MULTIDIMENSIONAL APPROACH TO LINK BETWEEN TRUST AND HEALTH BEFORE AND AFTER COVID-19: NATIONWIDE INVESTIGATIONS BASED ON SOCIAL CAPITAL THEORY

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ABSTRACT

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The current research was part of a larger project, funded by the Scientific and Technological Research Council of Turkey (TUBITAK), examining the link between psychosocial factors and health-related outcomes. A pilot study showed that the items could adequately be used, and bivariate relationships were consistent with the hypotheses. In Study 1, the hypotheses were examined in a representative sample of the Turkish population. Bonding and linking aspects were positively related to SRH; however, bridging aspect and interaction between bonding and linking aspects were not related to SRH. In Study 1, a follow-up analysis was conducted to examine the same hypotheses using a multilevel modeling framework accounting for the interdependency between different regions where individuals are nested in those regions of Turkey. A theory-driven variable, i.e., income inequality, was added as a region-level predictor in the analysis. Findings showed that there could be regional discrepancies in terms of social capital dimensions and SRH. In Study 2, I aimed to examine the same relationship patterns to see whether those patterns would be consistent by counting different countries after adjusting for income inequality as a

country-level predictor of SRH. Secondary data analysis was conducted on the joint data set of the last waves of the World Values Survey and European Values Study, including data from 69 countries. All hypotheses were confirmed. Findings of Study 1 were specifically discussed considering the post-disaster context due to the COVID-19 pandemic, and Study 2 was discussed considering more like a global picture regarding the same relationship patterns.

Keywords: Social Capital, Bonding, Bridging, Linking, Health

ÖZ

COVİD-19 ÖNCESİ VE SONRASI GÜVEN VE SAĞLIK ARASINDAKİ BAĞLANTIYA ÇOK BOYUTLU YAKLAŞIM: SOSYAL SERMAYE TEORİSİNE DAYALI ULUSAL ARAŞTIRMALAR

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Mevcut araştırma, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK) tarafından finanse edilen ve psikososyal faktörler ile sağlıkla ilgili sonuçlar arasındaki bağıntıyı inceleyen daha büyük bir projenin parçasıdır. Pilot çalışma, maddelerin uygun şekilde kullanılabileceğini ve iki değişkenli ilişkilerin hipotezlerle tutarlı olduğunu göstermiştir. Çalışma 1'de, hipotezler Türkiye popülasyonunu temsil eden bir örneklemde incelenmiştir. Dayanışmacı ve bağlayıcı sosyal sermaye boyutları, KKSD ile pozitif olarak ilişkili bulunmuştur. Bununla birlikte, aracı sermaye KKSD ile anlamlı olarak ilişkili bulunmamıştır. Benzer şekilde, dayanışmacı ve bağlayıcı boyutları arasındaki etkileşimin de KKSD ile anlamlı bir ilişkisi tespit edilmemiştir. Çalışma 1'de, bireylerin, Türkiye'nin farklı özelliklerdeki bölgeleriyle iç içe olmasından kaynaklanan karşılıklı bağımlılığı hesaba katan çok düzeyli bir modelleme kullanılarak aynı hipotezleri incelemek için bir takip analizi yapılmıştır. Teoriye dayalı bir değişken olarak gelir eşitsizliği, analize bölge düzeyinde bir yordayıcı olarak eklenmiştir. Bulgular, sosyal sermaye boyutları ve KKSD açısından bölgesel farklılıklar olabileceğini göstermiştir. Çalışma 2'de,

KKSD'nin ülke düzeyinde bir yordayıcısı olarak gelir eşitsizliği belirlendikten sonra farklı ülkelerden verileri hesaba katarak bu modellerin tutarlı olup olmayacağını görmek için aynı ilişki modellerinin incelenmesi amaçlanmıştır. Dünya Değerler Anketi ve Avrupa Değerler Anketi'nin son dalgalarının ortak veri seti üzerinde 69 ülkeden gelen verileri içeren ikincil veri analizi yapılmıştır. Bu analizde tüm hipotezler doğrulanmıştır. Çalışma 1'in bulguları, COVID-19 pandemisi nedeniyle afet sonrası bağlam göz önünde bulundurularak tartışılmıştır. Çalışma 2'de elde edilen aynı ilişki örüntülerine ilişkin sonuçlar daha ziyade genel bir çerçevede tartışılmıştır.

Anahtar Kelimeler: Sosyal Sermaye, Dayanışmacı, Aracı, Bağlayıcı, Sağlık

To my best friend Ezgi

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CHAPTER 1

INTRODUCTION

Studies on health determinants, especially in Europe and America, have been among the most important public health issues as life expectancy and chronic diseases increase. In those studies, health-related outcome(s) assessment may vary based on different operational definitions (Xue et al., 2020). For instance, a healthy individual is often defined as someone who does not have any illness or disability (Aydın, 2020). However, remembering the definition of the World Health Organization (WHO), health is "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, 1946), which means that "lack of illness and disability" does not necessarily mean that an individual is a healthy living. Thus, in addition to objective assessments (e.g., biomedical measures, a clinical diagnosis), individuals' subjective evaluation is also a critical indicator of health (WHO, 2014). In this context, the self-rated health (SRH) measure has been widely used to predict individuals' physical and mental health status. As such, SRH has been globally shown as a robust predictor of objective health (e.g., Idler and Benyamini 1997; Wu et al., 2013), mortality, and morbidity (e.g., Jylhä et al., 2006; Lekander et al., 2004; Leung et al., 1997) even after controlling for demographics such as gender, age, and socio-economic status.

Moreover, that definition, which primarily focuses on physical and biological factors, may limit our understanding of health determinants by missing out on societal-level indicators influencing health, such as economic, psychological, social, and cultural (Marmot & Wilkinson, 1999; WHO, 2008). Social capital, which involves trusting relationships with different social structures (e.g., family, neighborhood, public agencies) in society (Putnam, 2000; Szreter & Woolcock, 2004), is one of the societal-level variables widely investigated in terms of health-related outcomes (Helliwell & Putnam, 2004; Kawachi et al., 2008). According to these investigations

capturing over the 20 years of cumulative knowledge, there have been mixed findings due to particular reasons such as varying conceptualizations (e.g., the inclusion of different aspects of social capital) and different contexts (e.g., post-disaster/crises or different countries) (Aldrich, 2010; Moore & Kawachi, 2017). However, relying on current meta-analysis studies, social capital could be shown as a consistent predictor of both physical (Rodgers et al., 2019) and mental health (Xue et al., 2020).

Despite two decades of research on the link between social capital and health, there may be new research questions never asked before. For instance, it is unknown whether a different aspect of social capital (i.e., relationship with close others) could compensate for a deficiency in the link between another aspect of social capital (i.e., relationship with the power gradients) and health. Namely, the question is whether there would be interaction effects between different aspects of social capital in terms of health. Moreover, it would not be clear how these relationship patterns (if it exists) may differ during the COVID-19 pandemic, which has been seen as an immense disaster. Another important question may be whether the *predictive power* of different aspects of social capital on health would differ in varying contexts (i.e., COVID-19 pandemic, country-level differences). Therefore, this thesis proposal aims to investigate original research questions regarding the association between social capital and health, considering different contextual variables.

1.1 Literature Review: Social Capital and Health

Sociologists first discussed basic social capital components such as trust, values, reciprocity, and norms for suggestions on economic and social problems (Woodhouse, 2006). Although its origin is dateless, it may still be challenging to operationally define the concept of social capital (Sun & Lu, 2020). Despite varying definitions, trust in relationships has been the most frequently used proxy of social capital (Rodgers et al., 2019). It represents the cognitive part of social capital which means how people perceive or feel about their relationships (Kawachi et al., 2008). In this research proposal, social capital is operationally defined based on its cognitive aspect (i.e., trust), which would precisely be consistent with one of the well-known

social capital theorist Robert Putnam's suggestion that "trust is an essential component of social capital." (Putnam, 1993, p.170)

In the simplest terms, social capital includes reciprocally trusting social networks formed at different levels of society. Those different levels are categorized as *bonding*, *bridging*, and *linking* social capital (Kawamoto & Kim, 2019). Bonding social capital refers to homogeneous, horizontal in-group social relationships (e.g., family, relatives, best friends, neighbors). Bridging social capital refers to horizontal relationships; however, it is more heterogeneous (e.g., people of other religions or nationalities) than the bonding aspect (Putnam, 2000). Thus, the strongest social tie we develop to connect with someone similar to us is bonding, whereas bridging relationships are weaker social ties with whom we have less in common (Kawachi, 2006).

Afterward, Szreter and Woolcock contributed to social capital literature by introducing another dimension, linking social capital, defining heterogeneous and vertical relationship dynamics between people and states. It was defined as "the norms of respect and networks of trusting relationships between people who are interacting across explicit, formal or institutionalized power or authority gradients in society." (Szreter & Woolcock, 2004, p.655). Parallel to this definition, Rothstein also defined vertical trust as "trust in political and societal institutions" and proposed that vertical trust, which relies on government institutions, is significantly related to linking social capital (Rothstein, 2000, p.488).

More than two decades of growing research have focused on the link between social capital and health (Kawachi et al., 2008; Rodgers et al., 2019). The 20-year cumulative work in health-related topics could mainly be classified as physical health (e.g., mortality, cardiovascular disease) and mental health (e.g., depression, well-being), in which mortality and depression measures were the most common outcome variables investigated from the social capital perspective (Xue et al., 2020). Rodgers et al. (2019) conducted a systematic review investigating the link between social capital and physical health-related outcomes. The review involved 145 studies

conducted between 2007 and 2018, representing the second decade of the social capital and health literature. The most studied social capital indicator was trust (54%), and the most studied health-related outcome was self-rated health (SRH; 57%). The researchers reported a robust positive association between social capital and SRH, whereas the link between social capital and other health-related outcomes was inconsistent. Also, a recent study supported the positive relationship between social capital and SRH by using 2016 China Family Panel Data which was cross-sectionally collected from 30,657 people (Gu & Zhu, 2020). The authors concluded that "the relation between social capital and SRH may be universal," relying on cumulative knowledge (p.11).

Another current meta-analysis re-tested 12,778 estimates from social capital to health-related outcomes from 470 studies (Xue et al., 2020). According to the meta-analysis, the operational definition of studies could be grouped for health-related outcomes as follows: general health status (40.4%), physical health (37.3%), and mental health (23%). Xue et al. (2020) confirmed the adaptive role of social capital on varying health-related outcomes. Comparatively, the cognitive aspect of social capital (i.e., trust) had a greater effect size on health than other aspects (e.g., structural aspect; associational membership) of the term. The cognitive aspect was especially significantly related to mental health rather than general health and physical health reports. Lastly, the authors reported that bonding, bridging, and linking aspects of social capital were also positively associated with health, and there was no significant difference in their effect sizes on health. Thus, it seems that different forms of social relationships could equally be vital to health. To be noted, however, investigations simultaneously capturing all these three aspects in terms of health-related research have been scant (Poortinga, 2012; Xue et al., 2020), although the three-dimension approach (i.e., bonding, bridging, and linking) was viewed as the clearest conceptualization in the literature (Elgar et al., 2011; Jiang & Wang, 2019). Based on this suggestion, the current proposal will include all three forms of social relationships while defining social capital.

Considering the positive impact of social capital on health, ecological theory, suggested by one of the well-known developmental psychologists, Urie Bronfenbrenner (1975), would also shed light on that relationship in a similar theoretical perspective with social capital. Especially, two dimensions of social capital, *bonding* and *linking*, may correspond to the different sub-systems of the ecological theory.

Ecological theory mainly emphasizes individual and contextual systems to understand human development (Stokols, 1996). According to Bronfenbrenner, it is essential to examine the interaction within and between these ecological systems to comprehend the developmental outcomes (Bronfenbrenner, 1975). Even though he suggested this theory to understand human development, especially by focusing on early childhood, it has also been the main theoretical framework of many mental health studies (Eriksson et al., 2018).

In this theory, ecology refers to the fit between individual and environment, meaning that the more the fit between the person and environment and the more adaptive developmental outcomes for a human. He suggested that the environment is a multi-layered system including sub-systems, rather than a single unity, such as microsystem, exosystem, and macro-system[1]. He underlined that at least two sub-levels should be considered in an ecological study (Bronfenbrenner, 1975). From this point of view, at least two sub-levels (i.e., bonding and linking) of social structure corresponding to ecological study ingredients will be considered in the current research.

The *microsystem* includes the individual and his/her immediate environment (e.g., home, school) consisting of significant others (Bronfenbrenner, 1977, 1995). In addition, in the final phase of the theory, Bronfenbrenner (1995) introduced a concept named "proximal processes," which he also called as "engine of development," referring to reciprocal interactions between the person and the significant others, for

[1] In this part regarding Bronfenbrenner's theory, I mainly intended to underline some similar theoretical perspectives that correspond to social capital theory. Thus, I deliberately skipped some parts of ecological theory and shared my personal opinions regarding the similarities.

instance, a family member. Therefore, micro-systems may correspond to the bonding aspect of social capital. *Exosystem* consists of wider social structures such as the business world, media, and public agencies. These kinds of wider social structures do not influence the person in the developmental process; rather, it impacts immediate settings (e.g., family), influential on human development. The *macro-system* involves written (e.g., law and regulations) and unwritten (e.g., culture) *norms* that would influence human development (Bronfenbrenner, 1978). Depending on the social structure and components mentioned in the exosystem and macrosystem, linking social capital may correspond to these two social structures. Consequently, in light of social capital theory and ecological theory, we could conclude that social relationships with various aspects matter in human health[2].

Considering the findings and interpretations mentioned above, the following hypotheses were proposed in all sub-studies covering by this research proposal:

H1: Bonding social capital would positively predict SRH.
H2: Bridging social capital would positively predict SRH.
H3: Linking social capital would positively predict SRH.

Relationship science has long discussed the compensatory role of close relationships on health-related outcomes in times of distress or lack of social support (e.g., Bradbury & Karney, 2004; Cohen & Pressman, 2004). Social capital literature also emphasized the stress-buffering role of its core elements (i.e., trust) on health (Uphoff et al., 2013; Van Lange, 2015). Combining this suggestion in the social capital

[2] Many other pioneer psychology theories consistently indicate an adaptive role of social relationships on physical and mental health, such as Attachment Theory, Stages of Psychosocial Development, Theory of Need to Belong, Self-Determination Theory (i.e., relatedness dimension). These theories consist of similar perspectives (e.g., trust, the importance of togetherness) corresponding to either bonding or bridging social capital theory aspects. However, these theories do not include linking social capital dimension, referring to the vertical relationship between people and power or authority. Indeed, this kind of comprehensive perspective on the scope of social relationships and health linkage incorporates different social science disciplines such as economy, psychology, and sociology.

perspective, it would be worth pursuing whether trust in close social ties (i.e., bonding social capital) could compensate for the lack of trust in vertical social ties (i.e., linking social capital). More specifically, even if individuals have lower trust levels in linking social capital, I expect a higher level of trust in bonding relationships could function as a buffering mechanism preventing individuals from reporting poorer SRH. Thus, the following hypothesis was proposed:

H4: Positive link between bonding social capital and SRH would be more pronounced for individuals having lower linking social capital.

1.2 Context-Specific Issues: COVID-19

The existing body of knowledge presenting the link between social capital and health includes context-specific research in which this link was investigated in post-disaster/crisis cases such as natural disasters (e.g., earthquake, flood, hurricane, tsunami) (Aldrich, 2012), economic crisis, (e.g., Sarracino & Piekałkiewicz, 2020), and pandemic (e.g., Gu & Zhu, 2020). In this research proposal, the COVID-19 pandemic, which was declared a severe disaster on March 13, 2020, in the US (Federal Emergency Management Agency, 2020) will be one of the context-specific issues examining social capital and SRH relationship. The second context-specific issue will be based on a potential country-level comparison regarding social capital and health linkage discussed in the next session.

Infectious diseases like COVID-19 can adversely affect those infected and the general psychological health and well-being of others who are not infected. For example, severe acute respiratory syndrome (SARS) disease increased anxiety, depression, and stress levels in the general population (Peng et al., 2010; Wu et al., 2005). To facilitate effective crisis planning, response and recovery process in such disasters, it was suggested that there has to be a "culture of resilience" in which societies have the "ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events" which leads to less vulnerability for individuals and societies (The National Academies, 2012, p.1). In this context, previous studies suggested that social

capital could be one of the key factors for developing that kind of cultural resilience against pandemic crisis (e.g., Chuang et al., 2015; Pitas & Ehmer, 2020; Rönnerstrand, 2013). Thus, effective response and action in crises are faster in societies with high social capital (Pitas & Ehmer, 2020), often operationally defined as trusting relationships across varying social structures.

