of control, however, can also be effective at encouraging violence in contexts in which violence is acceptable and normative. Literature on social networks has demonstrated that cohesion can reinforce norms, whether positive or negative (Centola & Macy, 2007; Latkin, Forman, Knowlton, & Sherman, 2003). Thus, understanding the association between cohesion and acceptance of violence, and the possible mechanisms by which this association occurs, is an important question in research on family-level violence prevention.

Despite the evidence on the relationship between violence and social cohesion, few studies have considered family cohesion in the context of IPV (Olsen & Lovett, 2016). Furthermore, the majority of cohesion research has operationalized cohesion using survey questions that ask respondents to report on the quality of their interactions within their families or communities, which can be subject to response bias depending upon who within the community or the family is being asked the questions. For instance parents are more likely to report positive parent-child interactions than are children (Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994).

Full social network data in developing countries is rare (Perkins, Subramanian, & Christakis, 2015). Here, we combine two very uncommon social network datasets, one from rural Honduras and one from rural Uganda, to investigate the household-level social network correlates of IPV acceptance. Although Honduras and Uganda represent distinct geographic settings, both countries represent low-income, low-resource societies with strong patriarchal cultural traditions (Hernandez, 2002; Kafumbe, 2010). In addition, both countries have a history of societal violence (Kasozi, 1994; Briceño-León, Villaveces, & Concha-Eastman, 2008) and exhibit strongly unequal gender norms (Mirembe & Davies, 2001; Godfrey, 2010; Lomot, 2013). Past studies have shown some of these factors and others (alcohol consumption, limited social support, gender inequality, witnessing violence as a child) to be associated with IPV (Garcia-Moreno, 2005; Kwagala, Wandera, Ndugga, & Kabagenyi, 2013).

We investigate the extent to which social network factors at the individual and household level are associated with individual attitudes accepting of IPV. We hypothesize that individuals from more cohesive households will be less likely to accept IPV; distinctly, we hypothesize that individuals in households in which a greater proportion of household members accept IPV will be more likely to accept IPV. We will also consider the interaction between these two: is household cohesion more strongly associated with IPV acceptance in households in which IPV acceptance is higher overall? Finally, given that IPV acceptance can differ according to education, gender, and marital status (Shakya et al., 2016), we consider the proportion of the household that is male, the proportion of the household that is married, and the mean level of household education separately, as possible factors associated with individual IPV attitudes accepting of IPV.

Methods

Data collection

In 2014, we collected full sociocentric network data from individuals aged 13+ in two villages in *La Unión, Lempira*, Honduras, as part of a larger ongoing study (Shakya, Stafford et al., 2017). Sociocentric studies attempt to ascertain all of the social relationships within a defined population (Marin & Wellman, 2011). Although adolescents 13–17 years of age were surveyed, we eliminated their observations to maintain consistency with the Uganda sample. In each Honduran village, we took a complete census of all households, which included mapping each household in the village and enumerating all of the residents within them. We later returned to each household to gather data about individual health indicators, attitudes and beliefs, demographics, and social network connections. In total, our Honduras household census revealed a population of 1307 eligible individuals, and we were able to collect survey and network data on 837 (64%) individuals (691 adults after excluding adolescents).

In each of eight villages within one parish in rural southwest Uganda, a data collection procedure similar to that used in Honduras