

MAPPING FEAR OF CRIME THROUGH A SOCIAL NETWORK MODEL IN MARDAN, PAKISTAN

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Abstract

The present study analyzes fear of crime through social network model. The social network model is delimited to three dimensions i.e., private social network (PrSN), parochial social network (PaSN), and public social network (PbSN). The association and contribution of each of the dimension is estimated through binary logistic regression. Data for the study is collected from 298 out of 1186 employees and students of the Main Campus of Abdul Wali Khan University Mardan, Khyber Pakhtunkhwa-Pakistan. Findings of the study show that the three dimensions are inversely related to the fear of crime. It means that improvement in private, parochial, and public social networks reduces fear of crime. Further, it is observed that private and public social networks are contributing more than parochial social network in reducing fear of crime in Pakhtun society of district Mardan. Thus, it is inferred that social networks through the development of a sense of empowerment among the members decrease fear of crime. Stronger social networks act as a social control mechanism and reduce the likelihood of the occurrence of deviant, and/or criminal behavior in a society.

Keywords: *Fear of crime, private social network, parochial social network, public social network, social control, Pakhtun society*

Introduction

Located in South Asia, Pakistan is one of the countries with a highly turbulent geopolitical environment and is faced with severe security issues

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for a long period. Khyber Pakhtunkhwa, located in the north of Pakistan is experiencing direct effects of these issues. It is generally accepted that social, economic and any other kind of human development can take place in the environment of peace and security. A peaceful and secure environment offers the opportunity of free, progressive, creative, and innovative thinking and allows the members to use their abilities for improving their quality of life without any fear or worries. On the other hand, lack of security at macro or national level affects the local environment and may contribute to the emergence of other social issues including crimes. Hence, members of such communities are expected to face more fear of crime being exposed to it. These scary and frightening socio-psychological milieus in the Pakhtun society attract scholars to analyze the situation by identifying processes and theoretical explanations of the crimes and criminal syndicates. Several studies and surveys emancipate that crime is one of the critical issues of Pakistan and particularly of Khyber Pakhtunkhwa (Ali, Muhammad & Abdullah, 2014; CAMP & Saferworld, 2013; Ali, Shah, Saud, 2016; Jan, Aman, 2016). However, it has been observed that one of the critical areas which needs to be explored is the link of social networks with fear of crime. In this connection, the current study is devised to map out the fear of crime through social network model.

In general, it is viewed that within a society, individuals experience fear of crime. Numerous literature support this notion and further explain that human sufferings increase with increase in fear of crime (Hale, 1996; Cobbina, Miller & Brunson, 2008; Gainey, Alper & Chappell, 2011; Warr, 2000; Skogan, 1986; McCarthy & Hagan, 1995; Jacobs, 1961). In last few decades, fear of crime has received considerable attention due to increasing safety concerns, socio-economic, and political challenges, (LaGrange, Ferraro & Suspancic, 1992; Intravia, Stewart, Warren & Wolf, 2016). According to Carro, Valera and Vidal (2010) fear of crime attracted researchers and policy makers to dwell on it. Many people express concerns over crime (Curiel & Bishop, 2018). However, agreed upon operational definition and measuring scale is yet to be devised (Hale, 1996; Ferraro & LaGrange, 1987; Baumer, 1985; Fattah & Sacco, 1989; Rader, 2004; Willams, Mcshane & Akers, 2000). Fear of crime can be defined as an emotional reaction to an actual or perceived criminal situation (Lewis, 1986; Ferraro & Lagrange, 1987; Ferraro, 1995; Will & McGrath, 1995; Hale, 1996). The level of fear has association with age, location, social context, gender, and ethnicity etc. (McCarthy & Hagan, 1995; Skogan, 1986). People shape their behavior in line with the feeling of fear they experience and/or perceive (Jacobs, 1961; Will & McGrath, 1995; Warr, 2000; Ferraro, 1996). The level and experience of social network of a person may influence a person behavior including the feeling of fear of crime. Therefore, this research examines fear of crime in relation with social networks in the

Pakhtun society. Moreover, it is perhaps the first study in the locality to our knowledge.

