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Research Article

The Role of Bonding Social Capital in Hard Times

Zor Zamanlarda Bağlayıcı Sosyal Sermayenin Rolü

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Özet: Bu çalışmanın amacı, Türkiye'de koronavirüs pandemisi sırasında bağlayıcı sosyal sermayenin yaşam memnuniyeti, yalnızlık hissi ve kaygı üzerindeki etkisini değerlendirmektir. Analizler için veriler çevrimiçi bir anket aracılığıyla toplanmıştır. Örneklem, en az üniversite eğitimi almış ve en az bir enfekte yakını olan 711 kişiden oluşmaktadır. Yapısal eşitlik modelinde, enfekte akrabaları olan iyi eğitimli kişiler arasında yaşam memnuniyetinin bağlayıcı sosyal sermaye arttıkça arttığı görülmüştür. Buna ek olarak, analizler bağlayıcı sosyal sermaye ile yalnızlık hissi arasında güçlü bir negatif ilişki olduğunu ortaya koymuştur. Benzer şekilde, bağlayıcı sosyal sermaye ile koronavirüse bağlı kaygı arasında da negatif yönlü güçlü bir ilişki vardır. Başka bir deyişle, Türkiye'de yakın sosyal ilişkiler bir yandan enfeksiyon riskini artırırken, diğer yandan kaygıyı azaltmaya yardımcı olmaktadır. Dolayısıyla, bir toplumda fiziksel mesafeyi zorlarken sosyal bağların olumlu etkisinin farkında olmak önemlidir. Bu ilişkilerin dijital teknolojiler gibi mecralar üzerinden sürdürülmesi pandeminin yol açtığı sorunlarla baş etmeyi kolaylaştıracaktır.

Anahtar Kelimeler: Bağlayıcı sosyal sermaye, yaşam memnuniyeti, yalnızlık, anksiyete, koronavirüs

Abstract: The purpose of this study is to assess the effect of bonding social capital on life satisfaction, feeling of loneliness and anxiety during the coronavirus pandemic in Turkey. The data for the analyses was collected through an online survey. The sample comprises 711 individuals with at least a college education and at least one infected relative. In the structural equation model, among the well-educated with infected relatives, life satisfaction increases with increasing bonding social capital. In addition, the analyses revealed a strong negative relationship between bonding social capital and the feeling of loneliness. Similarly, there is a strong negative relationship between bonding social capital and anxiety due to coronavirus. In other words, close social relations in Turkey increase the risk of infection on the one hand, but help reduce anxiety on the other hand. Thus, it is important to be aware of the positive impact of social bonds while enforcing physical distancing in a society. Maintaining these relations through mediums such as digital technologies will make it easier to cope with the problems caused by the pandemic.

Keywords: Bonding social capital, life satisfaction, loneliness, anxiety, coronavirus

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Introduction

The remote mountain town of Keles with a population of 12,000, located in the province of Bursa in Turkey, seemed unaffected by the coronavirus outbreak until May of 2020. After the initial 14 cases, there were no new cases in the town for a while. However, by the beginning of the holy month of Ramadan there were two new cases, which prompted the town mayor to declare that he would initiate additional precautions and restrictions. According to the mayor, the main reason for concern for a second wave in the town was the increase in the frequency of family visits and gatherings to break fast together in the evenings due to Ramadan. Like any remote town in Turkey, many in Keles have family members who had migrated to the large metropolitan areas. These family members regularly visit on special occasions such as Ramadan. In fact, the two news cases in the town were attendees to one of such family dinners[1]. This anecdote is a small example of how family dynamics and networks continued to function as usual during the pandemic in Turkey. Many studies on Turkish society confirm the power of close social relations and their prevalence in daily life (Aytaç, 1998; Kalaycıoğlu & Rittersberger – Tılıç, 2000; White, 2004).

The role of close social relations, exemplified in the case of Keles, during the coronavirus pandemic in countries such as Turkey is frequently debated. In situations where medical services are not developed, social relations become an important predictor of the spread of virus (Van Bavel, et.al., 2020). In sociology of health and health behavior literature, such social relations are often analyzed under the term "social capital" (Gönç-Şavran, 2018; Kawachi, et. al., 2008; Murayama, et. al., 2012). Social capital is a multidimensional term that covers social relations such as primordial bonds, civic participation and affinities (Burt 2001; Field, 2003; Lin, 2001; Portes,1998, 2000; Putnam, 2000; Szeter & Woolcock, 2004). To overcome the fluidity of the term, researchers usually prefer to differentiate sub-dimensions and point out to possible negative impacts of social capital (Macinko & Starfield, 2001; Szeter & Woolcock, 2004). Bonding social capital is one of the most important yet controversial of such differentiations as it comprises both the positive and negative outcomes (Ferlander, 2007; Field, 2003).

There have been significant number of studies that revealed a negative relationship between the bridging and linking dimensions of social capital and the spread of coronavirus (Bartscher, et.al., 2020; Borgonovi & Andrieu, 2020; Durante, et.al., 2020). However, strong social relations that constitute the bonding social capital are usually seen as epide-

1 "Keles Belediye Başkanı: Son Korona Vakaları, İftardan Kaynaklı", http://www.bursadabugun.com/haber/bursa-keles-belediye-baskani-son-korona-vakalari-iftarlardan-kaynakli-1285783.html

miological barriers against "social isolation" methods. The political representations of this view go as far as what Agamben (2020) labels as "*an extreme-state of-exception*". As a matter of fact, similar to Keles case, some have pointed out to the frequency of gatherings where people meet with their close social relations (e.g. religious gatherings and family dinners) as factors that caused Italy and Spain to be the early-epicenters of the pandemic in Europe (Balbo,et.al, 2020; Lavezzo, et.al, 2020; Mogi & Spijker, 2020; Oksanen, et.al, 2020). However, even with these risks, experts including the WHO emphasize the role of close social relations in reducing the anxiety of infected people and their loved ones, preserving their well-being and controlling the spread of the virus (Pitas & Ehmer, 2020; Smith & Him, 2020; Van Bavel, et.al., 2020). Despite these expectations, apart from a limited number of studies (Bian, 2020; Jones, et.al., 2020; Noy, et.al., 2020), the advantages that bonding social capital can provide during the pandemic have not been explored. This study aims to investigate the effect of bonding social capital during the pandemic.