There is a scarcity of studies examining the relationship between social capital and communicable diseases (Borgonovi & Andrieu, 2020). Most of those studies focused on sexually transmitted diseases (e.g., Frumence et al., 2014; Mukoswa et al., 2017). However, few current attempts aiming to examine the critical role of social capital on health during the COVID-19 pandemic should be considered. For example, a study conducted in urban China examined whether the cognitive aspect of social capital (e.g., trust and reciprocity in relationships) would mediate the relationship between structural social capital (i.e., COVID-19 related volunteering, organization membership) and mental health (i.e., depressive symptoms and life satisfaction) among elderly people (Sun & Lu, 2020). Findings demonstrated the fully mediating role of cognitive social capital, meaning that structural social capital did not directly predict mental health. In fact, this finding confirmed a previous statement that often suggested the critical role of cognitive social capital – involving perceptions or feelings of individuals – on health is more robust (Kim et al., 2008; Sarracino & Piekałkiewicz, 2020) than the predictor role of structural social capital referring to behavioral dynamics that could be observable in social relationships (e.g., associational membership, civic engagement) (Kawachi et al., 2008). Moreover, behavioral aspects of social capital (e.g., social participation) seem difficult to consider due to the precautions in the pandemic, such as physical and social distance in society. This is another reason why, in the current research, I deliberately focus on the cognitive aspect of social capital rather than the behavioral aspect, which had already led to non-significant health-related results in European and East Asian contexts (e.g., Bassett & Moore, 2013; Ehsan et al., 2019; Lu et al., 2018).

Although there may be various barriers (e.g., economic, technological, and legal) that can impede planning and response in the COVID-19 process, social capital may be a

protective factor. The “new normal” during COVID-19 brings about new challenges in social interactions due to shelter-in-place orders or restrictions on the size of the social bubbles (Wong & Kohler, 2020). Social support channels have been limited (e.g., time spent with close social ties such as family members and friends due to the social distance), which have already brought adverse mental health outcomes such as increased anxiety and depression in China, greater stress in Iran, increased fear and panic in Japan, and health anxiety in Canada during the pandemic (Rajkumar, 2020). In this case, close social ties (i.e., bonding social capital) could protect people depending on their preexisting strength through the provision of social support even though usual channels (e.g., in-person meetings with family members or friends) for such relationships are limited during the pandemic. In addition, members of societies where social relations are generally weak may lack empathy towards one another (i.e., lower bridging social capital) and may violate the current rules such as physical distance or public mask-wearing. Thus, consistent reactions must be followed in societies; otherwise, the precautions become meaningless (Wong & Kohler, 2020).

Moreover, transparent and consistent policies should be provided by the authority. Regardless of socio-economic class, individuals should have access to health services and have confidence in the authority (e.g., Ministry of Health). For example, in Italy, irregular migrants were not provided a free COVID-19 test, which undermined the effective response to the pandemic (Armocida et al., 2020). Therefore, high confidence in health services provided by the ultimate authority (i.e., linking social capital) would be vital for the good of states and societies. Following the findings and interpretations above-mentioned, all four hypotheses (i.e., Hypotheses 1-4) were expected to be consistent in data cross-sectionally collected before and after COVID-19.

Furthermore, although I noted (see page 7 in this paper) that effect sizes of different aspects of social capital (i.e., bonding, bridging, and linking) did not differ, on the one hand, there is a context-specific finding suggesting that the most influential social capital aspects on health during a post-disaster period were linking, bonding, and bridging, respectively (Kawamoto & Kim, 2019). On the other hand, a study

conducted by Hilfinger et al. (2012) showed that bonding social capital was the strongest social tie associated with health during a post-disaster case. In this context, a systematic review consisting of 15 studies on the association between post-disaster health and social capital suggested that role of bonding and bridging social capital was less clear, and further research on these dimensions was needed (Noel et al., 2018). Considering these suggestions and assuming that there may be significant relationships between the three aspects of social capital and SRH, I aim to exploratively examine whether the predictive power of different aspects of social capital on SRH would differ in the COVID-19 process (**Research Question**).

1.3 The Current Study

The current research aims to investigate a new research question and original hypothesis and replicate previous findings regarding the link between social capital and health. For such purpose, this research was intended to be part of a more comprehensive project (Project No:120K392) funded by the Scientific and Technological Research Council of Turkey (TUBITAK) investigating the relationship between psychosocial variables and health-related outcomes during the COVID-19 pandemic. The project consists of two surveys, a pilot study and the main study (i.e., Study 1). Moreover, Study 2, including secondary data analysis, was proposed to increase the reliability and generalizability of the findings and to explore new research questions in the current study.

This research would theoretically contribute to the existing body of knowledge in several ways. First, there has not been any empirical finding in Turkey examining the link between social relationships and health from the perspective of social capital theory. Second, the link between social relationships and health has rarely been investigated during the COVID-19 pandemic, which is a quite specific context considering human relationships and its impact on health and well-being. Third, Hypothesis 4 reflects a unique research question that has never been tested in the literature. Likewise, the Research Question, aiming to test the predictive power of different aspects of social capital on health during the pandemic, could be another

promising question bringing about worth pursuing original findings. Lastly, the proposed hypotheses will be tested through secondary data, including data from 69 countries, to investigate further the reliability and generalizability of the findings that may breed future research suggestions enriching the literature regarding the influence of social relationships on health.

CHAPTER 2

PILOT STUDY AND STUDY 1

2.1 Aims of the Study

The pilot survey was conducted to examine initial findings (e.g., bivariate correlations, factor structures) through convenience sampling (N = 445). Initial findings were critical since short forms of all measurements that could be finished in about 30 minutes were adapted based on the findings of the pilot study[3]. Such a time adjustment was important because it is aimed to collect data from a representative sample in Turkey for the main study and to do so, a primary concern was to increase the quality of the main study (i.e., Study 1) by attempting to minimize potential missing data due to a long survey.

2.2 Method

2.2.1 Procedure and Participants

Having been approved by the Scientific and Technological Council of Turkey (TUBITAK), the study was announced via social media channels along with a Qualtrics survey link. Participation in this study was fully voluntary, with no explicit incentives. The only exclusion criterion was to be under the age of 18 years. Participants who quit (N = 82) the survey halfway through without completing all measures or focal variables were excluded. The final sample included 363 respondents.

[3] Since the measurement scales in the project aimed to be used for the thesis proposal had already been shorter, original formats of these scales were maintained in Study 1. Thus, adaptations were only conducted on different scales that are not part of this thesis proposal.

2.2.2 Measurements

2.2.2.1 Self-Rated Health Status

Participants' health status was the dependent variable of the current study assessed based on subjective evaluations. Respondents were asked, "All in all, how would you describe your state of health these days?" and were given a scale from 1 (poor) to 10 (excellent). This single, self-rated health question has been shown as a globally valid and reliable instrument by numerous studies predicting objective health, morbidity, and mortality (e.g., Idler & Benyamini, 1997; Meng & Chen, 2014).

2.2.2.2 Social Capital Dimensions

All dimensions of social capital (i.e., bonding, bridging, and linking) were assessed through *trust* level, which is the core element of social capital (Fukuyama, 1995; Putnam, 2000; Uslaner, 1999). For the bonding aspect, respondents were asked how much they trust the following: "your family, your neighborhood, people you know personally." Reliability was found as acceptable (Cronbach's alpha = 0.60). For the bridging aspect, respondents were asked how much they trust the following: "people you meet for the first time, people of another religion, people of another nationality." This scale showed good reliability (Cronbach's alpha = 0.77). For the linking aspect, respondents were asked to what extent they trust the following institutions/public services: "health services, security services (e.g., police, gendarme, neighborhood warden), education services, public services provided electronically (e.g., e-government)." This scale showed good reliability (Cronbach's alpha = 0.76). Respondents answered these questions based on a Likert-type scale ranging from 1 (do not trust at all) to 4 (trust completely), as has been used in previous studies (e.g., Chu et al., 2018; Alpaslan & Yildirim, 2020).

2.2.2.3 Control Variables

Gender, (0 = man, 1 = woman), age (range:18–66), level of education [1 = primary school, 2 = secondary school, 3= high school, 4 = vocational school of higher

education, 5 = university degree, 6 = Master's/ Doctoral degree], socio-economic status (SES; 1 = not good at all, 10 = very good), relationship status (0 = no, 1 = yes), presence of a child (0 = no, 1 = yes), household size (*what is the number of people living in the same house besides you?*), the number of people (if any) in the family diagnosed with COVID-19, number of people (if any) in the family on unpaid vacation due to COVID-19, number of people (if any) in the family who are susceptible to the COVID-19 (e.g., one with a chronic disease or 65 years and older) were included as covariates.

2.2.3 Data Analysis Plan

Data analysis was started by screening the data set to see if any missing value existed. Participants who did not answer questions on the focal predictors (i.e., social capital aspects and SRH) were excluded. Next, a confirmatory factor analysis (CFA) was conducted on social capital items. The following goodness-of-fit indices were interpreted during the model fit evaluation: comparative fit index (CFI) and standardized root mean square residual (SRMR). Combination of cutoff values CFI > .90, SRMR < .08 are interpreted as a good model fit, and CFI > .95 and SRMR < .05 are interpreted as indicators of excellent fit of the data into the hypothesized model (Hu & Bentler, 1999). After that, the reliability of each aspect of social capital measurement was tested, relying on Cronbach's alpha. Then, each construct was created by averaging the items defining that construct. All measurement scores were standardized to put them on the same scale. After that, bivariate relationships were reported to evaluate the initial findings.

2.3 Results

Descriptive statistics and bivariate correlations of variables were shown in Table 1 and Table 2, respectively. There were 363 respondents (N_{women} = 261; M_{age} = 35.35 years, SD_{age} = 13.35). Thus, overall response rate was 82% considering total of 445 participants who attempted to join the study. Majority of the participants had a university degree [1 = primary school (0.6%), 2 = secondary school (0.3%), 3= high school (17.4%), 4 = vocational school of higher education (4.1%), 5 = university

degree (57.6%), 6 = Master's/ Doctoral degree (12.7%)]. 52.6% of respondents had a romantic relationship. 38.8% of respondents had at least a child.

Table 1
Descriptive Statistics

Variables	M	SD	Min.	Max.	Skewness	Kurtosis
Age	35.35	13.35	18.00	66.00	0.54	-1.04
SES	6.49	1.38	1.00	10.00	-0.49	1.33
Household size	3.12	1.36	0.00	7.00	0.17	0.59
COVNUMB	0.18	0.62	0.00	4.00	4.29	19.12
COVRISK	1.31	1.37	0.00	7.00	1.66	3.99
JOBLOST	0.19	0.52	0.00	3.00	3.62	14.12
Bonding	3.06	0.48	1.00	4.00	-1.01	2.13
Bridging	2.42	0.60	1.00	4.00	-0.29	0.14
Linking	2.72	0.62	1.00	4.00	-0.31	0.12
Self-rated health	7.45	1.77	1.00	10.00	-0.88	0.95

Note. COVNUMB = Number of people (if any) in the family diagnosed with COVID-19; COVRISK = Number of people (if any) in the family who are susceptible to COVID-19; JOBLOST = Number of people (if any) in the family on unpaid vacation due to COVID-19.

Since the main purpose of the pilot study is only to screen factor structure and initial findings, hypothesis tests were not reported. However, examining the Table 2 as preliminary analysis results, SRH was positively associated with the bonding, (r = 0.173, p = 0.001), bridging (r = 0.140, p = 0.007), and linking (r = 0.214, $p < 0.001$) aspects of social capital.

A confirmatory factor analysis (CFA) was conducted to examine the expected factor structure of social capital dimensions. According to findings, the expected factor structure showed adequate fit for the data, [(χ^2 (32) = 63.303, p = 0.001), CFI = 0.97, SRMR = 0.05]. As could be seen from Table 3, standardized factor loadings ranged from .43 to .95.

Table 2
Bivariate Relationships Among Variables

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Gender													
2	Age	-.240***												
3	Education	-.029	-.021											
4	SES	-.052	.109*	.124*										
5	Relationship status	-.131**	.315***	.126*	.022									
6	Presence of a child	-.148**	.730***	-.056	.011	.375***								
7	Household size	.106	-.166**	-.070	.009	-.025	.005							
8	COVNUMB	.069	-.159**	.090	.072	-.053	-.122*	.127*						
9	COVRISK	.037	-.038	0	-.056	.034	-.041	.005	.182***					
10	JOBLOST	-.030	-.112*	-.057	-.025	.042	-.119*	.033	.257***	.031				
11	Bonding	-.025	.073	.164**	.220***	.024	.089	.027	-.038	-.030	-.007			
12	Bridging	-.086	-.019	.092	.128*	.074	-.035	.019	.026	.044	.110*	.409***		
13	Linking	-.027	.108*	-.109*	.172**	.058	.155**	.028	-.070	-.112*	-.047	.257***	-.002	
14	Self-rated health	-.061	.047	.030	.262***	-.015	.066	.052	-.021	-.046	-.053	.173**	.140**	.214***

Note. * $p < .05$; ** $p < .01$; *** $p < .001$, two-tailed. COVNUMB = Number of people (if any) in the family diagnosed with COVID-19; COVRISK = Number of people (if any) in the family who are susceptible to the COVID-19; JOBLOST = Number of people (if any) in the family on unpaid vacation due to COVID-19.

Table 3
Confirmatory Factor Analysis Results

Factors of Scale	Factor Loadings		
Bonding	**Bonding**	**Bridging**	**Linking**
Bonding_1	0.49		
Bonding_2	0.53		
Bonding_3	0.63		
Bridging			
Bridging_1		0.41	
Bridging_2		0.92	
Bridging_3		0.91	
Linking			
Linking_1			0.61
Linking_2			0.68
Linking_3			0.70
Linking_4			0.69
Cronbach's alpha	0.60	0.77	0.76

Note. χ^2 (32) = 66.169, $p < 0.001$, CFI = 0.97, SRMR = 0.04. Standardized factor loadings were reported.

2.4 Study 1

The main purpose of this study was to investigate the pilot study's initial findings further. The proposed hypotheses (i.e., Hypotheses 1-4) and an additional exploratory question (i.e., Research Question examining the predictive power of social capital dimensions) were tested in this study. The pilot study included a sample of respondents who participated through convenience sampling, limiting the generalizability of the findings. Thus, the current study could be an opportunity to test the replicability of the initial findings and increase the generalizability of the initial findings through nationwide data representing the Turkish population.

2.4.1 Method

2.4.1.1 Procedure and Participants

As part of the TUBITAK project, one month after the pilot study, the main survey was conducted by a research company in a representative sample of the Turkish population (N = 2012). The question battery used in this study was formed from all scales showing high validity and reliability in the pilot study. All measurement tools used in the project can be found here: https://osf.io/3248d/. Also, see Appendix D for the scales identical to the pilot study and included in the current study. The scales were prepared to be collected online through Qualtrics and delivered to each participant in a balanced and random order. Participation in this study was fully voluntary, with no explicit incentives.

Because online measurements cannot be filled by participants of all age groups and economic levels, the interviewers reached the participants by phone calls. Due to the COVID-19 epidemic, data could not be collected face-to-face; instead, phone interviews were conducted. The interviewers asked respondents to answer the online questionnaire and marked the answers. After the scales were completed, the debriefing form was read to all participants by the interviewers. Subsequently, the research company randomly called 40% (N = 758) of the respondents again by phone to confirm whether they participated in the survey or not. There was no case that could not pass such a quality control process.

Representing the sample of Turkey, each province (N = 81) was included in the study based on the rate of their own population (taking into account the counties). The only exclusion criterion was to be under the age of 18 years. Data of participants who did not respond to half of the study variables or focal predictors (N = 57) were excluded. The final sample included 1955 respondents.

A sensitivity analysis was conducted using G*Power Software (Faul et al., 2007) to examine what effect sizes the current sample size is sensitive to detect. The analysis was based on ideally minimum statistical power (0.80), a sample size of 1955, and

14 predictors (four of the predictors were the focal predictors, including an interaction effect). The smallest effect size of interest which could be found in the current sample was 0.01 at the 0.05 alpha level. Considering the relationship between varying elements of social capital (i.e., bonding, bridging, linking) and health, previous systematic reviews suggested that the magnitude of effect sizes was modest, ranging from 0.01 to 0.03 (Gilbert et al., 2013; Xue et al., 2020). Thus, the current sample size is sensitive enough to detect the smallest effect size of interest.