Social networks are socially constructed relationships shaped in such a way that helps in developing feelings of trust, security, and confidence (Hunter, 1985). Social networks in the present study are divided into three dimensions i.e. private social network (PrSN), parochial social network (PaSN), and public social network (PaSN) outlined by Hunter (1985). Hunter argues that each of these dimensions have its own level of social order. Further, he is of the view that each of the dimensions have its own social bond, institutional locus, and spatial domain. PrSN operates through nearby people such as family and friends and act as a controlling mechanism for behavior within this network. PaSN works at the level of community or neighborhood and exerting informal social control via establishment of local bonds by participation in the social process of the community (Pain & Townshend, 2002). PaSN exerts its influence through social bonds which are established between members of the neighborhood and external institutions (government and non-government). This whole model is further explained in the forthcoming section.

Social Network Model

There are different theoretical explanations of fear of crime. For example, direct victimization theory explains that those who personally experience victimization are more fearful (Skogan, 1987; Lewis, 1980). Indirect victimization referred to the information about the victimization of friends or family members that potentially increases fear (Lavrakas & Lewis, 1980). The theory of incivility predicts that fear of crime is directly related to incivility. A community ridden in incivility is perceived to have lack of shared values and the controlling mechanism of such community is reduced (Hale, 1996; Bursik & Grasmick, 1993).

It is noted that each of these theories has received some empirical evidence (Hale, 1996). However, the current study explores fear of crime through social network model. It is observed that people who have strong social network bonds have more solidarity among them and respond together to an undesirable situation (Bursik & Grasmick, 1993). There are several ways through which social network may decrease fear of crime (Bandura, 1994). Firstly, social network decreases fear through feelings of empowerment generated due to improvement in self-efficacy by having many friends (Wickes et al., 2013; Rohe & Burby, 1988; Bandura, 1994). Secondly, social network increases informal social control thereby reducing fear of crime. Informal social control means the development, observance, and enforcement of norms for suitable behavior in the public. Social network decreases fear through establishing informal control by developing social cohesion where residents share mutual interests and monitor activities in a

community. Similarly, mutual interaction among families of children's friends enhances supervision. Thirdly, social network promotes close ties where mutual trust and reliance develop among community members that potentially decrease fear. Social control may stem, in part, from the belief that network bonds offer cooperation and support (Bursik & Grasmick, 1993; Rohe & Burby, 1988). Alternatively, weak social network may have a link with increasing fear of crime (Rohe & Burby, 1988; Coleman, 1988; Sampson et al., 1999; Kanan & Pruitt, 2002; Chadee, 2003). As earlier said, social network model is reflected into three dimensions that demonstrate three distinct levels of social order. The following text conceptualizes and operationalizes these dimensions.

a) Private Social Network (PrSN)

Private level of social network consists of primary networks or intimate friendships. According to Anderson (1999) it plays a supervisory role while shaping the behavior of youngsters. It includes family close relatives and friends. Private network is responsible for economic support, controlling behavior, associational friendship, and quality of life. People avoid criminal behavior by establishing private network ties (Bursik & Grasmick, 1993). The private level of network operates through family as a protective unit (Welsh & Farrington, 2007). A study concludes that the non-availability of public resources put a family under pressure for extra care of their children and thereby parents often walked with their children to places like schools and parks for the purpose of their protection and safety in any undesirable situation. In other words, public recourses and quality of life are associated with each other (Spanier & Fishel, 1973). It is evident in the literature that more number of friends and relatives enhances the feeling of being in control or empowered (Bursik & Grasmick, 1993).