Although bonding social capital has both structural and cognitive components as in other dimensions of social capital (Almedom, 2006); the cognitive support is more at the forefront (Ferlander, 2007). An advantage of focusing on cognitive support is its role when establishing causal relationships. These relationships usually comprise pyscho-social mechanisms. The increase of life satisfaction (Ateca-Amestoy, et.al.2014; Chu, et.al., 2018; Elgar, et.al, 2011; Mennon, et.al., 2015) and decrease of the feeling of loneliness (Green, et. al., 2001; Nyqvist, et. al., 2013; Routasalo, et. al., 2006) emerge as the important outcomes.

However, this impact of bonding social capital is usually seen limited to resources that help people survive in hard conditions. As a result, the relationship of this impact to class advantage has been fuzzy. There are two alternative views in this regard. The first view prioritizes the resource diversity that more educated people can access. Inspired by Granovetter's (1973) "weak ties", it postulates that better educated need bonding social capital less since they are able to use alternative resources. For this reason, it is seen as a resource utilized by the less advantageous classes (Briggs, 1998; Zhang, et.al., 2011). The alternative, relational resource use view, depends on findings that the better educated have a comparative advantage in utilization of bonding social capital as in the utilization of other types of resources (Eriksson, et.al., 2010; Rose, 2000; Rojas & Carlson, 2006). It is important to know which of these competing outcomes were realized during the pandemic. In countries such as Turkey where the collectivist currents are strong (Lee, 2020) and the other dimensions of social capital are weak (Bjornskov, 2006; Cenker-Özek, 2017; GSCI, 2019), bonding social capital is an important resource.

Another important question that should be addressed about bonding social capital is its sustainability. The findings from the community resilience literature suggest that the sustainability of the resources provided by bonding social capital is questionable (Aldrich

& Meyer, 2015; Hawkins & Maurer, 2010). In addition, most of the studies have been conducted in countries where the infectious disease loads are low (Borgonovi & Andrieu, 2020). When the disease load increases during a pandemic, the content and meaning of social relations may transform. Although educated middle and upper-middle classes are able to use their resources in a more sustainable way, it is not known if this is the case during the pandemic. The emotional support provided by relationships of solidarity is not unlimited. Moreover, it may not produce the expected results as the problems become more serious. The prolongation of the pandemic can weaken the social support including among the well-educated (Haas, et.al., 2010; Snelling, 1994). For this reason, it is critical to assess if bonding social capital retains its known benefits during the pandemic, which possibly causes heavy social and psychological problems.

To address this gap in our knowledge, this study investigates the cognitive effects of bonding social capital when dealing with the anxiety related to the pandemic among the educated people in Turkey who has at least one infected relative. The study comprises a sample of 711 individuals who participated in an online survey. This study argues that bonding social capital has two indirect cognitive impacts among the individuals with infected relatives. First, bonding social capital prevents the decline in life satisfaction. Second, it also prevents the feeling of loneliness. Thus, the anxiety pertaining to the pandemic is expected to be lower among the individual with high bonding social capital through these two mechanisms. In the following sections, first the potential effect of social capital during pandemic will be discussed. Then, the role of strong social relations in Turkish society during the pandemic will be assessed. Finally, the hypotheses created in the process will be tested using the survey data.

Bonding Social Capital: Potential Benefits and Risks of Strong Social Ties and Their Relationship with Life Satisfaction and Loneliness

Social capital is an important resource in pandemic conditions that can shape the rate of spread, adaptation of preventative measures and alleviation efforts (Chuang,et.al. 2015; Jung, et.al.,2013; van der Weerd, et.al., 2011). When establishing a link between social capital and health, researchers often utilize the differences between its dimensions (Beaudoin,2009; Kim, et.al.,2006). In this regard, social capital is differentiated as bonding social capital that reflects the solidarity among primordial groups with a shared identity, as bridging social capital that points out the horizontal links between individuals from different social groups, and as linking social capital that links groups and organizations (Putnam, 2000; Szeter & Woolcock, 2004). In addition, its effects within these dimensions are differentiated as structural and cognitive consequences (Almedom, 2006; Forsman, et.al., 2012; Nyqvist, et.al., 2014).

The impact of bonding social capital derives from its basis in homogenous social relations. However, as Mc Pherson et.al. (2001) state, the main problem with homogenous

social relations is that "Homophily limits people's social worlds in a way that has powerful implications for the information they receive, the attitudes they form, and the interactions they experience". For his reason, according to many, bonding social capital strengthens the feeling of solidarity and makes division of labor easier rather than proliferating resources (Burt, 2001; Granovetter, 1973; Lin, 2001). However, these relations do not always create positive outcomes. Strong bonding social relations can lead to negative sanctioning of norms, limits on individuality, increase in responsibilities and role strain (Portes, 2000; Villalonga-Olives & Kawachi, 2017).