2.4.2 Data Analysis Plan

Data analysis was started by screening the data set to see if any missing value existed. Participants who did not answer questions on the focal predictors (i.e., social capital aspects and SRH) were excluded. After that, the reliability of each aspect of social capital measurement was tested, relying on Cronbach's alpha. All measurements were as same as in the pilot study. Bridging and linking dimensions of social capital were found reliable for this study (Cronbach's alpha = 0.73, Cronbach's alpha = 0.84, respectively). However, reliability for the bonding dimension was questionable (Cronbach's alpha = 0.51). Then, each construct was created by averaging the items defining that construct. All measurement scores were standardized to put them on the same scale. Next, bivariate relationships were examined.

Before conducting the main analysis, basic assumptions (i.e., homoscedasticity, linearity, multicollinearity, and multivariate normality) for multiple linear regression were checked. The conceptual model (see Figure 1), where SRH was a dependent variable, three aspects of social capital and an interaction term were focal predictors (i.e., Hypotheses 1-4), was tested by statistically adjusting the aforementioned covariates. All paths were estimated using maximum likelihood estimation and bias-corrected bootstrap with 1000 samples, and confidence intervals were obtained for each estimate. Findings were reported in both scenarios where multivariate normality was violated and not violated. Since findings were significant based on Hypotheses 1 and 3, the Research Question (regarding the predictive power of the social capital aspects) was also tested. A nested model, where each path from social capital

dimensions to SRH was set to be equal, was created to explore Research Question. This nested model with such equality constraint was compared with the main model (also called the parent model) through the chi-square difference test. IBM SPSS 20.0 and Mplus 7.0 software were used for data analysis.

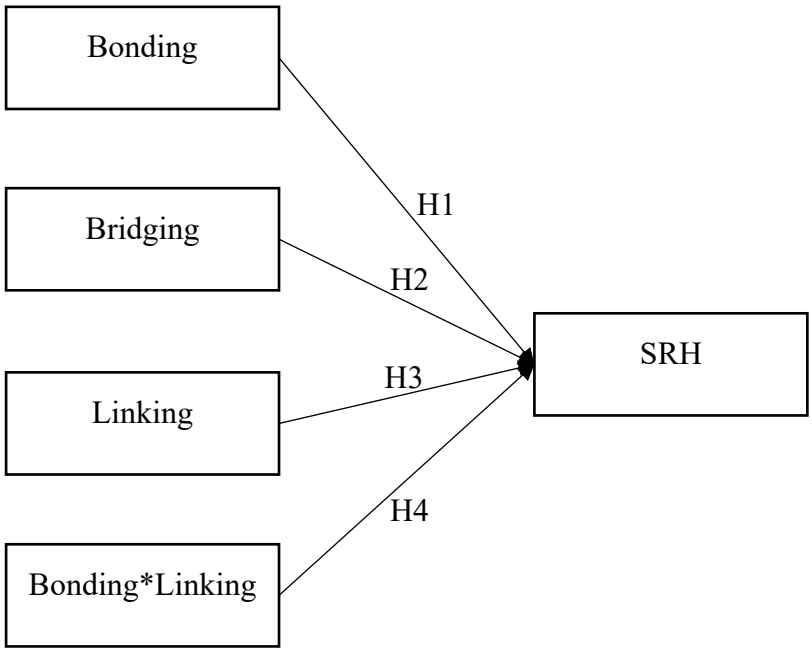

Figure 1
The Four Hypotheses on SRH. Control variables were regressed on SRH but not shown in the figure for the sake of clarity.

2.4.3 Results

Descriptive statistics and bivariate correlations of all variables were shown in Table 4 and Table 5, respectively. There were 1955 respondents (N_{women} = 996; M_{age} = 42.11 years, SD_{age} = 13.11). Thus, overall response rate was 97% considering total of 2012 participants who were reached via the phone interviews. Majority of the participants had a high school degree [1 = primary school (17.6%), 2 = secondary school (12.6%), 3= high school (33.6%), 4 = vocational school of higher education (5.6%), 5 = university degree (25.1%), 6 = Master's/ Doctoral degree (3.2%)]. 63.9% of respondents had a romantic relationship. 67.2% of respondents had at least a child.

Table 4
Descriptive Statistics

Variables	M	SD	Min.	Max.	Skewness	Kurtosis
Age	42.11	13.11	18.00	110.00	0.33	0.03
SES	5.34	1.88	1.00	10.00	-0.12	-0.24
Household size	3.56	1.49	1.00	14.00	1.11	4.11
COVNUMB	0.25	0.85	0.00	11.00	5.58	42.56
COVRISK	0.36	0.68	0.00	6.00	2.26	7.24
JOBLOST	0.12	0.45	0.00	9.00	7.11	94.70
Bonding	3.13	0.49	1.00	4.00	-0.52	0.39
Bridging	2.10	0.70	1.00	4.00	0.08	-0.23
Linking	2.98	0.76	1.00	4.00	-0.54	-0.27
Self-rated health	8.03	1.79	0.00	10.00	-1.07	1.14

Note. COVNUMB = Number of people (if any) in the family diagnosed with COVID-19; COVRISK = Number of people (if any) in the family who are susceptible to COVID-19; JOBLOST = Number of people (if any) in the family on unpaid vacation due to COVID-19. The household size question (*How many people live in the house, **including you**?*) was slightly different from the pilot study; that is why the minimum number is one.

To test the hypotheses, a moderated regression analysis was conducted where SRH was the outcome variable predicted by the followings: gender, age, level of education, SES, relationship status, presence of a child, household size, the number of people (if any) in the family diagnosed with COVID-19, number of people (if any) in the family on unpaid vacation due to COVID-19, number of people (if any) in the family who are susceptible to the COVID-19, bonding social capital, bridging social capital, linking social capital, and an interaction term between bonding and linking dimensions. First, linear regression assumptions were checked by screening homoscedasticity, linearity through partial plots, multicollinearity, and multivariate normality.

Table 5
Bivariate Relationships Among Variables (N = 1955)

		1	2	3	4	5	6
1	Gender						
2	Age	-.009					
3	Education	.013	-.318**				
4	SES	.028	-.175**	.361**			
5	Relationship status	-.040	.252**	-.035	-.052*		
6	Presence of a child	.047*	.491**	-.187**	-.095**	.412**	
7	Household size	-.096**	-.193**	-.109**	-.079**	.136**	.103**
8	COVNUMB	.009	-.060**	-.014	-.019	-.015	-.013
9	COVRISK	.073**	.127**	-.105**	-.167**	-.023	-.042
10	JOBLOST	.008	-.073**	-.031	-.073**	.0	-.080**
11	Bonding	-.028	.017	-.002	.150**	-.008	.049*
12	Bridging	.045*	-.033	.177**	.026	.008	.043
13	Linking	-.016	-.017	-.089**	.229**	-.068**	-.023
14	Self-rated health	-.106**	-.169**	.127**	.176**	.020	-.043

Table 5 (Continued)

		7	8	9	10	11	12	13
7	Household size							
8	COVNUMB	.131**						
9	COVRISK	.103**	.148**					
10	JOBLOST	.098**	.286**	.107**				
11	Bonding	-.011	-.029	-.084**	-.068**			
12	Bridging	-.083**	-.033	.009	-.052*	.283**		
13	Linking	.035	-.029	-.087**	-.040	.298**	-.122**	
14	Self-rated health	.079**	-.019	-.156**	-.043	.181**	.056*	.119**

Note. * p < .05; ** p < .001, two-tailed. COVNUMB = Number of people (if any) in the family diagnosed with COVID-19; COVRISK = Number of people (if any) in the family who are susceptible to the COVID-19; JOBLOST = Number of people (if any) in the family on unpaid
vacation due to COVID-19.

It seemed that there was not any serious violation of assumptions for homoscedasticity, linearity, and multicollinearity (VIF_{maks} = 1.7, $Tolerans_{min}$ = 0.6). Multivariate normality based on 14 predictors seemed to be violated (Mahalanobis distance > 23.68, p = 0.05) for 181 participants. Then, regression analysis was conducted by including the outliers first, and then the same analysis was conducted without the outliers. Since there was not any noticeable change after excluding the

outliers, all findings were reported based on the original data. This is also an advantage for the sake of protecting the representativeness of the current sample.

First, hypotheses were tested without control variables, shown in Table 6. Then, results with covariates were presented in Table 7. As seen from Table 7, women reported worse SRH compared to men (*B* = -0.183, *SE* = 0.044, 95% CI [-0.269, -0.096], $p < 0.001$). Also, age and number of people in the family who are susceptible to the COVID-19 significantly and negatively predicted SRH (*B* = -0.127, *SE* = 0.028, 95% CI [-0.182, -0.072], $p < 0.001$; *B* = -0.098, *SE* = 0.023, 95% CI [-0.144, -0.053], $p < 0.001$, respectively). In contrast, education (*B* = 0.056, *SE* = 0.025, 95% CI [0.006, 0.106], $p = 0.028$), SES (*B* = 0.092, *SE* = 0.025, 95% CI [0.044, 0.141], $p < 0.001$), household size (*B* = 0.066, *SE* = 0.024, 95% CI [0.019, 0.114], $p = 0.006$), bonding social capital (*B* = 0.140, *SE* = 0.025, 95% CI [0.092, 0.188], $p < 0.001$), and linking social capital (*B* = 0.053, *SE* = 0.024, 95% CI [0.005, 0.100], $p = 0.031$) significantly and positively predicted SRH. It should be noted that significant and positive bivariate relationship ($r = 0.056$, $p = 0.013$) between bridging social capital and SRH became non-significant in regression analysis. In addition, interaction term between bonding and linking aspects of social capital on SRH was non-significant. Consequently, Hypothesis 1 and Hypothesis 3 were confirmed. However, Hypothesis 2 and Hypothesis 4 were failed to be confirmed.

Table 6
Analysis Results without Control Variables

	B	*SE*	*p*	*LLCI*	*ULCI*
	Self-rated Health				
	$R^2 = 0.04$*				
Bonding	0.154	0.025	< 0.001	0.105	0.203
Bridging	0.022	0.024	0.357	-0.025	0.069
Linking	0.078	0.024	0.001	0.031	0.125
Interaction Term	0.014	0.02	0.502	-0.026	0.053

Note. *p < .001; Unstandardized regression coefficients were reported; Interaction term: Bonding*Linking.

Table 7
Linear Multiple Regression on Self-rated Health

	B	*SE*	*p*	*LLCI*	*ULCI*
	Self-rated Health				
	$R^2 = 0.11$*				
Gender	-0.183	0.044	< 0.001	-0.269	-0.124
Age	-0.127	0.028	< 0.001	-0.182	-0.072
Education	0.056	0.025	0.028	0.006	0.106
SES	0.092	0.025	< 0.001	0.044	0.141
Relationship status	0.098	0.051	0.053	-0.001	0.198
Presence of a child	0.008	0.059	0.894	-0.108	0.124
Household size	0.066	0.024	0.006	0.019	0.114
COVNUMB	-0.003	0.023	0.902	-0.048	0.042
COVRISK	-0.098	0.023	< 0.001	-0.144	-0.053
JOBLOST	-0.026	0.023	0.263	-0.071	0.019
Bonding	0.140	0.025	< 0.001	0.092	0.188
Bridging	0.015	0.024	0.534	-0.032	0.061
Linking	0.053	0.024	0.031	0.005	0.100
Interaction Term	0.012	0.020	0.553	-0.027	0.051

Note. *p < .001; Gender: 0 = Male, 1 = Female; Education was measured from 1 (Primary School) to 7 (Master's/Doctoral Degree); Relationship Status: 0 = No, 1 = Yes; Presence of a child: 0 = No, 1 = Yes; COVNUMB = Number of people (if any) in the family diagnosed with COVID-19; COVRISK = Number of people (if any) in the family who are susceptible to the COVID-19; JOBLOST = Number of people (if any) in the family on unpaid vacation due to COVID-19. Unstandardized regression coefficients were reported; Interaction term: Bonding*Linking.

To examine Research Question, predictive powers of bonding and linking dimensions were compared. Since the bridging aspect was not a significant predictor of SRH, it was not included in the predictive power analysis. To test this research question, I estimated a constrained model and compared it with the saturated model via the chi-square difference test. The following links were set equal in the constrained model: the path from bonding social capital to SRH and linking social capital to SRH. Findings showed a significant difference between the saturated and constrained models, [$\Delta\chi^2$ (1) = 5.119, p = 0.024], suggesting that the predictive power of the dimensions was significantly different. Thus, magnitude of estimate from bonding

dimension to SRH (B = 0.140, SE = 0.025, 95% CI [0.092, 0.188], $p < 0.001$) was greater than magnitude of estimate from linking dimension to SRH (B = 0.053, SE = 0.024, 95% CI [0.005, 0.100], p = 0.031).

2.4.5 Follow-up Analysis

The Nomenclature of Territorial Units for Statistics (NUTS) classification for Turkey was published in 2002 to identify regional statistics and compare these statistics to the European Union Regional Statistics System. The regions were categorized based on economic, social, and geographical similarities (The Official Gazette of The Republic of Turkey, 2002, p. 1). According to that classification, there are 12 regions, as shown in Table 8. Based on the NUTS classification, the Turkish Statistical Institute (TurkStat) publishes annual data regarding citizens' income and living conditions in Turkey. Those annual statistics show that there are not only similarities but also differences across the regions (e.g., TurkStat, 2021). Thus, considering such discrepancy across the regions, as an exploratory analysis, I aimed to investigate whether the same relationship patterns reported above could be different across the regions in the current representative data from Turkey. Such a follow-up analysis was considered based on the following suggestions:

1) The follow-up analysis was based on a multilevel analysis of the same relationship patterns in which it would be possible to examine the data collected from each individual nested within each region. Thus, any potential impact of the context (i.e., different regions) on SRH along with the individual-level variables examined in Study 1 could be detected. Therefore, interdependency between individual- and contextual-level variables was considered to increase the correct estimation of error terms at both levels, which is the main reason behind the multilevel analysis technique (Enders & Tofighi, 2007).
2) Based on the annual statistics published by TurkStat, one of the salient differences across these regions is income inequality (TurkStat, 2021) which is a consistent predictor of both social capital and health (Ehsan et

al., 2019). Previous findings suggested that income inequality would negatively predict social capital, which in turn increases mortality (e.g., Kawachi et al., 1997) or leads to poor health (e.g., Ichida et al., 2009). Although we did not measure such a theory-driven predictor (i.e., income inequality) on both social capital and health, a multilevel analysis, where income inequality was included as a contextual-level variable after considering the findings of TurkStat, was conducted to predict SRH. Similarly, the interaction between social capital dimensions and income inequality was examined in different models based on an exploratory purpose. Through that approach, it could be seen whether the predictor role of the focal variables (i.e., social capital dimensions) on SRH would be conditional on the context-level variable (i.e., income inequality).

3) In addition, each social capital dimension was predicted based on a multilevel analysis where only income inequality was included as a context-level variable. That analysis would also show whether there could be any discrepancy across the regions in terms of social capital level. Finally, such attempts would show us any necessity to conduct a further study considering contextual differences in the same relationship patterns suggested in the current dissertation.