In order to operationalize PrSN, researchers have constructed eight statements that broadly cover the feeling of security among family members, quality of social interaction within and outside of family (family members, neighborhood, and friends of youngsters) effective supervision of youngsters, trust in neighborhood and friends of youngsters. In light of the discussion, we hypothesize that stronger PrSN reduces fear of crime in members of society.

b) Parochial Social Network (PaSN)

The parochial social network (PaSN) being distinct from private network is socially and emotionally less intensive. It consists of a larger network of neighbors whose attachment is minimal than family and friends. This network also includes some local institutional ties like a religious institution (Bursik, 2001). Nevertheless, such a neighborhood provides a system of friendship, social ties, and recognition (Bursik & Grasmick, 1993; Sampson & Raudenbush, 2004). Frequent social interaction and stronger

social relationships have the potential to approach local issues with collective wisdom. Supervision of the locality and youngsters is easily manageable in such a neighborhood (Warner, 2010). Contrary to such a neighborhood would delimit the role and provide ample chances of social disorder and disorganization (Bursik & Grasmick, 1993). Close ties and stronger PaSN can effectively supervise and exert social control in a community (McCarty, 2013).

In local community, members of the neighborhood play a supervisory role of keeping an eye on the children of the community and report any suspected behavior of strangers and residents (Hunter, 1985). Participation in local organizations may have an effect on deviant behavior (Simcha-Fagan & Schwartz, 1986). In Pakhtun society Mosque {*Juma't*: a place for the worship of Muslims} and Guesthouse {*Hujra*: a place of gathering and sharing the views in rural areas} (Khan & Mahmood, 2016) could be included in the parochial social network. These places are very vital in providing frequent social interactional opportunities to male members of society. Hujra, particularly serves as a place of social gathering and conflict resolution (Khan & Mahmood, 2016). This dimension is operationalized through twelve statements that cover quality and trust in the role of neighborhood, mosque, and hujra in providing feelings of safety and security to the members of community. We hypothesize that a stronger parochial network reduces fear of crime in members of society.

c) **Public Social Network (PbSN)**

The PbSN level of social network model is the neighborhood access to outside public resources (Hunter, 1985). There are two potential resources of PbSN which are the accessibility to funds for controlling crimes and the relationship of local communities with local agencies responsible for implantation of the law and maintenance of local order. As such police and judiciary are considered formal agencies of social control. Thus a neighborhood which have more access to public resources and funds for formal control will have a lower level of fear of crime among its citizens (Lewis & Salem, 1986). According to Peterson, Krivo and Harris, (2000) such institutions may include “churches, recreation centers, and libraries”. Gatherings in local housing during night times for gossips is common in some societies are examples of public networks. Other researchers find that there are more chances of negative attitudes of the people towards police in unsystematic communities in comparison to more orderly and systematic neighborhoods (Sprott & Doob, 2009). Thus, as disorder and perceptions of crime increase, confidence in police decreases (Sampson & Bartusch, 1998; Reisig & Parks, 2000). Alternatively, it can be argued that when police or judiciary fails to effectively guard against crimes, then both crime and fear of crime increases in society. Interestingly, Skogan (2009) finds that contact with the police, regardless of whether it was viewed as positive or negative,

resulted in reduced confidence in the police. It is because police are assumed to respond quickly by themselves instead of contacted by the community. Police may respond to issues differently in areas with a low crime rate as they may perceive the inhabitants as more trustful and commendable of their support in comparison to inhabitants of poor and high crime areas (Davies et al., 2013). Accordingly, several inhabitants of the poor communities report that local law enforcement agencies fail to respond quickly to call for assistance and do not care about the victims (Miller, 2008).

Alemika and Chukwuma (2005) noted that the general perception about role of police is satisfactory. However, those who contact police during any emergency were less satisfied (Alemika & Chukwuma, 2005). As the reassurance model suggests that fear of crime is low in communities whose residents have trust in local police and court system (Waller, 2006). In contrast, communities who think that their police are unjust in their dealing or not successful in crime control will draw upon their asset of social capital to lessen their collective level of fear, balancing for the actual or perceived lack of reassurance from means of formal control (Fiedler & Flaming, 2005). For the current study, the operationalization of the public network is restricted to the role and perception of police and judiciary in controlling the fear and empowering the people. It is hypothesized that a stronger public network leads to reduced fear of crime in members of society.