Concerning health, social capital is believed to affect four areas. These are information and knowledge sharing, strengthening of norms, social-psychological support and ease of access to health facilities (Beaudoin,2009; Kim,et.al., 2006). There have been noteworthy studies that link bonding social capital to "health literacy" (Kim, et.al., 2015; Sentell, et.al., 2017). In fact, during the H1N1 pandemic bonding social capital was shown to have significant effects on vaccination, access to treatment, access to accurate information and adherence to the advice by experts (Jung,et.al., 2013). As a result, it emerged as one of main factors that decreased preventable hospital admissions (Derose & Warda, 2009). One of main problems during the coronavirus pandemic in many countries, including the developed ones, has been the strain on the capacity of health systems and facilities. To alleviate this, bonding social capital becomes an important resource like any other avenue that helps in providing accurate information to the public. Another key issue is testing. The ubiquity and availability of testing has been one of the factors that determined the success of the fight against the virus (Peto, 2020). Some studies on HIV testing revealed that high levels of bonding social capital has increased the likelihood of testing (Sen,et.al., 2010). However, this closed circuit information sharing within groups can also have the opposite effect. During a Measles – Rubella outbreak in Tamil-Nadu in India, parents who rejected vaccination had high bonding social capital (Palanisamy, et.al., 2018). Moreover, in-group communication can also lead to the preference of traditional remedies over modern treatments (Amoah, et.al.,2018).

The studies that show the positive impact of bonding social capital on health behavior are also noteworthy. The norms that affect the consumption of tobacco and alcohol (Aslund & Wilson, 2013), frequency of physical activity (Ueshima, et.al., 2010) and healthy eating habits (Mieziene, et.al., 2019) can have a positive impact on immunity during pandemic (Bian, 2020). Abiding by preventive measures can help curb the spread of the disease. During the H1N1 outbreak, bonding social capital was instrumental in adaptation of habits such as wearing masks and washing hands regularly (Chuang, et.al, 2015). However, within the groups where negative norms are dominant the effect can be reversed. For example, Carpiano (2007) shows that in groups where smoking and alcohol consumption is widespread, bonding social capital can turn into a negative risk factor for health.

When differentiating bonding social capital as a structural and cognitive resource the importance of structural effects for disadvantaged groups becomes apparent. The view labeled as the "buffer hypothesis" (Uphoff, et.al., 2013) refers to the impact of bonding social capital in removing economic and cultural barriers for health and welfare outcomes. This view attracted some attention among scholars (Poortinga, 2006; Rose, 2000). In the pandemic conditions, such effects can be established for cognitive aspects too. In the fight against HIV, bonding social capital has been one the sources of societal resilience (Thomas-Slayter & Fisher, 2011). In the US, HIV infections are more common among individuals more vulnerable economically and socially. This makes it harder for these people to access treatment as well as creating effects such as PTSD that decrease the success rate of treatments (Pellowski, et.al., 2013).

Another advantage of focusing on cognitive effects is the contribution of strong social relations in establishing causality. This way the effect of bonding social capital becomes clearer. Even in studies that try to establish causal relationships using structural dimensions, the cognitive processes are utilized as mechanisms. The well-known view in this regard is the psycho-social distress theory. This view, which is based on the "community" debate in sociology (Bauman, 2001), also assumes that social parameters tied to social stratification types is the source of social stress (Aneshensel, 1992). Bonding social capital increases the frequency of communication among close relations. Intense communication increases the reciprocity and responsibilities among members. However, in order to show the burden that is created by the responsibilities, psycho-social variables such as weakening of mastery are utilized (Moore,et.al., 2009). Especially in environments where group resources are limited, it is argued that bonding relationships will suppress benefits and increase responsibilities (Mitchell & LaGory, 2002). Thus, many studies that find a negative relationship between bonding social capital and mental health emphasize this causal mechanism (Almedom, 2006). These effects may repeat themselves during the pandemic. Especially among the individuals with infected relatives, the risk of infection because of intense interaction as well as the expectations and responsibilities may create feelings of being under intense pressure. This in turn may increase anxiety.

As opposed to this, there is a wide literature that emphasizes the emotional support created by the cognitive form. The emotional support literature helps us understand why WHO and experts on epidemiology prioritize the continuation of strong social relations. However, these effects have not been assessed comprehensively within the context of the coronavirus pandemic, and the dark side of the bonding social capital has been more at the forefront. Yet, a limited number of studies attempted to show the positive impact of bonding social capital during the pandemic. Jones,et.al. (2020) show that in the case of Bristol, bonding social capital defined as neighbor relations not only eased the access to food and

medicine during the lockdown, but also improved the morale among respondents including the elderly. Bian (2020) contends that bonding social capital helped individuals to maintain physical and mental health during the pandemic. Noy et.al. (2020) argue that bonding social capital will be one of the key resources in dealing with economic loss due to the pandemic. In addition, bonding social capital is possibly one of the few resources to deal with psychological crises of the pandemic period because of its potential to create emotional support and improve well-being (Duan & Zhou, 2020). Widespread and elevated anxiety makes fighting the pandemic harder (Asmundson & Taylor, 2020). For his reason, the existence of mechanisms that alleviate this anxiety is vital. The most commonly used psycho-social variable to illustrate the mechanisms of the cognitive effect of bonding social capital is life satisfaction. The research has shown that although bonding social relationships increase life satisfaction their effect is less pronounced compared to bridging ones (Ateca – Amestoy, et.al., 2014; Li, et.al., 2005). Many studies show that the positive impact of strong bonding social capital relationships on life satisfaction creates psycho-social effects that decrease anxiety. This effect was shown among different demographic groups such as college students (Kong, & You, 2013; Lee, et.al., 2018; Mahmood, et.al., 2015), migrants (Silveria & Allebeck, 2001; Brailovskaia,et.al., 2019) and the elderly (Headey, et.al., 1993; Tomini, et.al., 2016). The magnitude effects in these studies vary according to the structural and compositional characteristics. In addition, the positive link between bonding social capital and life satisfaction and the negative link with anxiety is not independent from economic resources. However, some studies have shown that bonding social capital can improve life satisfaction independent of economic conditions (Mennon, et.al., 2015).