Table 8
The 12 Regions and Each Province with Total Sample Size

Region	**Provinces**	**N**
Istanbul **(TR1)**	İstanbul	383
West Marmara (**TR2**)	Tekirdağ	24
	Edirne	9
	Kırklareli	9
	Balıkesir	28
	Çanakkale	10

Table 8 (Continued)

Region	Provinces	N
Aegean (**TR3**)	İzmir	102
	Aydın	27
	Denizli	26
	Muğla	24
	Manisa	33
	Afyonkarahisar	18
	Kütahya	13
	Uşak	8
East Marmara (**TR4**)	Bursa	71
	Eskişehir	20
	Bilecik	6
	Kocaeli	44
	Sakarya	22
	Düzce	10
	Bolu	9
	Yalova	6
West Anatolia (**TR5**)	Ankara	121
	Konya	54
	Karaman	8
Mediterranean (**TR6**)	Antalya	59
	Isparta	10
	Burdur	6
	Adana	51
	Mersin	41
	Hatay	41
	Kahramanmaraş	25
	Osmaniye	12
Central Anatolia (**TR7**)	Kırıkkale	7
	Aksaray	5
	Niğde	7
	Nevşehir	7
	Kırşehir	5
	Kayseri	32
	Sivas	44
	Yozgat	9

Table 8 (Continued)

Region	Provinces	N
West Black Sea (**TR8**)	Zonguldak	13
	Karabük	7
	Bartın	5
	Kastamonu	9
	Çankırı	5
	Sinop	11
	Samsun	30
	Tokat	15
	Çorum	12
	Amasya	10
East Black Sea (**TR9**)	Trabzon	17
	Ordu	17
	Giresun	8
	Rize	8
	Artvin	4
	Gümüşhane	4
North East Anatolia (**TRA**)	Erzurum	17
	Erzincan	5
	Bayburt	2
	Ağrı	12
	Kars	6
	Iğdır	4
	Ardahan	3
Central East Anatolia (**TRB**)	Malatya	15
	Elazığ	15
	Bingöl	6
	Tunceli	2
	Van	25
	Muş	9
	Bitlis	7
	Hakkari	6
South East Anatolia (**TRC**)	Gaziantep	48
	Adıyaman	14
	Kilis	3
	Şanlıurfa	10
	Diyarbakır	40
	Mardin	19
	Batman	14
	Şırnak	14
	Siirt	6

2.4.5.1 Data Analysis Plan

The estimation method was chosen as full maximum likelihood to examine regression coefficients and variance components simultaneously (Bickel, 2007). Since the primary focus was on the main effects of level 1 and level 2 variables while controlling their effects on each other, all predictors were standardized as recommended due to computational advantage (Enders & Tofighi, 2007). Parallel to Study 1, individual-level variables were as follows: gender, age, level of education, SES, relationship status, presence of a child, household size, the number of people (if any) in the family diagnosed with COVID-19, number of people (if any) in the family on unpaid vacation due to COVID-19, number of people (if any) in the family who are susceptible to the COVID-19, bonding social capital, bridging social capital, linking social capital, and an interaction term between bonding and linking dimensions. The contextual-level variable was income inequality, a theory-driven predictor considered through the annual statistics of TurkStat.

In the existing body of knowledge (e.g., Ichida et al., 2009), income inequality is often assessed through the Gini coefficient, theoretically ranging from 0 to 1. A higher value for this coefficient indicates higher income inequality across countries or regions. Thus, I used Gini coefficients calculated by TurkStat (2021) for each of the 12 regions in 2020 when data from Study 1 were collected (see Table 9).

Table 9
Gini Coefficients Across Regions

Region	Gini Coefficients
TR1	0,451
TR2	0,367
TR3	0,368
TR4	0,302
TR5	0,385
TR6	0,391

Table 9 (Continued)

Region	Gini Coefficients
TR7	0,345
TR8	0,343
TR9	0,346
TRA	0,366
TRB	0,362
TRC	0,383

2.4.5.2 Results

In the original data set of Study 1, there were 1955 participants; however, for 32 of them, we do not have any data identifying in which province they participated in the study. Thus, after excluding data collected from those participants, the final sample size for multilevel analysis was 1923. The number of participants from each province was shown in Table 8. Only exploratory results of the multilevel analysis were reported in this part, rather than any descriptive statistics or correlations.

A multilevel analysis was conducted where SRH was an outcome variable. In addition to above mentioned individual-level predictors, the Gini coefficient was included as a contextual-level variable. An intra-class correlation (ICC) of .04 was obtained using Model 1, suggesting that 4% of the statistically significant variance (B = 0.127, SE = 0.064, p = 0.047) in SRH was at the contextual level. This means a significant variation across the 12 regions in terms of SRH. Thus, this could be counted as the first evidence regarding the necessity for considering potential context-related variables. Findings regarding the remaining models were shown in Table 11.

First, hypotheses were tested without control variables, shown in Table 10. Then, results with covariates were presented in Table 11. As shown in Model 2 (see Table 11), results regarding the individual-level variables were almost the same as in Study 1. When it comes to the theory-driven variable, i.e., income inequality, it did not significantly predict SRH. Thus, this variable did not significantly contribute to the significant 4% of the explained variance on SRH. Then, in the following models (i.e.,

Model 3, Model 4, Model 5), I examined possible cross-level interactions between the focal predictors (i.e., social capital dimensions) and income inequality which was examined as the context-related variable. As shown in Model 3, interaction between bonding aspect and income inequality was significant in terms of SRH (B = -0.092, SE = 0.040, p = 0.019). Specifically, the positive link between bonding social capital and SRH was significantly more pronounced when income inequality was at the low and moderate levels, respectively; however, such interaction disappeared at the high level of income inequality (see Figure 2). Similarly, in Model 4, interaction between bridging aspect and income inequality was found as significant (B = -0.132, SE = 0.040, p = 0.001). Specifically, the positive link between bridging social capital and SRH was pronounced when income inequality was only at a low level (see Figure 3). However, as shown in Model 5, there was no significant interaction between the linking aspect and income inequality. Nevertheless, meaningful cross-level interactions between the focal predictors (i.e., bonding and bridging aspects) and income inequality could refer to the need to consider regional discrepancies.

Table 10
Multilevel Analysis Results on SRH without Covariates ($N = 1923$)

Parameter	Model 1	Model 2	Model 3	Model 4	Model 5
			Fixed Effects		
Intercept	8.110(.113)**	8.099(.097)**	8.092(.092)**	8.100(.099)**	8.087(.096)**
Individual-level					
Bonding		.235(.045)**	.229(.045)**	.233(.045)**	.236(.045)**
Bridging		.100(.044)*	.099(.044)*	.098(.044)*	.097(.044)*
Linking		.112(.044)*	.114(.044)*	.106(.044)*	.120(.045)*
Bonding*Linking		-.010(.036)	-.027(.037)	-.016(.036)	-.011(.036)
Group-level					
Income inequality		.066(.111)	.061(.104)	.034(.113)	.083(.109)

Table 10 (Continued)

			Cross Level Interactions		
			Model 3	Model 4	Model 5
Bonding*Income Inequality			-.117(.040)*		
Bridging*Income Inequality				-.117(.041)*	
Linking*Income Inequality					-.079(.043)
			Random Effects		
Individual-level	3.059(.099)**	2.968(.096)**	2.957(.096)**	2.955(.096)**	2.964(.096)**
Group-level	.127(.064)*	.079(.044)	.068(.040)	.081(.045)	.075(.043)
Deviance	7630.246	7567.914	7559.678	7559.891	7564.639
Parameters	3	8	9	9	9

Note. *p<.05, **p<.001. Standardized estimates were reported. Standard errors are in parenthesis. There were 1923 participants whose province could be identified. That is why the sample size decreased from 1955 to 1923 in the multilevel analysis.

Table 11
Multilevel Analysis Results on SRH (N = 1923)

Parameter	Model 1	Model 2	Model 3	Model 4	Model 5
		Fixed Effects			
Intercept	8.110(.113)**	8.134(.115)**	8.132(.113)**	8.144(.115)**	8.124(.115)**
Individual-level					
Gender		-.290(.078)**	-.300(.078)**	-.293(.077)**	-.285(.078)**
Age		-.247(.050)**	-.242(.050)**	-.246(.050)**	-.249(.050)**
Education		.090(.045)*	.092(.045)*	.094(.045)*	.087(.045)*
SES		.175(.043)**	.167(.044)**	.171(.043)**	.174(.043)**
Relationship status		.095(.091)	.110(.091)	.113(.091)	.100(.091)
Presence of a child		.070(.105)	.056(.105)	.042(.105)	.061(.105)
Household size		.100(.043)*	.096(.043)*	.104(.043)*	.097(.043)*
COVNUMB		-.017(.040)	-.020(.040)	-.021(.040)	-.018(.040)
COVRISK		-.171(.041)**	-.169(.041)**	-.169(.041)**	-.170(.041)**
JOBLOST		-.038(.040)	-.037(.040)	-.040(.040)	-.037(.040)
Bonding		.227(.044)**	.225(.044)**	.227(.044)**	.228(.044)**
Bridging		.064(.043)	.063(.043)	.060(.043)	.062(.043)
Linking		.078(.044)	.081(.044)	.072(.044)	.083(.044)
Bonding*Linking		-.008(.035)	-.022(.036)	-.015(.035)	-.010(.035)
Group-level					
Income inequality		.070(.087)	.065(.083)	.034(.087)	.085(.088)

Note. See notes in the next table for the abbreviations.

Table 11 (Continued)

			Cross Level Interactions		
			Model 3	Model 4	Model 5
Bonding*Income Inequality			-.093(.040)*		
Bridging*Income Inequality				-.132(.040)**	
Linking*Income Inequality					-.071(.042)
			Random Effects		
Individual-level	3.059(.099)**	2.764(.089)**	2.758(.089)**	2.748(.089)**	2.760(.89)**
Group-level	.127(.064)*	.044(.027)	.039(.026)	.045(.029)	.044(.029)
Deviance	7630.246	7426.709	7421.230	7415.769	7423.874
Parameters	3	18	19	19	19

Note. *p<.05, **p<.001. Standardized estimates were reported. Standard errors are in parenthesis. There were 1923 participants whose province could be identified. That is why the sample size decreased from 1955 to 1923 in the multilevel analysis. COVNUMB = Number of people (if any) in the family diagnosed with COVID-19; COVRISK = Number of people (if any) in the family who are susceptible to COVID-19; JOBLOST = Number of people (if any) in the family on unpaid vacation due to COVID-19.

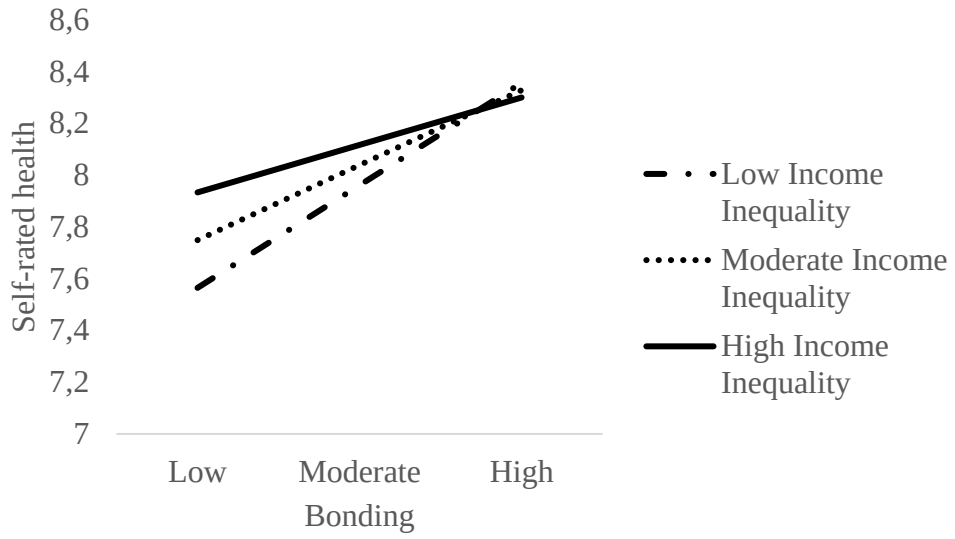

Figure 2
Interaction between Bonding Social Capital and Income Inequality on SRH

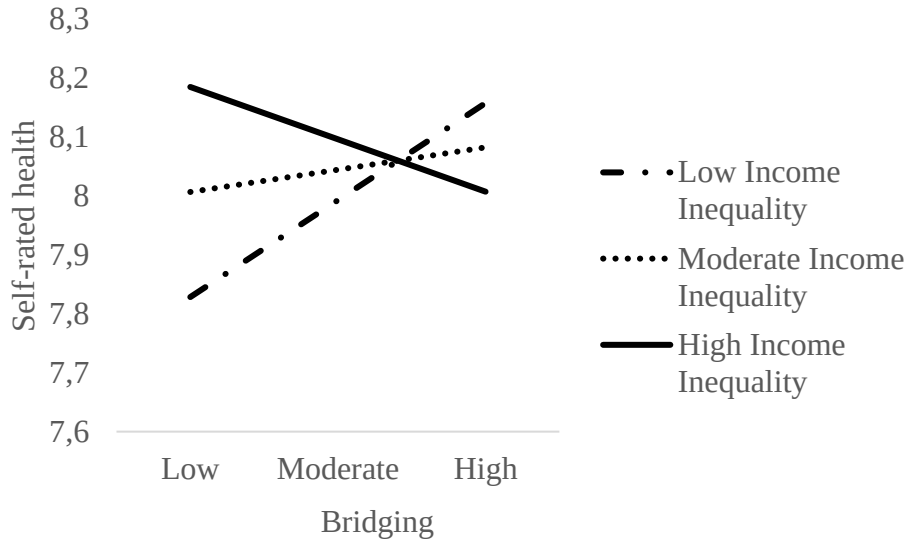

Figure 3
Interaction between Bridging Social Capital and Income Inequality on SRH

Lastly, to further examine the regional discrepancies, each social capital dimension was predicted in a multilevel model in which only the contextual-level variable, i.e., income inequality, was included (see Table 12). ICC for the bonding aspect was .09. This means 9% of the statistically significant variance (B = 0.023, SE = 0.010, p =

0.026) in the bonding aspect that the context could explain. Similarly, ICC for the bridging aspect was .09, meaning 9% of statistically significant variance (B = 0.043, SE = 0.019, p = 0.025) in the bridging aspect that the context could explain. In addition, ICC for linking aspect was .19, meaning that there was 19% of statistically significant variance (B = 0.116, SE = 0.050, p = 0.020) which could be explained by regional discrepancies. However, income inequality, the context-level variable, did not significantly predict any of the social capital dimensions. In any case, statistically meaningful variance showed that there could be regional discrepancies across each of the focal predictors.

Table 12
Social Capital Dimensions Regressed on Income Inequality

Bonding SC		Model 1	Model 2
		Fixed Effects	
	Intercept	3.161(.046)**	3.148(.047)**
	Group-level Income Inequality		-.050(.055)
		Random Effects	
	Individual-level	.230(.007)**	.230(.007)**
	Group-level	.023(.010)*	.021(.009)*
	Deviance	2.660.462	2.659.668
	Parameters	3	4
Bridging SC		Model 1	Model 2
		Fixed Effects	
	Intercept	2.081(.062)**	2.096(.065)**
	Group-level Income Inequality		.054(.077)
		Random Effects	
	Individual-level	.449(.015)**	.449(.015)**
	Group-level	.043(.019)*	.042(.019)*
	Deviance	3.950.391	3.949.900
	Parameters	3	4

Table 12 (Continued)

Linking SC		Model 1	Model 2
		Fixed Effects	
	Intercept	3.078(.100)**	3.020(.094)**
	Group-level Income Inequality		-.199(.111)
		Random Effects	
	Individual-level	.505(.016)**	.505(.016)**
	Group-level	.116(.050)*	.090(.039)*
	Deviance	4.185.917	4.183.071
	Parameters	3	4

Note: *p<.05, **p<.001.

2.5 Discussion

The current study that is part of a larger project consists of a pilot study and the main study. In the pilot study, the main purpose was to test the validity and reliability of the measurement tools and examine initial findings based on bivariate relationships. Findings indicated that measurement tools could adequately be used parallel to the existing theoretical background for operationally defining the social capital construct. Moreover, preliminary analysis showed that the three aspects of social capital (i.e., bonding, bridging, and linking) were positively associated with SRH. In a sense, individuals having higher trust in bonding (e.g., family relationships), bridging (e.g., relationships with people meeting for the first time), and linking relationships (e.g., the relationship between citizens and state institutions) would be more likely to report better SRH.

To further examine the initial findings, the main study was conducted, for the first time, to examine the relationship between social capital dimensions and SRH in a sample of respondents representing the Turkish population during the COVID-19 pandemic. Findings suggested that bridging relationships and the interaction term between bonding and linking aspects were not significant on SRH (i.e., *Hypothesis 2* and *Hypothesis 4*, respectively). However, higher trust in close relationships (e.g., family) led to better SRH (i.e., *Hypothesis 1*). Likewise, higher trust in people-

authority/state relationships led to better SRH (i.e., *Hypothesis 3*). Also, the predictor power of the bonding aspect on SRH was larger than the linking aspect (i.e., the *Research Question*). These findings were consistent with the existing body of knowledge suggesting an adaptive role of social capital during crisis or post-disaster cases such as natural disasters (Aldrich, 2012) or pandemics (Chuang et al., 2015; Rönnerstrand, 2013).