Material and Methods

The aim of the study is to measure the association of the three dimensions of social network model with fear of crime. For t purpose, positivist quantitative approach and method is followed.

The study was conducted in Mardan, the second largest district of Khyber Pakhtunkhwa after Peshawar. Mardan city is the Headquarter of the district where the Main Campus of Abdul Wali Khan University is situated. The data was collected in the Main Campus of Abdul Wali Khan University Mardan. More than 98% of people of the district speak Pakhtu language, locally known as Pakhtu. The total population of the Main Campus is 1186, where university employees are 112, male students are 760, and female students are 314. As per Yamane (1973) formula for a known population, a sample size of 298 is derived for the data collection which is further proportionately distributed according to the formula of Chaudhry & Kamal (1996). Both the formulas are given below followed by a table showing the sample size:

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the population size, e is the level of precision (Yamane, 1973).

$$NI = Ni/N*n$$

Where NI =No of sampled respondents in each stratum, Ni =No of strata in the study area, N =Total population, n =Total sample size (Chaudhry and Kamal, 1996).

Table 1: Breakup of Composite Sample Size

S.No	Sample Groups	Population	Sample Size
1	University Staff	112	28
2	Female Students	314	79
3	Male Students	760	191
4	Total	1186	298

a) Likert Scale Construction and Data Collection

With the help of literature and personal observations, a questionnaire in the form of Likert scale was constructed. The questionnaire was close-ended with eleven items on Fear of Crime, the dependent variable. The independent variable i.e., Social Network is further categorized into three dimensions namely; Private Social Network with eight items, Parochial Social Network with twelve items, and Public Social Network with nine items. Data was collected from the respondents through a random sampling procedure by the researchers. Respondents were briefed about the data collection purpose and were provided with the opportunity of filling the questionnaire on spot or later on as convenient to them. They were also at liberty not to fill the questionnaire. Likert scale is considered a reliable and effective tool for data collection in social sciences (Hosker, 2010; Nachmias & Nachmias, 1992). The respondents were asked to indicate their level of agreement with the statements. It was a five-point scale and accordingly, the responses were categorized as strongly agree, agree, uncertain, disagree, strongly disagree. The statements were distributed to a small group of test respondents. Modifications in these statements were made where required. Respondents were asked to respond to each of the statements which were calculated and summed-up for aggregate score of individual respondent. In order to run Binary Logistic Regression, the dependent variable was converted into two options of Yes and No scale through computing and recoding procedure in SPSS.

b) Reliability Analysis

The instrument reliability was checked through Cronbach's alpha test. In social sciences where human attitude is to be measured, it becomes very difficult to ensure reliability. The reliability of the current instrument where

all the forty items were collectively checked came to be .881. Reliability for fear of crime, PrSN, PaSN, and PbSN was .598, .567, .779, and .827, respectively.

c) Binary Logistic Regression

The collected data was analyzed by using binary logistic regression technique through SSPS 2010. Binary logistic regression was used when observation falls into two categories of a dichotomous dependent variable with one or more independent variables either continuous or categorical. In the current study the dependent variable i.e., Fear of Crime was converted to dichotomous category with two options of Yes and No. While, the independent variables i.e., public, private, and parochial social networks were categorically divided into five options from strongly agree to strongly disagree.

Data Analysis and Interpretation

This section contains the model summary, variables in the equation, and its interpretation under different headings.

a) Model Summary

The model summary in table number 2 shows the variation of social networks with fear of crime. The value -2log likelihood for model containing independent variables is 307.866. The social networks with three dimensions of PbSN, PrSN, and PaSN as explanatory variables produce 2.4% to 3.7% variation in the outcome variable i.e., fear of crime. The contribution of the study variables in reducing fear among the respondents is less in extent as evident from the results. However, it does affect the fear of crime among the respondents to some extent. A detailed explanation of the contribution of all the three dimensions of social network theory in reducing fear of crime is given in the next sub-section.