The impact of bonding social capital on anxiety is not limited to life satisfaction. Another important connection is usually made with feelings of loneliness. Although there are some studies that argue that the feeling of loneliness will decline as result of people working and attending school from home (Tull, et.al., 2020), many expect that among the elderly and other vulnerable groups the feeling of loneliness and health problems due to this will increase during the pandemic (Armitage & Nellums, 2020; Banerjee & Rai, 2020). For this reason, the impact of bonding social capital on the feeling of loneliness becomes important. Bonding social capital's effect on loneliness varies according to the structure of the network, similar to its effect on life satisfaction. In general, the existence of multiple strong social relationships can have more clear effects in decreasing the sense of loneliness (Litwin, 2001). For this reason, strong social relationships weaken the correlation between anxiety and the sense of loneliness. However, there are also those who claim that life span is more decisive in this regard. Among the youth, the extensiveness of the relationships is more important for decreasing anxiety while among the elderly it is the intensity (Green, et.al., 2001).

When you take into consideration the duration of health problems the cognitive support of strong close relationships is not infinite. Compared to short-term effects of structural support, the cognitive support provided by bonding social capital is effective at least until the medium terms although it weakens in the long term (Wind, et.al., 2011; Cook & Bickman, 1990). The studies show that individual characteristics and composition of networks are important in creating these effects. Especially the level of education shapes the ways that people use the bonding social capital resources (Kim, et.al., 2006; Moore,et.al., 2009; Rojas & Carlson, 2006). However, the direction of the impact of education is not always certain. The studies done on the well-educated can be divided into two.

The first view can be labeled as resource diversity. Following the buffer hypothesis, it is thought that bonding social capital provides "getting by" resources, as Putnam (2000) puts it, to disadvantaged groups. In contrast, inspired by Granovetter's (1973) "weak ties", well-educated people are thought to have easier access to "getting ahead" resources. When individuals' ability to access different types of resources increase, the marginal benefit of bonding social capital declines. In addition, as homophily principle (Mc Pherson,et.al., 2001) states, the well-educated are expected to have less intense reciprocal relations with their peers. Therefore, bonding social capital may be limited for these groups. However, homophily does not always define network relations. Wegener (1991) points out the importance of assessment of network relations heterogeneously. In daily life the well- educated are more likely to be part of the same networks as the less educated. This creates a hierarchy within networks. In addition, it is more likely for the well-educated to play the role of "linking-node". However, it is possible that the well-educated may refrain from bonding social capital relationships. As the Psycho-Social Pressure hypothesis assumes that the linking node position may increase the role strain.

This view has an empirical basis at the individual and societal level. Maas,et.al. (2016) argues that in Scandinavian countries, which are highly developed and have extensive public health systems, the effect of bonding social capital on health outcomes is weaker. At the individual level, Haseda, et.al. (2018) argues that in Japan bonding social capital creates positive externalities for the general population, but its effect is less clear among the well-educated since these individuals have a higher ability to mobilize alternative resources. In contrast, for the disadvantaged, bonding social capital is vital since their access to resources is limited.

The second view is close to the Bourdieusian social capital theory (Rojas & Carlson, 2006; Paccoud, et.al, 2020) and can be defined as *relational resource use* (Rojas & Carlson, 2006; Paccoud, et.al, 2020). According to this view, the ability of the well-educated to use alternative resources determines the returns from the close and strong social relationships. The power of economic and human capital cannot be assessed independently of bonding social capital. Actually, the well-educated are assumed to benefit more from social capital

because of their higher human capital and better economic conditions. This view also has some empirical support (Eriksson, et.al., 2010; Rose, 2000; Rojas & Carlson, 2006).

Bonding Social Capital and Turkish Society during Coronavirus Outbreak

There are studies that show the effect of bonding social capital about life satisfaction and feeling of loneliness in Turkey as well. (Yalçın, 2015). In line with the buffer hypothesis, defined as one of the countries without a mature welfare state (Buğra & Adar, 2008), the network relations in Turkey performed as familiar mechanisms that substitute a comprehensive welfare system. During the rapid migration from the countryside to urban areas in the second half of the 20th century, social networks played a vital role filling the gap left by limited formal regulations and resources. This led to the prominence of primordial ties such as neighborhood and kin relations and even fictive kin relations in daily life (Dubetksky, 1976; Karpat, 1976; Magnarella & Türkdoğan, 1973; White, 2004). For this reason, it can be argued that Turkey is an example of how social networks assume the role of survival strategy in countries outside the Western capitalism (Bayat, 2000).

However, the network relations that constitute bonding social capital have functions beyond these in Turkish society. First, the strong network relations are not limited to disadvantaged groups, but are also visible among the middle classes (Güneş-Ayata, 1996; White 2004). As a result, when considering Turkish cities the resource variety assumption for the well-educated is not wholly applicable. The solidarity effect of network relations functions in a way that makes it harder to exclude the well-educated. Another unique characteristic of network relations in Turkish cities is that the in-network relations are extensive and intense at the same time. The studies show that in large cities in Turkey more than half of the population reside in the immediate vicinity of their relatives. If you combine ethnic and other local connections, these ratio goes even higher. A majority of the urban dwellers, especially women, spend most of their time within the physical boundaries of strong social relations (Güneş-Ayata, 1996; Kalaycıoğlu & Rittersberger- Tılıç, 2000). Because of these extensive and intense interactions social rituals not only fortify norms, but also enable functional emotional solidarity. As a result of activities such as religious worship (Özcan, 1994), the reception days among women (Wolbert, 1996; Bilecen, 2019), weddings (White,2004) and funerals (Barış & Ataman, 2019) become extensions of social solidarity. These activities are not only representations of the values of a collectivist culture, but are also mediums of solidarity that people feel obliged to maintain.