Previous studies showed that strong social ties could be adaptive to disaster recovery processes (e.g., Aldrich, 2012; Nakagawa & Shaw, 2004; Smiley et al., 2018). Especially, bonding and linking aspects of social capital were vital during crisis management (e.g., Hilfinger et al., 2012; Kyne & Aldrich, 2020). Social capital represents social ties relying on trust/confidence that could be fundamental for community response during crisis management (Dynes, 2005). In such a crisis situation, close relationships would be the safer resource that could buffer against stressors by providing social support. The existing body of knowledge suggests that social support is a focal predictor fostering a sense of trust in the immediate environment, which in turn, leading positive health-related outcomes (Glanville & Story, 2018). It should be recognized that what we call social capital basically consists of human relationships and the quality of these relationships, which are defined based on the level of trust (Pitas & Ehmer, 2020). Thus, the stress-buffering role of close relationship dynamics (Cohen & Pressman, 2004), i.e., bonding relationships, could provide emotional and instrumental (e.g., provision of basic needs such as meals financial aid) support during the pandemic, which in turn leads adaptive health-related outcomes (Borgonovi & Andrieu, 2020).

Furthermore, in societies where the sense of trust toward the authority/power is strong, individuals would put their personal interests aside and facilitate health behaviors in a way that could protect the benefit of the society, and as a result, they can adopt behaviors that are beneficial for health. Such attitude and behavior adoption would depend on transparent and consistent policies applied by the authority in which individuals should have confidence in the authority that they could access health services and equipment (e.g., test kits, vaccination), regardless of socio-economic

background (Wong & Kohler, 2020). Similarly, a sense of trust is essential in the diffusion of health-related information since the tendency to adopt that information and act accordingly (e.g., wearing a mask, frequent hand washing, intention to receive vaccination, self-quarantine) would depend on the confidence in that source (e.g., government agencies) (Chuang et al., 2015). For instance, in Sweden and USA, trust in the government could increase individuals' tendency to receive vaccination against the H1N1 pandemic in 2009 (Rönnerstrand, 2013; 2016). Therefore, linking relationships built between the citizens and the authority would contribute to the extent to which subjective health evaluations could be influenced during disaster recovery.

When it comes to the non-significant role of bridging relationships, there could be at least two contextual explanations for this finding. The first explanation may be related to the context. Namely, due to shelter-in-place orders such as lockdown and social distance limiting social bubbles during the pandemic process, individuals had to reduce face-to-face communication. As a result, while bridging relationships with others (e.g., friends, colleagues) would have declined, the relationship of individuals with the immediate environment may have become more evident (Pitas & Ehmer, 2020). That could also explain the stronger predictor power of the bonding aspect, including close social relationships, than other aspects of social capital.

The second reason may be discussed based on the individualism vs. collectivism perspective. Hofstede argued that interpersonal social ties would tend to disappear in individualist societies, and everyone would be obliged to take care of themselves. On the other hand, in collectivist societies like Turkey, individuals would develop a cohesive in-group identity and a deep commitment to the group (e.g., family). Ultimately, collective well-being would be emphasized rather than own well-being (Hofstede, 1991). Parallel to this, ultimate in-group loyalty to primary social units (e.g., family) led those groups to be the only resource for social support (Allik & Realo, 2004). Thus, as a collectivist society in Turkey, the link between human relationships and health-related outcomes could be more reflected based on bonding relationships rather than bridging relationships.

In addition, the discussion on social capital in individualist and collectivist cultures has moved one step further after introducing a new phenomenon, *trust radius,* referring to the width of trust scope (Delhey et al., 2011). According to this phenomenon, the critical point is to have broader trust across different social relationships rather than having solid trust in a particular aspect of social relationships. In this context, bonding and bridging aspects of social capital[4] were focused across different cultures (i.e., individualistic vs. collectivistic) in terms of trust radius (Realo et al., 2008; Van Hoorn, 2015). A comprehensive analysis of the fifth wave of the World Values Survey, including 36 countries (N = 44,845), showed that while the trust radius is wider in individualist societies, it was narrower in collectivist societies (Van Hoorn, 2015). This finding suggested that while the trust radius in collectivist societies would be more limited to bonding relationships, in individualistic societies, the scope of trust would be broader to include both bonding and bridging relationships. Thus, if in-group trust is more salient, as in collectivist societies, individuals could have a limited resource (e.g., family/bonding aspect) for social support (Triandis, 1995). As a result, perceived subjective health evaluation of individuals would be less likely to depend on bridging relationships in collectivist societies like Turkey.

Another hypothesis examined in the current study proposed that there may be an interaction between the bonding aspect and linking aspect of social capital on subjective health evaluations. The basic argument was that close relationships have a compensatory role on health-related outcomes when perceiving distress or lack of social support (e.g., Bradbury & Karney, 2004; Cohen & Pressman, 2004). Comparatively, the existing body of knowledge suggests that the core element of social capital, i.e., trust, could play a compensatory role on health (e.g., Uphoff et al., 2013; Van Lange, 2015). Based on such arguments, for the first time, it was investigated whether the closest horizontal social ties we have, i.e., bonding ties,

[4] These two aspects of social capital reflecting horizontal relationships seem to be more appropriate to examine cultural differences. That is why the linking aspect is not focused on this part as it has never been discussed in the literature based on individualism vs. collectivism comparison or other culture-related concepts.

could have a compensatory side in case of a lack of confidence in vertical relations with authority. However, no significant relationship was found. This finding could also be attributed to the salience of bonding relationships, as mentioned above, during the crisis phase. Thus, the relationship between bonding social ties and SRH was not conditional on the relationship quality between citizens and authority.

Concerning the link between social capital and health, previous findings suggested that there may be within-country variability in social capital and health-related outcomes (Chen & Meng, 2015). That is why there are many studies (e.g., Chu et al., 2018; Murayama et al., 2012; Sundquist et al., 2006) investigating social capital-health linkage in nationwide survey data relying on multilevel analysis, which accounts for interdependency between individual- and contextual-level variables. Following those suggestions and taking advantage of the current nationwide data, I exploratorily examined the same relationship patterns in a follow-up analysis, considering potential social capital and health discrepancies across 12 regions based on NUTS classification for Turkey.

In this follow-up analysis, income inequality was theoretically assessed as a contextual-level variable assigned for each region. Although income inequality was not directly assessed in the current study, there is a plausible reason to select that theory-driven variable. The reason is that annual statistics of TurkStat showed that one of the salient differences across the 12 regions is income inequality (TurkStat, 2021). Cumulative knowledge assertively suggested that income inequality could be a critical variable in both social capital and health-related outcomes (Wilkinson, 2005). For instance, as a result of his time-series analysis in the USA, Uslaner stated that the rise in income inequality (measured by the Gini index) alone would account for two-thirds of the fall in trust level (Uslaner, 2002, pp.181-189). In addition, a seminal work conducted by Kawachi et al. (1997) across 39 states of the USA found a large indirect effect where income inequality would adversely influence social capital, which leads to an even increased mortality rate.

As a result of the follow-up analysis, findings showed the necessity of taking not only individual-level but also contextual-level variables into account. The analysis result showed a significant discrepancy between the 12 regions in terms of SRH and all aspects of social capital. Yet, income inequality did not contribute to that significant discrepancy regarding both SRH and social capital dimensions across the regions. However, cross-level interactions between *bonding-income inequality* and *bridging-income inequality* on SRH were found as significant. Namely, the adaptive role of increased trust in both bonding and bridging relationships on better SRH would be more pronounced in the regions where income inequality is lower.

The existing literature rarely examined such an interaction between different social capital dimensions and income inequality on health-related outcomes. Instead, previous studies focused on the interaction between generalized social trust/capital and inequality in health (see Uphoff et al., 2013). In this context, a systematic review conducted by Uphoff et al. (2013) on the previous research hypothesized that social capital could be a buffering resource compensating for the adverse effect of inequality on health. Comparatively, the authors also stated a dependency hypothesis (which I later call the *booster effect*), suggesting that the positive relationship between social capital and health is more salient in societies with high equality. Previous findings did not present a clear picture regarding such interaction effect on health-related outcomes. Specifically, results showed a buffering effect, booster effect or no effect regarding the interaction between social capital and inequality on health (Uphoff et al., 2013).

Focusing on the booster effect, which was consistent with the current analysis, it was suggested that disadvantaged people suffering from inequality would possess a limited level of social capital, meaning that they would not be able to benefit from social capital-related resources and, as a result, adaptive role of social capital on health would have vanished. One explanation could be that in egalitarian societies, there would be more shared values and fewer social distances among individuals; therefore, interpersonal interactions and a high sense of trust in those interactions would be more likely to occur (Uslaner, 2002, Wilkinson, 2005). In contrast,

individuals with a sense of deprivation or in a disadvantaged position could not have the opportunity to gain and use social relations, so it would not be possible to observe an adaptive effect of social capital on their health. Consequently, according to this view parallel to the current findings, equality would become a preliminary assumption for those who can benefit from the adaptive role of social resources on health-related outcomes. Nevertheless, it should be noted that there were found between-country variations regarding the buffering or booster role of social capital on health (see Uphoff et al., 2013). Therefore, data collected across different countries could provide a more generalizable picture of such relationship patterns.

CHAPTER 3

STUDY 2

3.1 Aims and Hypotheses of the Study

Follow-up analysis in Study 1 showed that there could be regional differences in a given sample in which social capital and health were examined. This idea is consistent with the existing body of knowledge on social capital and health, suggesting that any context-level (e.g., across countries) comparisons for this link should be investigated in multilevel analysis (Murayama et al., 2012; Sundquist et al., 2006). Based on this suggestion, I aimed to examine the same relationship patterns to see whether those patterns would be consistent across different countries after adjusting for income inequality as a country-level predictor of SRH.

In that exploratory analysis, although the direct predictor role of income inequality on SRH and social capital dimensions was not significant, interactions of income inequality with bonding and bridging aspects would arouse curiosity about the possible contextual role of income inequality across different countries. Thus, Study 2 is a kind of extension of the previous study considering country-level differences based on a new variable, i.e., income inequality, by using joint data set consisting of the last waves of the World Values Survey and European Values Study (EVS/WVS, 2021) including data collected from 81 countries. However, acknowledging the COVID-19 context in which the first study was conducted, the findings of that study were considered based on disaster-related literature covering the link between social capital and health. However, in Study 2, I aimed to present a general picture of such relationship patterns rather than compare it with the first study's findings. Thus, theoretical discussion across the two studies is needed to be differentiated.

3.2 Method

3.2.1 Procedure and Participants

The WVS consists of data representing 90 percent of the world's population and has been collected since 1981 in collaboration with a large network of various social science fields. It is the largest data set shared publicly and accessible for everyone (World Values Survey, n.d.-a). Those data, including human beliefs, values, and various motivations, are frequently used for various purposes such as international developmental reports, teaching courses at universities, Ph.D. dissertations, and media publications (World Values Survey, n.d.-a). Similarly, The EVS was initiated by a group of academics in the late 1970s to examine moral and social values in European countries. WVS Association and EVS were officially cooperated to incorporate the last waves of their study conducted between 2017-2020 (EVS/WVS, 2021). EVS was responsible for surveying European countries, and WVS Association was responsible for conducting the survey outside Europe. In both questionnaires, there were joint questions called *Common Core*, which involves almost the same items to measure social capital dimensions and SRH used in the first study. Taking advantage of those open data sets, in Study 2, previous hypotheses suggested in the first study were aimed to be examined in multilevel modeling, considering possible country-level variations.

WVS was conducted in 51 countries (N = 76,897) and EVS (N = 58,103) was conducted in 35 countries (N_{total} = 135,000). Five countries (i.e., Germany, Romania, Russia, Serbia, and Ukraine) were included in both surveys. In all countries, surveys were released by random sampling representing nationwide data. The methodology and descriptive results for WVS and EVS were previously described in detail elsewhere (see World Values Survey, n.d.-b, European Values Study, n.d., respectively).

Before conducting the analysis, data from each country were carefully checked. Two exclusion criteria were strictly assessed after data screening. First, since COVID-19 was declared a pandemic by the World Health Organization on March 11, 2020, any

country, including the time interval for data collection after March 11, 2020, was excluded from the analysis. Partial exclusion of data covering before March 11 was not an option due to protecting the representativeness of the data from any country. Thus, considering the first criteria, data collected in Canada, Ethiopia, Iran, Singapore, Zimbabwe, Ukraine were completely excluded. Secondly, if there was no data regarding the focal predictors (social capital dimensions and income inequality), such countries were also excluded. In this case, Andorra, Bosnia Herzegovina, Iraq, Lebanon, and Macau Special Administrative Region were excluded due to a lack of data regarding the Gini coefficient to assess income inequality. Additionally, data collected in Egypt were excluded due to a lack of measurement for linking social capital. Thus, the final sample included 69 countries (see Table 13) with a total of 114,774 participants.

Table 13
Countries Included in The Current Analysis

Countries	N	Gini Index
Albania	1435	0,386
Azerbaijan	1800	0,286
Argentina	1003	0,411
Australia	1813	0,332
Austria	1644	0,308
Bangladesh	1200	0,395
Armenia	1500	0,344
Bolivia	2067	0,446
Brazil	1762	0,539
Bulgaria	1558	0,404
Myanmar	1200	0,307
Belarus	1548	0,252
Chile	1000	0,459
China	3036	0,51
Taiwan	1223	0,339
Colombia	1520	0,504
Crotia	1487	0,304

Table 13 (Continued)

Countries	N	Gini Index
Cyprus	1000	0,327
Czechia	1811	0,249
Denmark	3362	0,287
Ecuador	1200	0,454
Estonia	1304	0,303
Finland	1199	0,274
France	1870	0,328
Georgia	2194	0,364
Germany	3698	0,311
Greece	1200	0,344
Guatemala	1203	0,445
Hong Kong	2075	0,539
Hungary	1514	0,296
Iceland	1624	0,314
Indonesia	3200	0,378
Italy	2277	0,334
Japan	1353	0,299
Kazakhstan	1276	0,278
Jordan	1203	0,4
South Korea	1245	0,307
Kyrgyzstan	1200	0,297
Lithuania	1448	0,357
Malaysia	1313	0,428
Mexico	1739	0,454
Montenegro	1003	0,341
Netherlands	2404	0,285
New Zealand	1057	0,325
Nicaragua	1200	0,432
Nigeria	1237	0,351
Norway	1122	0,276
Pakistan	1995	0,316
Peru	1400	0,424
Philippines	1200	0,479
Poland	1352	0,297
Portugal	1215	0,319
Puerto Rico	1127	0,593
Romania	2870	0,358
Russia	3635	0,372

Table 13 (Continued)

Countries	N	Gini Index
Serbia	2545	0,362
Slovakia	1432	0,232
Vietnam	1200	0,357
Slovenia	1075	0,242
Spain	1209	0,347
Sweden	1194	0,288
Switzerland	3174	0,327
Tajikistan	1200	0,447
Thailand	1500	0,364
Tunisia	1208	0,333
Turkey	2415	0,419
North Macedonia	1117	0,307
Great Britain	1788	0,335
United States	2596	0,412

A sensitivity analysis was conducted using G*Power Software (Faul et al., 2007) to examine what effect sizes the current sample size is sensitive to detect. The analysis was based on ideally minimum statistical power (0.80), a sample size of 114,774, and 12 predictors (five of the predictors were the focal predictors, including an interaction effect). The smallest effect size of interest which could be found in the current sample was 0.0001 at the 0.05 alpha level.

3.2.2 Measurements

3.2.2.1 Self-Rated Health, Social Capital, and Income Inequality

Measurements for SRH and social capital dimensions were almost the same as in the previous study. For SRH, the only noticeable difference was that the scale ranged from 1 to 5 as opposed to the previous study where SRH ranged from 1 to 10.

For social capital dimensions, the only noticeable difference was that two items (i.e., *confidence in education services* and *confidence in public services provided electronically*) measuring the linking aspect of social capital did not exist in this study since linking social capital measurement was slightly different in WVS and EVS

compared to Study 1. In the joint data set of WVS and EVS, there were 14 different institutions (e.g., armed forces, labor unions, The United Nations) that participants were asked to rate their trust/confidence in these institutions. Previous studies (e.g., Chu et al., 2018; Elgar et al., 2011) measured linking social capital by selectively using the level of trust toward some of those institutions. Thus, based on the previous studies (cf. Chu et al., 2018; Elgar et al., 2011), participants' confidence in the following three organizations was included to assess linking social capital: *the armed forces, the police, the courts*. For bonding and bridging aspects, questions were the same as in Study 1. Reliability coefficients for bonding, bridging, and linking social capital dimensions were found .63, .83, and .71, respectively, in the current analysis.