Table 2: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke Square	R
1	307.866	.024	.037	

b) Variables in the Equation

Table number 3 shows logistic regression coefficient, standard errors, Wald statistic, and odd-ratios Exp (B) for fear of crime. The Wald statistic is used to estimate the significance of relationships between dependent and independent variables. Odds ratio greater than 1 indicates an increase in the

likelihood of fear with a one unit increase in a predictor variable. Odds ratio less than 1 shows that odds are less likely with a one unit change. In the light of social network model theory, fear of crime increases with weak social networks, such as loss of close ties, mistrust, prefer to stay home, avoiding outdoor or recreation activities, and other insecurities (Jacobs, 1961). Mosque, *Hujra*, police, and judiciary contribute to decreasing fear of crime in a society. In the forthcoming section, results of the three dimensions are discussed in detail.

i) Private Social Network (PrSN)

The coefficient (β) of PrSN with minus sign (-.048) shows that it is inversely related to fear of crime. Strong PrSN decreases fear of crime by .953 times. The odds ratio indicates a proportion decrease of 4.7 percent (Calculated as $1-.953=.047*100$). PrSN establishes informal social control that decreases fear of crime. Under informal social control, family operates as a protective and supervisory unit (Spanier & Fishel, 1973). Parents often drop their children at schools and colleges while protecting them from bad companies that show their fear and anxiety.

PrSN flavored with intergenerational closure effectively manages and controls wards and their peers (Coleman, 1988). Parents' interaction with families of their children's friends pave way and room for cultivating the seed of cohesiveness, trust, and thereby improving the informal mechanism of social control (Welsh & Farrington, 2007). Intergeneration closure increases supervision and safety that has directly attached to decrease fear of crime. Contrary to this argument, it is observed that lack of intergenerational closure increases fear through a corresponding lack of informal social control.

Family provides feeling of security, strong check and balance, and supervision which ultimately causes reduction in fear of crime. In order to assess the influence of social disorganization and the network approach, Sampson and Groves (1989) utilized the British Crime Survey. They found private networks more vital than parochial networks in governing youth behavior and they contented that the most important source of social control is supervision of young persons.

ii) 4.2.2. Parochial Social Network (PaSN)

The PaSN coefficient (β) value -.014 shows that there is an inverse relationship of PrSN with fear of crime. It could be deduced that strong and effective PrSN reduces fear of crime as evident from the results. The parochial social network decreases fear of crime by .986 times. The odds ratio shows a proportion decrease in fear of crime by 1.4 percent. Strong PrSN within neighborhood provides a protective effect to community members and thereby reduces fear of crime among them. This is probably because citizens feel that neighbors may be looking out for each other and

neighbors may be more likely to intervene or at least call the police if a crime is being observed.

Even if formal social control mechanism fails or weakens to respond to crime and or fear of crime, according to Bourdieu (1986), Bahan (1974), neighborhood social capital as reassurance or compensatory role operates to control the situation. Participation with neighbors or connection with neighborhood organizations which is known to be parochial ties has an effect on fear of crime. However, Lewis and Salem (1986) reported that information exchange about local crimes increases fear among the members. Contrary to the above, social interactions and sharing of experiences of collectivity promote feeling of security which ultimately reduces fear. In communities networks are developed that function as social control or networks through which they gain support but maintain little contact. Members of the neighborhood keep an eye on children and report any suspicious activity of the member of the community or strangers (Scarborough et al, 2010). Similarly, Simcha-Fugan and Schwartz (1986) reported an indirect effect of participation in the local organizations on the level of delinquency.

In Pakhtun society, local community organization (*Jirga*, elder council) is an institutional framework with a cultural base that provides a platform to community members for sharing their experiences. Hence, it plays a very important role in minimizing the conflicts among members through negotiation to escape community life to suffer (Khan, & Mahmood, 2016). In this context, this local community organization (*Jirga*) has a judicial and political role that seems to be reducing fear of crime. The philosophy of conflict resolution working in the functioning of the *Jirga* is not to locate blame among parties but to resolve the conflict through consensus. This capacity of *Jirga* and firm belief in it by Pakhtun is producing feeling of empowerment and control within the society. Such structural-functional stand of *Jirga* may have an influencing effect for reducing fear among Pakhtun. Although, *Jirga* may not be influenced from any of the conflicting parties, however, if so, then people may lose trust in it and it may lose its status. If so, *Jirga* will not be in a position to exert its influence and will create a gap in Pakhtun society that will be filled by fear, chaos and normlessness. Mosque and *Hujraas* social institutions play significant role in Pakhtun society by providing social space for interaction and we feelings among the members, hence have the potential to improve relations and develop and sustain trust which will result in reduction of fear among the members.