However, epidemiologists are worried about these extensive and widespread interactions where physical contact is common. They see the fluctuations in case loads in Turkey as a direct consequence of people's unwillingness to delay social rituals and the lack of social

distancing in these events (Hurriyet Daily News, 2020). The physical contact necessitated by social networks is not limited to these rituals. Although the nuclear family is dominant in contemporary Turkish society, members of these nuclear families spend a significant portion of their daily lives in close contact with extended family members. The results of ISSP (International Social Survey Program) surveys show that Turkey is ranked number 1 in frequency of visiting parents and number 4 in terms of frequency of visiting siblings (Çarkoğlu & Kalaycıoğlu, 2020). Many in large cities live in the same apartment building or neighborhood with their relatives. In this setting, dining or having tea together or meetings during the weekends happen regularly. Although these interactions are known to increase the risk of infection, the economic hardships created by the pandemic conditions may necessitate bringing family members together (Çarkoğlu, 2020). These interactions also include intense inter-generational physical contact (Kalaycıoğlu & Rittersberger-Tılıç, 2000). This situation creates specific risks for the elderly as it did in familiar societies such as Spain and Italy. Moreover, these risks are not limited to disadvantaged groups. Many employed middle class individuals regularly use their own parents as substitutes for day care for their children (Ecevit, 2010). As a result, intense physical contact becomes inevitable for middle classes as well, increasing the rate of infection.

The epidemiological risks created by extensive and intense network relations in Turkish society causes many to overlook the advantages provided by these. The study of these advantages is also important to understand why many people in society insist on continuing their social relationships. The role of social networks during the pandemic in Turkish society has not been analyzed in depth. However relations that correspond to bonding social capital have been effective tools in dealing with long term health problems (Filazoğlu & Griva, 2008; Kara & Mirici, 2004; Yılmaz,et.al., 2017) and natural disasters (Altındağ,et.al., 2005; Kasapoğlu, et.al., 2004). Few studies conducted on the matter confirms the positive role played by social networks (Koçancı, 2020). In addition, it is problematic to see social relations as the single source of the deviation from public health rules. From a behavioral economics point of view, incompliance with social isolation rules also emerges as an example of the free-rider problem. The only way to decrease the social costs that may emerge is the existence of social relations that strengthens norms (Kahn & Costa, 2020). Thereby, bonding social capital relations has the potential to improve compliance with rules as much as causing people to break them.

In addition, the fact that bonding social capital is the dominant form of social relations provides structural opportunities during the pandemic. In this context, most of the communication in daily life happens within the networks while interaction with anonymous resources have a limited role. the aforementioned ISSP study shows that Turkey is the second from the last in terms of number of people interacting daily, especially among the wom-

en (Çarkoğlu & Kalaycıoğlu, 2020). The relative scarcity of anonymous contacts makes the contact tracing of infected individuals easier. In Turkey, contact tracing and filiation has a unique place in its fight against the virus (Demirtaş & Tekinel, 2020). Turkey is one of the few countries that approach the goal of testing five contacts of infected individuals, as set by WHO, with an average of 4.5 tests (Koyuncu, 2020). In addition, the ubiquity of bonding social capital made the curfews implemented on individuals aged 65 and above more manageable (Demirbilek, et.al., 2020). Although the use of technology and internet shopping is low among the elderly, they were able to acquire their basic needs without leaving their residences through bonding social capital relations. The lower rates of death in Turkey is partly a result of these precautions, which were enabled by bonding social capital relations. Although much of this support has been in the structural form, it is important to assess the cognitive aspect especially about dealing with anxiety.

Hypothesis of Study

Although the structural basis of bonding social capital in Turkish society is wide, the cognitive resources have not been properly analyzed. In the study, the magnitude of these effects will be shown among the well-educated individuals with infected relatives. The structural bases of bonding social capital are expected to affect the anxiety levels as in the cases of long-term health problems and disasters. The resources provided by bonding social capital minimize the economic risks and help with access to health facilities and services. Among the educated people in Turkey, the role of bonding social capital cannot be disregarded when accessing such resources. To complement these structural bases, the power of cognitive elements will be assessed utilizing the variables such as "life satisfaction" and "loneliness", which are widely used in the literature. This study expects that bonding social capital will prevent the decline in life satisfaction and the feeling of loneliness among the individual with infected relatives. To this end:

H_1H_1: Bonding social capital increases life satisfaction among the well-educated with infected relatives in Turkish society.

H_2H_2: Bonding social capital decreases the feeling of loneliness among the well-educated with infected relatives in Turkish society.

H_3H_3: The increase in life satisfaction and the decline in feeling of loneliness will decrease the anxiety due to pandemic among the well-educated. Concerning anxiety during the pandemic, bonding social capital plays an indirect role. Thus, the relational resource use approach is valid.

$H_{3a}H_{3a}$: Among the well-educated with infected relatives there is a negative relationship between life satisfaction and anxiety related to coronavirus.

$H_{3b}H_{3b}$: Among the well-educated with infected relatives there is a positive relationship between feeling of loneliness and anxiety related to coronavirus.

$H_{3c}H_{3c}$: The level bonding social capital of the well-educated with infected relatives indirectly affects the anxiety related to coronavirus negatively.

Data and Methods

Data Source

An online survey was conducted using Google Forms to assess the psycho-social impacts of coronavirus pandemic in Turkey. The survey was announced using several social media platforms. The data used in analyses comes from this survey. One of the questions in the survey asked if respondents had a relative who contracted coronavirus. Among the respondents who said yes, individuals with at least college education were selected (n=711).