Income inequality was measured via the Gini coefficient, as in the follow-up analysis of the first study. It should be noted that in WVS, data regarding Gini coefficients were already included based on the latest assessment of the World Bank between 2012-2019. However, in the current analysis, I try to include the latest Gini index as accessible as possible. To do so, first, the Gini index of all countries published by the World Bank was checked (the World Bank, n.d.). If the Gini index of a country representing the particular year, when the data of that country were collected in three years at the latest was available, then it was used. However, if the Gini index represented more than three years before the data collection, then data from World Health Organization (the World Health Organization, 2021) were checked. If the Gini index of a particular country could not be found there, finally, the following website, which is among the credible sources for global statistics, was visited: https://knoema.com/atlas. Therefore, three different sources, primarily the World Bank, were used to determine the most up-to-date Gini coefficients based on the data collection time for countries.

3.2.2.2 Control Variables

All identical variables in both the previous study and the current analysis included in this study as follows: gender (0 = man, 1 = woman), age (range:16–82), education (0 = less than primary, 1 = primary, 2= lower secondary, 3 = upper secondary, 4 = post-

secondary non tertiary, 5 = short-cycle tertiary, 6 = bachelor or equivalent, 7 = master or equivalent, 8 = doctoral or equivalent), socio-economic status (SES; 1 = lowest group, 10 = highest group), marital status (0 = single, 1 = married), presence of a child (0 = no, 1 = yes), and household size (*How many people permanently live in your household, including you and children?*).

3.2.3 Data Analysis Plan

First, descriptive statistics and bivariate relationships were examined. Then, multilevel analysis was conducted to examine hierarchically nested data (Raudenbush et al., 2019). The estimation method was chosen as full maximum likelihood to examine regression coefficients and variance components simultaneously (Bickel, 2007). Since the primary focus was on the main effects of level 1 and level 2 variables while controlling their effects on each other, all predictors were standardized as recommended due to computational advantage (Enders & Tofighi, 2007). This computational advantage makes sense while interpreting the magnitude of effect sizes for each predictor. In multilevel analysis, effect size calculation is a more complex issue than effect size comparison via bivariate relationships since it would not be possible to examine the strength of a particular variable after statistically controlling for other variables (Lorah, 2018). Concerning that issue, it was recommended that the coefficients obtained after standardizing each variable score before conducting the multilevel analysis could be used as effect size (Ferron et al., 2008; Snijders & Bosker, 2012). Since the sample size is very large in the current analysis, there would be a greater chance to find statistically significant results based on the p-value. Thus, standardized estimates in the current analysis will be used as effect size criteria to avoid such a large sample fallacy.

Gender, age, education, SES, marital status, presence of a child, household size, bonding social capital, bridging social capital, linking social capital, and an interaction term between bonding and linking dimensions were placed as individual-

level predictors. Income inequality was examined as a country-level predictor of SRH.

A two-level hierarchical linear modeling was run on SRH by including individual- (i.e., Level 1) and country-level (i.e., Level 2) predictors. A total of six models were computed sequentially. Model 1 (null model) was tested on SRH to compute individual- and country-level variation. In Model 2, I included individual-level predictors. In Model 3, income inequality was added as the country-level predictor. In the following three models (i.e., Model 4, Model 5, Model 6), cross-level interactions between the three social capital dimensions and income inequality were added, respectively. The main aim of the last three models was to examine the replicability of those exploratory findings regarding cross-level interactions found in the follow-up analysis of the previous study. Lastly, to determine the goodness of fit of the model, each model was compared with the previous one based on the deviance statistics. Models with a lower deviance statistic present a better fit than models with a higher deviance statistic (Hox, 2017).

3.3 Results

Descriptive statistics and bivariate correlations of variables were shown in Table 14 and Table 15, respectively. There were 114,774 respondents (N_{women} = 61,949; M_{age} = 46.27 years, SD_{age} = 17.31). Majority of the participants' highest educational level was upper secondary school [0 = less than primary (3.1%), 1 = primary (9.8%), 2= lower secondary (14.4%), 3 = upper secondary (33.7%), 4 = post-secondary non tertiary (6.5%), 5 = short-cycle tertiary (7.4%), 6 = bachelor or equivalent = (13.6%), 7 = master or equivalent (9.4%), 8 = doctoral or equivalent (1.1%)]. 60% of respondents were not single. 71.7% of respondents had at least a child.

Table 14
Descriptive Statistics

Variables	M	SD	Min.	Max.	Skewness	Kurtosis
Age	46,27	17,28	16,00	82,00	0,21	-0,96
SES	4,90	2,29	1,00	10,00	0,21	-0,41
Household size	3,24	1,56	1,00	6,00	0,28	-0,98
Bonding	3,22	0,53	1,00	4,00	-0,82	1,09
Bridging	2,26	0,72	1,00	4,00	-0,02	-0,60
Linking	2,71	0,72	1,00	4,00	-0,29	-0,29
Income inequality	0,36	0,07	0,23	0,59	0,86	0,32
Self-rated health	3,78	0,90	1,00	5,00	-0,47	0,01

Table 15
Bivariate Relationships Among Variables (N = 114,774)

		1	2	3	4	5	6
1	Gender						
2	Age	,010**					
3	Education	-,023**	-,124**				
4	SES	-,057**	-,123**	,290**			
5	Marital status	-,041**	,158**	-,045**	,131**		
6	Presence of a child	,090**	,433**	-,130**	-,023**	,492**	
7	Household size	-,011**	-,357**	-,094**	,106**	,272**	,135**
8	Bonding	-,020**	,145**	,095**	,104**	,042**	,036**
9	Bridging	-,018**	,131**	,172**	,135**	-,030**	-,022**
10	Linking	0,002	,069**	-,017**	,020**	,054**	,037**
11	Income inequality	-,013**	-,138**	-,114**	-,075**	,032**	-,013**
12	Self-rated health	-,050**	-,292**	,141**	,201**	,007*	-,131**

Table 15 (Continued)

		7	8	9	10	11
7	Household size					
8	Bonding	-,102**				
9	Bridging	-,182**	,484**			
10	Linking	-,034**	,284**	,169**		
11	Income inequality	,204**	-,235**	-,206**	-,082**	
12	Self-rated health	,103**	,120**	,088**	,073**	-,007*

Note. * p < .05; ** p < .001, two-tailed.

To test the hypotheses, a multilevel analysis was conducted where SRH was the outcome variable predicted by the followings: gender, age, level of education, SES, marital status, presence of a child, household size, bonding social capital, bridging social capital, linking social capital, an interaction term between bonding and linking dimensions, and income inequality. First, linear regression assumptions were checked by screening homoscedasticity, linearity through all partial plots, multicollinearity, and multivariate normality. It seemed that there was not any serious violation of assumptions for homoscedasticity, linearity, and multicollinearity (VIF_{maks} = 1.7, $Tolerans_{min}$ = 0.6). Multivariate normality based on 12 predictors seemed to be violated (Mahalanobis distance > 21.03, p = 0.05) for 7,423 participants. Thus, regression analysis included the outliers first; then, the same analysis was conducted without the outliers. As there was not any noticeable change after excluding the outliers, all findings were reported based on the original data. This is also an advantage for the sake of protecting the representativeness of the current sample from different countries.

First, hypotheses were tested without control variables, shown in Table 16. Then, results with covariates were presented in Table 17. As seen from Table 17, women reported worse SRH compared to men (*effect size* = -0.025, *SE* = 0.002,). Also, age significantly and negatively predicted SRH (*effect size* = -0.264, *SE* = 0.003). In contrast, education (*effect size* = 0.064, *SE* = 0.003), SES (*effect size* = 0.105, *SE* = 0.003), marital status, (*effect size* = 0.030, *SE* = 0.003), bonding social capital (*effect size* = 0.107, *SE* = 0.003), bridging social capital (*effect size* = 0.021, *SE* = 0.003) and

linking social capital (*effect size* = 0.049, *SE* = 0.003) significantly and positively predicted SRH. In addition, interaction between bonding and linking aspects of social capital was found as significant (*effect size* = 0.014, *SE* = 0.002). Specifically, the relationship was more pronounced at greater levels of linking capital (see Figure 4). Presence of a child, household size, and Gini index did not significantly predict SRH.

Regarding the cross-level interactions, findings were consistent with follow-up analysis such that the interaction between bonding-income inequality and bridging-income inequality were significant on SRH (see Table 17). Comparatively, interactions were significant at all levels of income inequality; however, the positive relationships between the two social capital dimensions and SRH were more pronounced at lower levels of income inequality (see Figure 5 and Figure 6, respectively).

Regarding the Research Question in the first study, the predictive power of each social capital dimension on SRH was compared, relying on their effect sizes in the current analysis. Accordingly, the magnitude of the effect sizes on SRH were bonding, linking, and bridging, respectively, from largest to smallest (see Table 17).

Table 16

Multilevel Analysis Results on SRH without covariates (N = 114,774)

Parameter	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
			Fixed Effects			
Intercept	3.791(.026)***	3.791(.026)**	3.792(.026)***	3.790(.026)***	3.790(.026)***	3.791(.026)***
Individual-level						
Bonding		.094(.003)**	.094(.003)***	.096(.003)***	.095(.003)***	.094(.003)***
Bridging		.033(.003)**	.033(.003)***	.033(.003)***	.033(.003)***	.033(.003)***
Linking		.039(.003)**	.039(.003)***	.039(.003)***	.040(.003)***	.040(.003)***
Bonding*Linking		.009(.002)**	.009(.002)***	.008(.002)**	.008(.002)**	.008(.002)**
Group-level						
Income inequality			.035(.026)	.034(.026)	.034(.026)	.034(.026)
			Cross Level Interactions			
Bonding*Income Inequality				-.009(.003)**		
Bridging*Income Inequality					-.012(.003)***	
Linking*Income Inequality						-.007(.003)*
			Random Effects			
Individual-level	.756(.003)***	.744(.003)***	.744(.003)***	.743(.003)***	.743(.003)***	.743(.003)***
Group-level	.048(.008)***	.048(.008)***	.046(.008)***	.046(.008)***	.046(.008)***	.046(.008)***
Deviance	293977.084	292033.024	292031.215	292020.495	292015.249	292025.190
Parameters	3	7	8	9	9	9

Note. *p<.05, **p<.001. Standardized estimates were reported. Standard errors are in parenthesis.

Table 17
Multilevel Analysis Results on SRH (N = 114,774)

Parameter	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
			Fixed Effects			
Intercept	3.791(.026)*	3.787(.024)*	3.787(.024)*	3.786(.024)*	3.785(.024)*	3.787(.024)*
Individual-level						
Gender		-.025(.002)*	-.025(.002)*	-.025(.002)*	-.025(.002)*	-.025(.002)*
Age		-.264(.003)*	-.264(.003)*	-.264(.003)*	-.265(.003)*	-.265(.003)*
Education		.064(.003)*	.064(.003)*	.064(.003)*	.064(.003)*	.064(.003)*
SES		.105(.003)*	.105(.003)*	.105(.003)*	.105(.003)*	.105(.003)*
Relationship status		.030(.003)*	.030(.003)*	.030(.003)*	.030(.003)*	.030(.003)*
Presence of a child		-.002(.003)	-.002(.003)	-.002(.003)	-.002(.003)	-.002(.003)
Household size		-.002(.003)	-.002(.003)	-.002(.003)	-.002(.003)	-.002(.003)
Bonding		.107(.003)*	.107(.003)*	.109(.003)*	.108(.003)*	.108(.003)*
Bridging		.021(.003)*	.021(.003)*	.021(.003)*	.021(.003)*	.021(.003)*
Linking		.049(.003)*	.049(.003)*	.049(.003)*	.050(.003)*	.050(.003)*
Bonding*Linking		.014(.002)*	.014(.002)*	.012(.002)*	.013(.002)*	.013(.002)*
Group-level						
Income inequality			.012(.023)	.012(.023)	.012(.023)	.012(.023)

Table 17 (Continued)

Cross Level Interactions						
Bonding*Income Inequality				-.010(.002)*		
Bridging*Income Inequality					-.015(.003)*	
Linking*Income Inequality						-.004(.003)
Random Effects						
Individual-level	.756(.003)*	.650(.003)*	.650(.003)*	.650(.003)*	.650(.003)*	.650(.003)*
Group-level	.048(.008)*	.040(.007)*	.040(.007)*	.039(.007)*	.039(.007)*	.039(.007)*
Deviance	293977.084	276538.088	276537.799	276521.402	276507.401	276535.306
Parameters	3	14	15	16	16	16

Note. *p<.001. Standardized estimates were reported. Standard errors are in parenthesis.

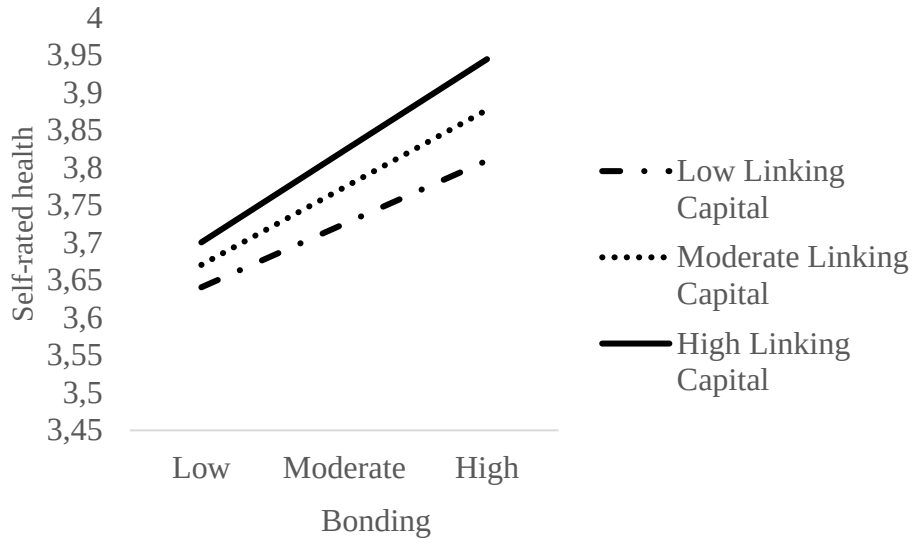

Figure 4
Interaction between Bonding and Linking Social Capital on SRH

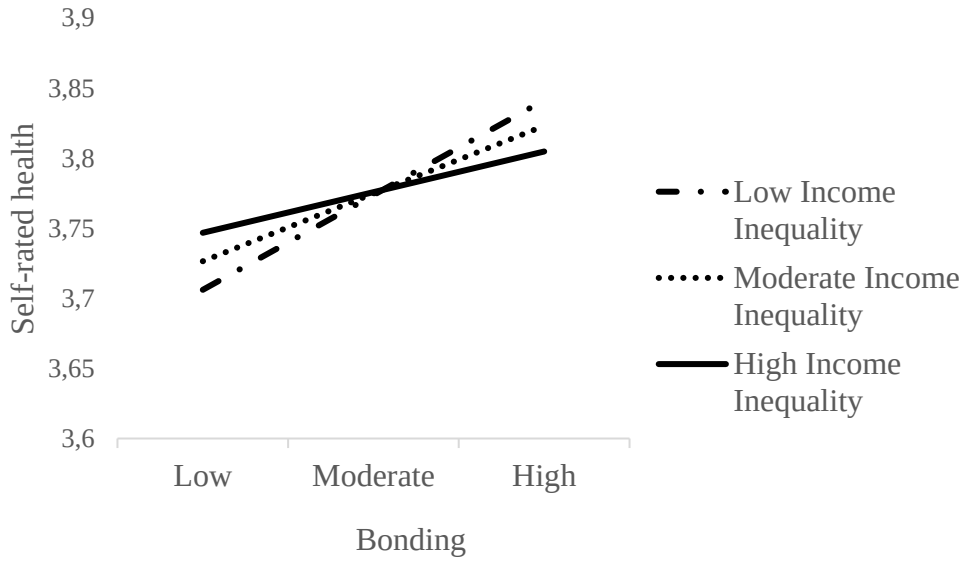

Figure 5
Interaction between Bonding Social Capital and Income Inequality on SRH

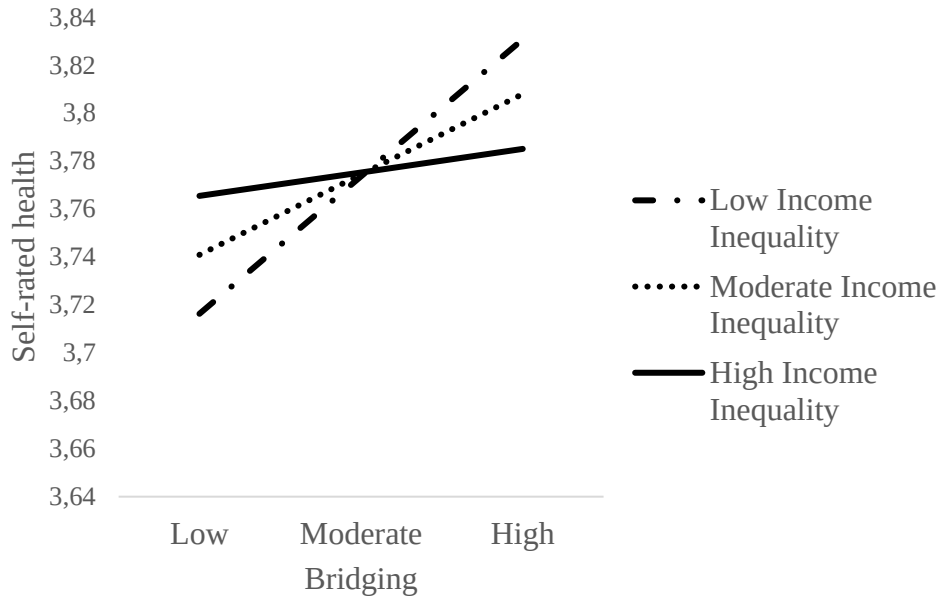

Figure 6
Interaction between Bridging Social Capital and Income Inequality on SRH

3.4 Discussion

In the current study, secondary data analysis was conducted on the joint data of WVS and EVS to investigate the same hypotheses in the previous study. Findings suggested that having higher trust in all aspects of social relationships (i.e., *Hypothesis1-Hypothesis 3*) led respondents to report better subjective health evaluation. Also, the significant link between bonding relationships and SRH was more salient for those having greater trust in the authority (i.e., *Hypothesis 4*). Moreover, interactions between the two social capital dimensions (i.e., bonding and bridging) and income inequality on SRH were found as significant. However, the country-level variable, income inequality, was not related to SRH.