iii) 4.2.3. Public Social Network (PbSN)

The results in Table 3, show that there is a negative relationship between PbSN and fear of crime. Close ties in PbSN decrease fear of crime by .967 times. The odds ratio shows a proportion decrease in fear of crime by 3.3

percent. The results indicate that respondents are somehow satisfied from PbSN. Police and judiciary are contributing to creating a safe and protective environment in society and people contact them in case of unwanted situation and report to them. Such an interactive trust-based environment can be considered social capital produces psychological empowerment and control within the society. Such a milieu has the potential of reducing the feeling of fear within a society. Effective and easily accessible police and judiciary add to the capacity of the people to manage and control criminal tendencies before the eruption of violence.

Contrary to it, ineffective, biased, and non-friendly police might be critical for societal fear. This show that member of a community in which police are responsive and visible will have a low level of fear. Such social ties of citizens to a public institution perhaps lessen the feeling of insecurity and the fear of being easily attacked by someone (Fiedler & Flaming, 2005). In other words, one can deduce that some people might feel safer because of their access to police or to a street where police presence is common while less access or ineffective at dealing with police leads to a greater level of fear of crime in the community. The current results also show that confidence in the police is inversely associated with fear. Similar results are derived by McGarrell (1997), Skogan (2009) where they conclude that individual confidence in police and fear of crime are inversely associated phenomena. We conclude from the results of the present study that strong PbSN decreases fear of crime. The strong social bond among people, police, and judiciary produces protective and supportive strength within the public social network and empowers the society to reduce fear of crime.

Table: 3 Variables in the equation

Variables	B	S.E.	Wald	Df	Sig.	Exp(B)
Private network	-.048	.039	1.475	1	.225	.953
Parochial network	-.014	.024	.351	1	.554	.986
Public network	-.034	.023	2.239	1	.135	.967
Constant	3.257	.789	17.021	1	.000	25.971

Conclusions

This paper examined the association between social networks and fear of crime while using binary logistic regression. The variable of social network is further divided into three parts i.e., Private, Parochial, and Public social networks categorized by Hunter (1985) referred to as dimensions in this paper and treated as three variables. An inverse relationship is observed between the predictor and outcome variables. We conclude that a stronger social network reduces fear of crime. The PrSN, PaSN, and PbSN ties are strong social sources of controlling crime in a community. Stronger bonds

among the family members, parent's children, neighbors, mosque, *hujra*, police, and judiciary empower members to control their environment. In such a community, there is less chance for criminal syndicates to play their dirty game. Hence, the members are less fearful.

The current results are dominantly in line with the available literature. Nevertheless, it was expected that PrSN, PaSN, and PbSN would have a contribution in reducing fear of crime in descending order. However, the first dimension reduces fear of crime by 4.7%, the third dimension contributes by 3.3% while the second one reduces it by only 1.4%. Nevertheless, the difference is not significant enough but we can conclude that Pakhtun society is undergoing a paradigm shift with reference to reliance on public social network more than on parochial one.

No study is without limitation(s), the present study is conducted in the second largest district of Khyber Pakhtunkhwa namely Mardan, however, the respondents are not selected from certain specific areas of the district hence, the results could not be compared geographically within the district. It is suggested that future studies may select different areas within the district in order to compare the results. Further, the data is cross-sectional where it might not cover different time phases, therefore, it is suggested that time-series data may provide an accurate picture of the district with reference to fear of crime over time. It is also noted that all the respondents are somehow from similar socio-economic status; therefore, variations in results may not be significant.

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