Table 1 presents descriptive statistics. Respondents originate from 33 provinces in Turkey. Majority of the respondents (%84.6) are from large metropolitan areas (population of one million or more) and overall %94,9 live in urban areas. Around a third of the sample has a bachelor's degree while the rest have graduate degrees. There are slightly more men in the sample then women. The average age is 33.99. The respondents' ages range between 19 and 81, but most of the respondents were aged 44 or less. %77.3 of respondents live in households of 4 or less people and the average household size is 3.58. Most of the respondents report that they see themselves in middle or upper-middle income level.

Measures

Bonding social capital scale: In order to measure bonding social capital 8 questions were developed using the 4 questions from Chen,et.al.' (2009) Personal Social Capital Scale that measures bonding social capital. The primordial relationships in the scale ("family members", "relatives", "neighbor", "friends", "co-workers" and "old-classmates") were measured with a 5 point agree- disagree (1-none / 5-all) scale in terms of number, keeping routine contact, trust and help upon request. These questions are: (i). How do you rate the number of your friends?, (ii). How do you rate the number of your old classmates?, (iii). How many can you trust your relatives?, (iv). How much can you trust your co-workers?, (v). How many people in your family numbers, your neighbor, your friends and your co-workers do you keep in routine contact?, (vi). How many people in your family members and relatives do you keep in contact?, (vii). Among people in your co-workers, how many will definitely

help upon your request?, (viii). Among people in your friends, how many will definitely help upon your request?'. Internal consistency of the scale is high (Cronbach's $\propto$ = 0,81).

Loneliness scale: To measure loneliness UCLA Loneliness Scale – Short version 8 item (ULS -8) (Hays & Di Matteo, 1987; Bozkurt, 2018) is used. The 20-item version of the index is hard to implement while the 4-item ones carries information loss risk. The 8-item version has fewer problems. In the survey, respondents answered the first seven questions with a 5 point agree- disagree scale. Internal consistency of the scale is high (Cronbach's $\propto$ = 0,90).

Table.1. *Descriptive Statistics*

Female (%)	59,2	Age [24-] (%)	24,2
Male (%)	40,8	Age [25 – 34] (%)	32,3
Living in metropolitan Areas (%)	84,6	Age [35- 44] (%)	22,9
Living in cities (%)	10,6	Age [45+] (%)	20,4
Living in rural areas (%)	4,8	Age ($\bar{x}$)	33,99
Lower income (%)	4,6	Household size [4-] (%)	77,3
Lower middle income (%)	17,3	Household size [5+] (%)	22,7
Middle income (%)	51,3	Household size ($\bar{x}$)	3,58
Upper middle income (%)	25,2	Graduate (%)	66,1
Upper income (%)	1,5	Post-Graduate (%)	33,9

Life satisfaction scale: Life satisfaction ise measured by Diener, et.al.' (1985) 5-item satisfaction with life scale (SWLS). The scale is applicable to all age groups and can solely measure life satisfaction. Again respondents were asked to evaluate items in the scale using a 5 point agree- disagree scale (Cronbach's $\propto$ = 0,87).

Anxiety related to coronavirus (ArC): In order to measure anxiety levels of respondents, 7 questions were asked. The questions intend to measure anxiety in different aspects of daily life. Respondents answered seven questions using a 5 point agree-disagree scale. The questions were: (i). My uneasiness increased during the coronavirus outbreak, (ii). I feel such difficulty when doing daily work during the coronavirus outbreak, (iii). I became more angry and irritable during the coronavirus outbreak, (iv). I feel lost to a sense of control over my life during the coronavirus outbreak, (v). I am always feeling tired and exhausted during the coronavirus epidemic, (vi). My sleep quality deteriorated during the coronavirus outbreak, (vii). I feel imprisoned during the coronavirus outbreak ($\propto$ = 0,88). Items are also suitable for factor analysis (KMO test = 0,90; p=000; Bartlett's sphericity test [$x^2 x^2$/df]= 2231,753 /21; p=,000).

Data Analysis

Variables in the survey (except the demographic variables) will be first subjected to Pearson correlation analysis. This way the relation of bonding social capital with life satisfaction, loneliness and anxiety will be revealed. After that, the direct and indirect effect of bonding social capital among the well-educated will be measured using four variables. We expect that that effect will happen through life-satisfaction and loneliness as stated above. The structure of interactions will be tested using a structural equation model (Bryne, 2013) using AMOS'23. Table 3 presents General Model's goodness of fit indices.

Internal consistency of the latent variables in the modes is measured with confirmatory factor analysis. Table 3 shows that internal consistency criteria were met for all variables. However, in all confirmatory factor analysis models, covariates were detected among items. In confirmatory factor analysis on bonding, social capital covariates were added between (i). How do you rate the number of your friends? and (ii). How do you rate the number of your old classmates?; (v). How many people in your family numbers, your neighbor, your friends and your co-workers do you keep in routine contact? and (vi). How many people in your family members and relatives do you keep contact with?, and (vii). Among people in your co-workers, how many will definitely help upon your request?, and (viii). Among people in your friends, how many will definitely help upon your request? In confirmatory factor analysis on loneliness a covariate was added between items (i). I lack championship items and (ii). There is no one I can turn to. Finally, in anxiety related coronavirus measures a covariate was added between items (vi). My sleep quality deteriorated during the coronavirus outbreak and (vii). I feel imprisoned during the coronavirus outbreak. This way the measure is created in the model. Following this a structural model is established. Results from this are shown in Figure 1 (The details of interactions among variables in the model is given in the appendix). Finally, the direct and indirect relations between these variables will be presented in Table 4.