Although there are mixed findings regarding the link between social capital with different aspects and health, it was suggested that there is convincing evidence in terms of the adaptive role of social capital on health (Xue et al., 2020). For example, as a result of a meta-analysis, Gilbert et al. (2013) stated that "an average one-unit increase in social capital will increase the odds of survival by 17 percent and increase

the odds of reporting good health by 29 percent" (Gilbert et al., 2013, pp.1390-1391). Specifically, this rate was 30 percent, 18 percent, and 10 percent for the effect of bonding, bridging, and linking relationships on health, respectively.

Regarding the relationship between social capital and health, scholars claimed different explanations. For instance, the stress level of individuals can be reduced through supportive relationships, trust, and socialization (Folland, 2008). In addition, more health information can be obtained in a socialization environment where the sense of trust is high (Kawachi & Berkman, 2000). Moreover, strong social relationships may provide a sense of responsibility for implementing positive, healthy behaviors such as regular check-ups and quitting smoking (Folland, 2008). Additionally, health behaviors can be controlled informally through social pressure to prevent unhealthy behavior (Story, 2014).

More specifically, in bonding relationships, social support provided by family members or neighbors could help reduce distress in not only times of sudden health crisis or chronic health conditions (Story et al., 2016) but also in any time when people face a conflicting and negative stimulus (Bradbury & Karney, 2004). This support may be emotional (e.g., empathy, caring), informational (e.g., providing health-related info) or instrumental (e.g., financial aid) that make individuals feel that they are cared for and valued (Kawachi, 2010).

Moreover, in societies with a higher sense of trust in bridging relationships, strong ties could facilitate mobilization and collective action that may improve health-related outcomes by creating a sense of belonging and togetherness. Such positive emotions would make individuals put their own interests aside and exhibit health behaviors in a way that would protect the benefit of society, or they can collectively act for change in social policies facilitating healthy behaviors (Glanville & Story, 2018), resulting in an influence on policy changes impacting the whole community (Kawachi, 2010). In addition, new information beneficial for health-related outcomes would be more likely to diffuse in such strong social ties since higher confidence

among those ties would facilitate the adoption and usage of such information to create attitudes and behaviors congruent with that information (Kawachi, 2010).

Deficiency in trust toward the authority would obstruct peace and tranquility, resulting in damage to solidarity and a sense of security in the community. By contrast, if the sense of trust is higher toward the authority institutions, there would be a greater chance to interact with the power gradients so that individuals could feel more sense of power and control over health-related policies influencing their lives (Sundquist & Yang, 2007). Thus, all dimensions of social capital are key for good health as indicated: bonding aspect for social support, bridging aspect for solidarity and respect in the society, and linking aspect for the ability to mobilize resources provided by the power or authority (Poortinga, 2012).

The significant interaction term between bonding and linking aspects on SRH results from a unique research hypothesis investigated for the first time. The hypothesis was based on the compensatory role of close relationship dynamics, bonding aspect in the current study, on health-related outcomes for individuals with a lower level of trust toward the authority. However, the findings illustrated a distinct relationship pattern similar to the *booster effect* found between the bonding aspect and income inequality in the follow-up analysis of the first study. Although the positive association between bonding relationships and SRH existed in all levels (low, moderate, and high) of linking relationships, such relationship pattern was more pronounced for people with greater trust against the authority. Such booster effect could be explained through the association between institutional/vertical trust and interpersonal/horizontal trust. There were findings suggesting a reciprocal relationship between the two kinds of trust in different contexts and countries (e.g., Rothstein & Stolle, 2008; Sønderskov & Dinesen, 2014; 2016).

Beyond the reciprocal relationship pattern, there are arguments about a causal pathway from institutional trust to interpersonal trust (e.g., Rothstein & Stolle, 2008) in which the former is an experiential process where the latter is learned to be built by interactions with institutional representatives (e.g., members of the judiciary,

police officers). For instance, a repeated measure analysis through two representative Danish survey data showed that institutional trust could influence interpersonal trust among the citizens (Sønderskov & Dinesen, 2016). The authors also reported that such a causal pathway was robust after controlling for influential confounds (e.g., personality characteristics). One explanation could be that people's perceptions of how trustworthy others are may be constructed through the rule-makers that govern the behavior of society members. In a sense, the fairness, transparency, and efficiency of government institutions are indicative of norms for other members of society and the encouragement of trustworthiness (Sønderskov & Dinesen, 2016). Simply put, dishonesty is seen as unusual, and citizens would believe that the ones who break such norms would be imposed severe sanctions (Rothstein & Stolle, 2008). Supporting that, corruption or other malfunctions in institutions would undermine trust in institutions and reduce interpersonal trust (Sønderskov & Dinesen, 2014). Therefore, a greater sense of trust at the macro level is reflected in other social relations through positive experiences at the individual level, where trust in bonding relationships could become more prominent and, therefore, more pronounced for health-related outcomes. In other words, people with greater trust toward the state would be more advantageous to experience the adaptive effect of trust as a cognitive resource in bonding relationships on their health.

Over and above, interactions between the two social capital dimensions (i.e., bonding and bridging) and income inequality on SRH were consistent with the follow-up analysis in the previous study. The current findings increased the generalizability of such assumption that the adaptive role of horizontal relationships on SRH could be more likely to be detected in societies where income inequality is lower. Thus, the results strengthened the reliability and generalizability of the *booster effect* that was discussed in the previous study.

Lastly, a weak pairwise relationship between income inequality and SRH became non-significant in the multilevel analysis, including several individual-level variables along with the social capital dimensions. This result is not surprising considering the previous interpretations (e.g., Kawachi et al., 1997; Wilkinson, 2005) on income

inequality, social capital, and health linkage. In their seminal work, Kawachi et al. (1997) indicated that the relationship between income inequality and health-related outcomes (e.g., mortality) became negligible after controlling for social capital. Thus, they rather emphasize a mediating mechanism, rather than a direct link, where income inequality could be related to health via social capital.

Such an indirect path may be interpreted relying on the Relative Deprivation Theory (Crosby, 1976) in a way that individuals go through the following processes in social experiences, respectively: First, people make comparisons; second, individuals make cognitive assessments that they or their group are disadvantaged; third, as they see these disadvantages as unfair to themselves, then negative feelings would appear, resulting in maladaptive health consequences. Therefore, scholars (e.g., Uslaner, 2002; Wilkinson, 2005) supported the idea that income inequality results in relative deprivation and deterioration of community unity, which negatively affects health. For instance, Wilkinson claimed that income inequality could lead to forming a hierarchical social structure by fostering the perceptions of inferiority and superiority among individuals. Afterward, competition for status and personal interests would become evident in society. Such prominent perceptions can damage the sense of trust, resulting in damage to social relationships and would cause stress (Wilkinson, 2005). Supporting this idea, Uslaner (2002) also argued that income inequality would damage the self-esteem and optimism of individuals and lead them to feel deprived. Then, economic and social inequalities would bring about anxiety for individuals living in a society where inter-class disrespect and isolation would appear, negatively influencing health (Wilkinson & Pickett, 2006; Pickett & Wilkinson, 2010). Thus, indirect pathways were rather emphasized in the association among income inequality, social capital, and health.

CHAPTER 4

GENERAL DISCUSSION

The concept of social capital is a psychosocial construct in which the emphasis is placed on integrating and establishing strong ties with society. According to the theory, strong social networks involve beneficial resources that could only be activated through an essential component, i.e., trust (Putnam, 2000). Thus, trust is a reflection of good quality relationships promoting meaning in life and positive emotions (Sun & Lu, 2020). In this context, numerous studies found that people with strong social ties would benefit from the adaptive role of such bonds on health-related outcomes (Rodgers et al., 2019; Xue et al., 2020).

Although there has not been a clear-cut consensus regarding the definition of social capital, trust was accepted as a good and most frequently used proxy of such a psychosocial construct (Rodgers et al., 2019). One criticism was related to the measurement of the target relationship, which raises the question of to whom we are talking about trust (Elgar et al., 2011; Glanville & Story, 2018)? In this case, three aspects of social relations (i.e., bonding, bridging, and linking) were suggested as the clearest distinguishing conceptualization providing a well-established and testable framework for the target relationship patterns (Szreter & Woolcock, 2004). However, there has been a limited attempt to include all three dimensions simultaneously (Ehsan et al., 2019). Concerning that, this study is an attempt to examine the relationship between all of these aspects and SRH, which provides secondary data commonly used in numerous studies, and is suggested as a valid and reliable proxy for physical and mental health and mortality (Gilbert et al., 2013).

Previous findings showed that the relationship pattern between social capital and health may change during crises or disasters due to shifts in daily routines and experiences of people so that there may be variation in social network resources (Noel

et al., 2018) which could also influence health-related outcomes. For instance, it was shown that community engagement and strong social bonds could facilitate social integration, increasing individual resilience during and after the crisis (Kyne & Aldrich, 2020). That is why the findings of the first study were interpreted considering the huge global disaster, COVID-19, to re-examine, for the first time, whether there could be consistency or difference in the relationship patterns investigated in a different country, Turkey. Remember that infectious diseases can affect not only the health of those infected but also the general psychological health and well-being of other people. For example, severe acute respiratory syndrome (SARS) disease increased the level of anxiety, depression, and stress in the general population (Wu et al., 2005). Concerning such critical health outcomes, an analysis conducted by Borgonovi and Andrieu (2020) supported the idea that societies with strong social relations can be more prepared, especially in the early stages when infectious diseases begin to spread and would exhibit adaptive behaviors to protect other members of society.

In the early stages of such crises, governments may delay acting due to different concerns (financial or political), and at this point, individuals can alleviate the burden on the authority with their own responsible attitudes and behaviors without being imposed mandatory measures. In short, in crisis situations, social capital stock at both *individual* and *community* levels is as important as material stock (e.g., face masks, test kits) in terms of health. Remember that interventions aiming health promotion at only the individual level, without considering the community level, would lead to a lower impact than expected (Glass, 2000).

Emphasizing the importance of social capital stock at the community level, WHO and OECD suggested initiatives to develop health where social capital is one of the protective factors for community health (Keeley, 2007; World Health Organization, 2013). For instance, in a health-related policy, Health 2020, WHO European suggested that social capital could be a critical antecedent of quality of life and longevity, and there needs to be more research on this topic (World Health Organization, 2013). In addition, as indicated above, a multidimensional approach to

social relations provides a more nuanced understanding (Chen & Meng, 2015) and insight for future interventions that could decrease the great burden on health facilities (Lofors & Sundquist, 2007). Thus, cross-cultural studies with consistent conceptualization and measurement of social capital are needed to determine whether different communities could be distinguished, including all dimensions.

However, in general, data come from wealthier, developed countries such as the USA and Western European countries (Ehsan et al., 2019) and samples including youths almost do not exist (Rodgers et al., 2019). However, variation in cultural or socio-demographic characteristics may influence the level of trust, therefore, health-related outcomes. For instance, a comprehensive analysis of previous WVS and EVS data conducted by Balliet and Van Lange (2013) showed that there was a great variation in trust levels across the countries. Following that finding, Van Lange (2015) argued that there must be a modest genetic effect on trust across different countries. In this context, analyzing Turkish data and joint data of WVS and EVS, including a wide range of demographic and social characteristics, provides a unique case for the existing body of knowledge.

Another limitation in the literature is the lack of moderating and mediating mechanisms in terms of the social capital and health linkage (Rodgers et al., 2019). In the current research, an original attempt presented a moderating mechanism between bonding and linking aspects of SRH. In addition, other moderating relationship patterns (e.g., interaction between bonding and income inequality) were exploratorily presented for the first time. Further studies may extend these findings by investigating potential interaction between different aspects of social capital, for instance, the interaction between the cognitive aspect – referring to what people feel or perceive (e.g., trust) – and the structural aspect representing behavioral proxies of social capital (e.g., associational membership, voluntary actions) on health.

There should be an important reminder of the inconsistent finding regarding the interaction between bonding and linking aspects on SRH. A small effect of this interaction on SRH in the second study was not found in the first study. Such

inconsistency should be interpreted based on two reminder information. First, the effect size of this interaction was small; the statistical significance of such interaction could be detected in a very large sample size in the second study. Therefore, such a small effect may not be detected in a smaller sample in the first study compared to the second study. Such statistical power argument would be only reasonable considering, as noted before, bonding relations could become the most salient social ties during crisis times so that its association with health may not be conditional on any level of linking relationships or even if there may be a conditionality, it may only be detected through such a larger sample size in the second study. Nevertheless, the interplay between different aspects of social capital on health is an original finding that can further be extended.

The cross-sectional nature of the current research is a caveat to infer cause and effect relationships. Also, the findings of the first study are limited Turkish population and should be interpreted considering the huge global disaster, the COVID-19 pandemic, influencing daily social routines. Nevertheless, the secondary data analysis drawing nationwide pictures from 69 countries could increase the replicability and generalizability of the current findings. It should also be recognized that data from large sample sizes must have increased the likelihood of finding even very small effects on health outcomes, whereas a statistical significance does not necessarily mean a practical significance. For this reason, in the second study, I reported effect sizes rather than p-values to assess practical significance. Based on Cohen's (1977) accepted effect size classification, in the current study, it seems that there were small effect sizes for social capital dimensions on health. However, Cohen (1977) also pointed out that such effect size classifications may be arbitrary, so researchers should appraise the previous work in the field. In this context, the current effect sizes were consistent with the existing knowledge emphasizing modest effects of social capital dimensions on health (Gilbert et al., 2013; Xue et al., 2020). In this case, the extent to which the effects are "impactful" depends on the work area. For instance, greater statistical power through large sample sizes would be useful to detect small effects, which could be critical in health-related works (e.g., drug studies or cardiovascular device studies; Lantz, 2013). Thus, it can be argued that the current health-related

work would also contribute to cumulative knowledge by theoretical and practical meaning.