Results

Table 2 presents the Pearson correlations among variables. As expected, there are significant correlations between all variables providing the basis for hypotheses above. There is a moderate level relationship between bonding social capital and life satisfaction (r=,314, n=711, p<,001). Again as expected, there is a moderate level negative relationship between bonding social capital and loneliness (r=-,473, n=711, p<,001) and ArC (r=-,198, n=711, p<,001). Similarly, there is a moderate negative correlation between life satisfaction and these two variables (loneliness - r=-,310, n=711, p<,001; ArC – r=-,247, n=711, p<,001). However, there is a moderate level positive correlation between loneliness and ArC (r=,251, n=711, p<,001).

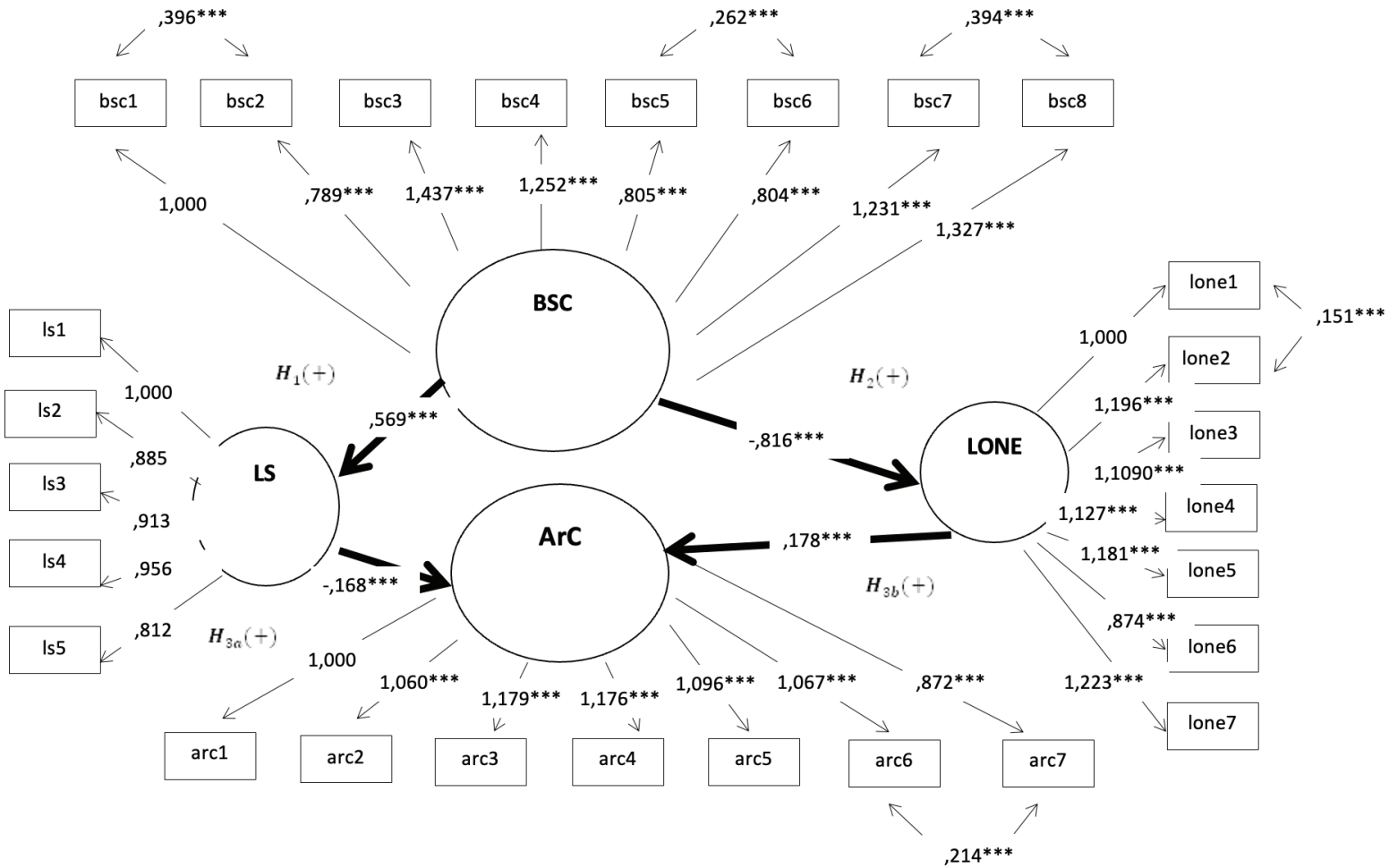

Figure.1. SEM Results

***p<,001*

Table.2. *Means, standard deviations and Pearson correlations coefficients*

Variable	M	SD	1	2	3	4
1. bonding social capital	2,83	,740	-			
2. life satisfaction	3,02	,917	,314***	-		
3. loneliness	2,15	,870	-,473***	-,310***	-	
4. ArC	3,14	,993	-,198***	-,247***	,251***	-

***p<,001

Before conducting the SEM analyses, the internal consistency of latent variables was tested with a confirmatory factor analysis. This was a measurement model. After adding 3 covariates to model on bonding social capital, and 1 each in models on loneliness and ARC an acceptable model consistency was achieved. All the values regarding this are listed in Table 3.

Table.3. *Research model goodness of fit values*

	x^2	df	$x^2 x^2/df$	GFI	CFI	RMSEA	SRMR
model	754,475	315	2,395	,928	,952	,044	,0494
bonding social capital	71,154	17	4,186	,976	,969	,067	,0367
Loneliness	67,652	13	5,204	,972	,980	,077	,0249
life satisfaction	23,833	5	4,767	,986	,989	,073	,0188
ArC	60,672	13	4,667	,976	,979	,072	,0276

After the measurement model was created, it was subjected to SEM analysis for multi-variable analysis. As seen in Table 3 the consistency values of the structural model is at an acceptable level. The summary of the model is presented in Figure 1 and the details in the Appendix. According to the model, life satisfaction increases with increasing bonding social capital among the well-educated individuals with infected relatives. As a result, it can be argued that the relationship with life satisfaction holds during the pandemic. Although the infection of relatives creates risks, social relations that correspond to bonding social capital prevents the decline in life satisfaction. This supports the hypothesis $H_1 H_1$.

It is mentioned above that there have been findings that bonding social capital can weaken the feeling of loneliness. The results suggest that this effect existed among well-educated people in Turkey during the pandemic. Hypothesis $H_2 H_2$ states that increasing bonding social capital should decrease the feeling of loneliness. The results of analyses support the hypothesis.

The expectation that loneliness and life satisfaction will have reverse impacts of ArC is also confirmed by the analysis. As expected, loneliness level had a moderate significant positive

impact on ArC. This supports hypothesis $H_{3a}H_{3a}$. $H_{3b}H_{3b}$. postulated a negative relationship between ArC and life satisfaction. The analysis provides a moderate level support for this. $H_{3c}H_{3c}$ stated that the strong cognitive effects of bonding social capital are increasing life satisfaction and decreasing the feeling of loneliness, and its effect on ArC would be indirect. Table 4 shows that, although the significance level is not as strong as direct effects (p<,005), there is a negative relationship between the two. This supports $H_{3c}H_{3c}$ and suggests that bonding social capital decreases ArC. It should be emphasized that the coefficient of the indirect relationship between ArC and loneliness is larger than the coefficient for ArC and life satisfaction. So, during the pandemic among the well-educated with sick relatives, the path of decreasing ArC is through weakening the feeling of loneliness.

Table.4 *Standardized specific indirect effect*

	Estimate	SE	P
BSC→ArC via LS	-,095	,001	<,005**
BSC→ArC via LONE	-,145	,002	<,005**

BSC= bonding social capital, LONE=loneliness, LS=life satisfaction, ArC=anxiety related coronavirus.

***<,005

Overall, results confirm that bonding social capital's decreasing effect of anxiety during the pandemic among the well-educated with sick relatives in Turkey. This supports the "relational resource use" view concerning bonding social capital resources among the well-educated.

Conclusion

Close social relations have been perceived as epidemiological risks that increase the rate of spread during the pandemic in Turkey. In fact, at a closer look it becomes clear that most people were infected through their close social relations. However, the positive effect of close social relations have been emphasized during natural disasters including the pandemics. These relations are especially important in decreasing anxiety levels. It is also known that there is a relationship between limiting anxiety and alleviation of the negative economic and social consequences of the pandemic. The social cost of pandemic does not comprise just the spread of virus but also includes the psycho-social effects that endure after the pandemic is over. Aware of this effect, WHO and experts point out to the positive impacts of socialization where social relations are not disregarded but instead strengthened. These effects are especially important for individuals who have a heightened sense of anxiety due to infected relatives.

This study aimed to assess the cognitive effects of bonding social capital on the well-educated with sick relatives in Turkey, a country dominated by strong social relations.

To this end, it claimed that bonding social capital had an indirect effect limiting anxiety due to pandemic. These indirect effects take place by increasing life satisfaction and decreasing the feeling of loneliness. The results of analyses of survey data from a sample of 711 individuals (well-educated and with infected relatives) confirmed this effect. These assumptions were tested using a SEM model. As expected, strong bonding social capital had a positive impact on life satisfaction and a negative effect on feeling of loneliness. The model also revealed a negative relationship between anxiety and life satisfaction and a positive one between anxiety and feeling of loneliness. In addition, the indirect effects of bonding social capital were assessed. These had significant effect as well, although they are not as strong as the direct effects.

These results also have implications for the role of bonding social capital among the well-educated during pandemic. In support of the view that this study labeled as the "relational resource use" view, the analyses suggest that the well-educated benefit from the cognitive resources of bonding social capital. Further studies are needed to assess if these effects are temporary results of the stay-at-home order or if they are permanent. In any case, it can be said that the claims that bonding social capital may weaken in the face of health emergencies were not substantiated for the period that the data was collected. This can be answered with longitudinal studies. In addition, studies that assess the impact of class position will also be beneficial.

This call for further studies highlights the limitations of the current study. The study was limited to individuals with infected relatives since it was assumed that anxiety would be more apparent among them. However, the effects measured by the ArC variable in this study have implications for the entire society. These effects may reveal themselves differently, especially with regards to the class position effects. When these effects are controlled for other factors such as age, family structure, occupation and regional differences a more complete picture will emerge. It is possible that the negative relationship between bonding social capital and ArC is limited to the well-educated since the well-educated have a clear advantage in access to health services and precautions to prevent infection. The confidence that this advantage brings may have enabled them to continue social relations without increasing the risk of infection. As a result, it may have been possible to continue social relations without increasing the anxiety load. Among the less educated, access to information and institutional support is relatively limited. In addition, during the pandemic technologies that provide social presence without physical contact became more important (van Bavel, et.al. 2020; Claridge, 2020). The well-educated have an advantage in terms of covering the financial cost of these technologies and using them. The other groups have a higher risk since their access to these are relatively limited. As a result, the indirect effects can weaken or reverse in other groups.

Finally, this study also has some policy implications. First, when social isolation and distancing policies are being designed, the prominence and importance of close social relations in countries such as Turkey should be taken into consideration. Social isolation policies can be practically inapplicable within the society. This does not mean giving up on isolation policies altogether. However, when implementing these the access to technologies that will compensate for lack of physical contact should be also on the agenda. The technologies that provide presence should be made accessible in daily lives. Also, when informing the public, instead of discouraging social contact altogether more emphasis should be given on educating the public on safe conduct in social relations to prevent the spread. This way, the forms of social relations that are strong but also sustainable under pandemic conditions may become more common and the cognitive effects found in this study can benefit the entire society.

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