4.1 Conclusion

Recalling Erikson's (1968) theory of psychosocial development, the sense of trust is a fundamental cognitive resource that begins to be built through close relationships in the earliest stages of life and, as suggested by interdisciplinary research, it can be reinforced by new sorts of social relationships formed later in life. In this study, the impact of trust, a critical cognitive resource in social relations from early childhood to adulthood, was examined on health within the framework of a psychosocial construct, i.e., social capital. The findings also provide a comprehensive view of how societies can adapt to the new normal in disaster situations when we leave our daily routines behind, called normal times, and how governments can deal with global crises by taking social relations into account. In short, this study reinforces previous insights and adds new evidence for practitioners and decision-makers to re-consider the influence of social relationships and cultural and socio-economic diversity on health interventions.

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APPENDICES

APPENDIX A: HUMAN SUBJECTS ETHICS COMMITTEE APPROVAL

Evrak Tarih ve Sayısı: 23/06/2020-34801

T.C.
KADİR HAS ÜNİVERSİTESİ REKTÖRLÜĞÜ
İnsan Kaynakları Direktörlüğü

Sayı : 82741295-604.01.01-E.34801 23/06/2020
Konu : Etik Kurul Raporunuz hk. (Doç.Dr. Mehmet HARMA)

Sayın Doç.Dr. Mehmet HARMA

İlgi : 08/06/2020 tarihli ve 21571 sayılı yazınız

İlgi yazınıza istinaden, "Ağ Analizi Perspektifinden COVID-19 Küresel Salgınının Psiko-Sosyal Etkilerinin İncelenmesi" başlıklı araştırma projeniz Üniversitemiz İnsan Araştırmaları Etik Kurulu tarafından değerlendirilmiştir.

Çalışmanızın Kadir Has Üniversitesi Bilimsel Araştırma ve Yayın Etiği Yönergesi kapsamında bilimsel araştırma etik ilkelerine uygun bulunduğuna ilişkin İnsan Araştırmaları Etik Kurul kararı ekte gönderilmiştir.

Bilgilerinizi rica ederim.

e-imzalıdır
Prof. Dr. Sondan DURUKANOĞLU
FEYİZ
Rektör

Ek: Doç.Dr. Mehmet HARMA'nın İnsan Araştırmaları Etik Kurul Raporu (2 sayfa)

Evrakı Doğrulamak İçin : https://obys.khas.edu.tr/onVision/Validate_doc.aspx?V=BE5F6YM4 **Pin Kodu :** 88451

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T.C.
KADİR HAS ÜNİVERSİTESİ REKTÖRLÜĞÜ
İnsan Araştırmaları Etik Kurulu

Sayı : 17446481-050.06.04-E.1992 17/06/2020
Konu : Doç.Dr. Mehmet HARMA'nın İnsan Araştırmaları Etik Kurul Raporu

REKTÖRLÜK MAKAMINA

İlgi : İktisadi, İdari ve Sosyal Bilimler Fakültesi öğretim üyesi Doç.Dr. Mehmet Harma' nın 08.06.2020 tarih ve 21571 sayılı başvuru dosyası ve ekleri

Üniversitemiz İktisadi, İdari ve Sosyal Bilimler Fakültesi öğretim üyesi Doç.Dr. Mehmet HARMA'nın "Ağ Analizi Perspektifinden COVID-19 Küresel Salgınının Psiko-Sosyal Etkilerinin İncelenmesi" başlıklı araştırma projesine ilişkin İnsan Araştırmaları Etik Kurulu raporu ekte sunulmuştur.

Gereğini bilgilerinize arz ederim.

Saygılarımla,

e-imzalıdır
Prof. Dr. Ömer Lütfi GEBİZLİOĞLU
Başkan

Ek: Doç.Dr. Mehmet HARMA'nın İnsan Araştırmaları Etik Kurul Raporu

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Kadir Has Üniversitesi
İnsan Araştırmaları Etik Kurulu Raporu
(15.06.2020)

Kadir Has Üniversitesi, İktisadi, İdari ve Sosyal Bilimler Fakültesi öğretim üyesi Doç. Dr. Mehmet HARMA'nın "Ağ Analizi Perspektifinden COVID-19 Küresel Salgınının Psiko-Sosyal Etkilerinin İncelenmesi" başlıklı araştırma projesi amaç, kapsam, ve veri sağlama ve koruma yöntemi bakımından incelenmiş ve insan araştırmaları etik ilkelerine uygun bulunmuştur.

e-imzalıdır
Prof.Dr. Ömer L. Gebizlioğlu
Başkan

e-imzalıdır
Prof.Dr. G. Deniz Bayrakdar
Üye

e-imzalıdır
Prof.Dr. Ayşe H. Bilge
Üye

e-imzalıdır
Prof. Dr. Ali Güzel
Üye

e-imzalıdır
Prof.Dr. Kemal Yelekçi
Üye

e-imzalıdır
Doç. Dr. Ebru Demet Akdoğan
Üye

e-imzalıdır
Doç. Dr. Aslı Çarkoğlu
Üye

e-imzalıdır
Doç. Dr. Ayşe Nur Erek
Üye

e-imzalıdır
Necmiye Kıcıroğlu
Üye

e-imzalıdır
Ebru Koç
Üye

APPENDIX B: INFORMED CONSENT FORM (PILOT STUDY & STUDY 1)

Doç. Dr. Mehmet Harma'nın yürütücüsü olduğu TÜBİTAK tarafından desteklenen 120K392 kodlu ve "Ağ Analizi Perspektifinden Covid-19 Küresel Salgınının Psiko-Sosyal Etkilerinin İncelenmesi" konulu kapsamlı çalışmamızın ön çalışması için sizden bazı sorulara cevap vermenizi isteyeceğiz. Anketleri doldurmak yaklaşık 30-35 dakika sürmektedir. Çalışmaya katılmak tamamen gönüllülük esasına dayanmaktadır. Çalışmanın amacına ulaşması için sizden beklenen, bütün soruları eksiksizce cevaplamanız ve size en uygun gelen şekilde işaretlemenizdir. Bu formu okuyup onaylamanız, araştırmaya katılmayı kabul ettiğiniz anlamına gelecektir. Ancak, çalışmaya katılmama veya katıldıktan sonra istediğiniz an çalışmayı bırakma hakkına da sahipsiniz. Bu çalışmadan elde edilecek bilgiler tamamen bilimsel amaçlı kullanılacak olup kişisel bilgileriniz gizli tutulacaktır.

Eğer araştırmanın amacı ile ilgili verilen bu bilgiler dışında daha fazla bilgiye ihtiyaç duyarsanız araştırma asistanlarına corelab@khas.edu.tr e- posta adresi üzerinden ulaşabilirsiniz.

CoReLab Ekibi olarak teşekkür ederiz.

Çalışmaya katılmayı kabul ediyor musunuz?

- Kabul ediyorum
- Kabul etmiyorum

APPENDIX C: DEBRIEFING FORM (PILOT STUDY & STUDY 1)

Değerli katılımcı,

Doç. Dr. Mehmet Harma'nın danışmanlığında yürütülen "Network Analizi Perspektifinden Covid-19 Küresel Salgınının Psiko-Sosyal Etkilerinin İncelenmesi" isimli TÜBİTAK projesinin ön çalışmasına katılımınız için çok teşekkür ederiz. Bu form size bu pilot çalışmanın içeriği hakkında daha detaylı bilgilendirme sunmak amacıyla oluşturulmuştur.

Özel olarak, COVID-19 temelinde yapılmış benzer bir çalışma bildiğimiz kadarıyla olmamakla birlikte, geçmişte yapılan incelemeler -COVID-19 gibi- virüs salgınlarının kişilerin yaşantılarında uzun vadeli etkileri olabileceğini göstermektedir. Bu pilot çalışmada COVID-19 nedeniyle yaşanan pandeminin oluşturabileceği tutumsal ve davranışsal farklılıkları incelemek amacıyla gerçekleşecek bir sonraki incelemede kullanacağımız ölçüm araçlarının geçerlik ve güvenirliklerinin test edilmesi ve ilgili ön testlerin gerçekleştirilmesi amaçlanmaktadır. Buna paralel olarak, bu çalışmada COVID-19 salgının diğerleriyle olan ilişkilerimizde yaratabileceği farklılıkları anlamak adına katılımcılardan tiksinme duyarlılığı, ilişki memnuniyeti, insanlara duyulan güven duygusu ve olumlu sosyal davranışlar (yardım sergileme, bağışta bulunma, vb.) gibi sosyalleşmeye ilişkin farklı değişkenlere dair bilgiler edinilmektedir. Bunun yanı sıra, katılımcıların ekonomik seviye, medeni durum, çocuk sayısı, yaş ve yaşadığı şehir gibi farklı demografik özelliklerinin, bahsi geçen ilişkisel değişkenlerde farklı etkiler ortaya çıkarabileceği öngörülmektedir. Bu yönüyle, bu pilot çalışmanın sonuçları vasıtasıyla şekillenecek olan bir sonraki incelemenin, potansiyel risk faktörlerinin önüne geçmek için müdahale programlarına bilgi sunması hedeflenmektedir.

Katılımcılardan alınan tüm kişisel bilgilerin "anonim" olarak tutulduğunu ve cevaplarınızın kimlik ve demografik bilgilerinizle eşleştirilmediğini belirtmek isteriz. Çalışma hakkında daha fazla bilgi sahibi olmak veya çalışma tamamlandığında sonuçlar hakkında bilgi edinmek isterseniz corelab@khas.edu.tr e-mail adresinden araştırma asistanlarına veya çalışmanın yürütücüsü Doç. Dr. Mehmet Harma'ya (mehmet.harma@khas.edu.tr) ulaşarak bilgi alabilirsiniz.

Devam butonuna basarak çalışmayı tamamlayabilirsiniz.

Sevgilerimizle,
CoRe Lab Ekibi

APPENDIX D: QUESTIONNAIRES (PILOT STUDY & STUDY 1)

Social Capital Dimensions

1. Lütfen aşağıdaki soruları cevaplayınız.

    a. Aldığınız sağlık hizmetlerine ne kadar güveniyorsunuz?
    b. Eğitim kurumlarına ne kadar güveniyorsunuz?
    c. Elektronik ortamda sunulan (örnek: e-devlet) kamu hizmetlerine ne kadar güveniyorsunuz?
    d. Asayiş/kamu düzeni hizmetlerine (polis, jandarma, bekçi vs.) ne kadar güveniyorsunuz?

    1 (Hiç güvenmem) 2 (Pek güvenmem) 3 (Biraz güvenirim) 4 (Tamamen güvenirim)

2. Lütfen, aşağıda belirtilen çeşitli gruplardan insanlara ne kadar güvendiğinizi belirtiniz.

    a. Aileniz
    b. Mahalleniz
    c. Şahsen tanıdığınız insanlar
    d. İlk kez tanıştığınız insanlar
    e. Başka bir dinden insanlar
    f. Başka bir milletten insanlar

    1 (Hiç güvenmem) 2 (Pek güvenmem) 3 (Biraz güvenirim) 4 (Tamamen güvenirim)

One-Item Self-Rated Health Measure and Demographics

1. 0'ın "olabilecek en kötü sağlık durumu"nu ve 10'un "olabilecek en iyi sağlık durumu"nu ifade ettiği bir ölçekte, bugünlerde sağlık durumunuza 0 ile 10 arasında kaç puan verirsiniz?

0 (En kötü) 1 2 3 4 5 6 7 8 9 10 (En iyi)

2. Cinsiyet

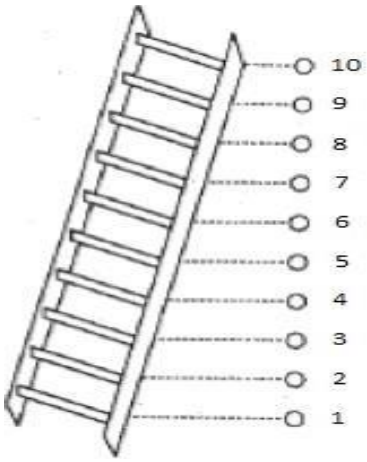
- Kadın
- Erkek
- Belirtmek istemiyorum
- Diğer:

3. Doğum yılınızı yazınız (ör.„ 1981)

4. Eğitim Düzeyiniz (En son bitirdiğiniz okulu belirtiniz)

- İlkokul
- Ortaokul
- Lise
- Yüksek okul (2 yıllık)
- Üniversite
- Yüksek Lisans & Doktora

5. Merdivenin en üst basamağında (10) en iyi durumda olan, en fazla paraya, en yüksek eğitime ve en iyi işlere sahip insanlar olduğunu düşünün. En altta (1) ise en kötü koşullarda yaşayan, en az parası, en az eğitimi olan, en kötü işlere sahip ya da hiç işi olmayan insanlar var. Lütfen merdivenin hangi basamağının sizi daha iyi temsil ettiğini işaretleyiniz.



6. Şu an romantik bir ilişkiniz var mı (sevgili, eş, partner vb.)?
   - Evet
   - Hayır

7. Çocuğunuz var mı?
   - Evet
   - Hayır

8. Siz dahil, evde kaç kişi yaşıyorsunuz?

9. Hanenizde COVID-19 teşhisi almış kaç kişi olduğunu belirtiniz (eğer kimse yoksa sıfır yazınız)

10. Hanenizde COVID-19 salgını dolayısıyla ücretsiz izne ayrılmış kişi sayısını belirtiniz (eğer kimse yoksa sıfır yazınız)

11. Hanenizde COVID-19 salgınında hassas ve riskli gruplar (örneğin, kronik hastalık sahibi veya 65 yaş üzeri gibi) içerisinde olan kişi sayısınız belirtiniz (eğer kimse yoksa sıfır yazınız)

APPENDIX E: QUESTIONNAIRES (STUDY 2)

Social Capital Dimensions

1. Size çeşitli gruplardan insanlara ne kadar güvendiğinizi soracağım. Bunların her biri için, “tamamen güvenirim”, “biraz güvenirim”, “pek güvenmem”, “hiç güvenmem” şeklinde bir cevap veriniz.

    a. Aileniz
    b. Mahalleniz
    c. Şahsen tanıdığınız insanlar
    d. İlk kez tanıştığınız insanlar
    e. Başka bir dinden insanlar
    f. Başka bir milletten insanlar

    1 (Hiç güvenmem) 2 (Pek güvenmem) 3 (Biraz güvenirim) 4 (Tamamen güvenirim)

2. Aşağıda sayacağım kurumlardan her birine ne kadar güvenirsiniz? Gene “tamamen güvenirim”, “biraz güvenirim”, “pek güvenmem”, “hiç güvenmem” şeklinde bir cevap veriniz.

    e. Ordu
    f. Polis
    g. Mahkemeler, hukuk sistemi

    1 (Hiç güvenmem) 2 (Pek güvenmem) 3 (Biraz güvenirim) 4 (Tamamen güvenirim)

One-Item Self-Rated Health Measure and Demographics

1. Genel olarak bugünlerde sağlık durumunuz nasıl? Çok mu iyi, iyi mi, orta halli mi, kötü mü, yoksa çok mu kötü?

1 (çok kötü) 2 (kötü) 3 (fena değil) 4 (iyi) 5 (çok iyi)

2. Cinsiyet

- Kadın
- Erkek

3. Doğum yılınızı yazınız. (Eğer doğum yılını bilmiyorsa) Peki kaç yaşındasınız?

4. Eğitim Düzeyiniz (En son bitirdiğiniz okulu belirtiniz)

- Hiç okula gitmedim
- İlkokul
- Ortaokul
- Lise
- Lise sonrası yükseköğretim dışı
- Meslek yüksek okulu
- Lisans
- Yüksek lisans
- Doktora

5. İnsanları gelir durumları bakımından 10 puanlı bir cetvele yerleştirecek olsak, siz kendinizi bu cetvelin neresinde görürsünüz? Cetvelde "1" en alt gelir grubu, "10" ise en üst gelir grubunu gösteriyor.

1 (en alt) 2 3 4 5 6 7 8 9 10 (en üst)

6. Şu andaki medeni durumunuz aşağıdaki sayacaklarımdan hangisidir? (**ANKETÖRE:** Şıkları okuyunuz ve tek bir şıkkı işaretleyiniz)
   - Evli
   - Evli gibi birlikte yaşamakta
   - Boşanmış
   - Evli fakat eşinden ayrı yaşıyor
   - Eşi ölmüş yani dul
   - Bekar

7. Kaç çocuğunuz var?

   ☐

8. Siz ve çocuklar dahil, hanenizde sürekli kaç kişi yaşıyor?

   ☐

APPENDIX G: CURRICULUM VITAE

EDUCATION

Degree	Institution	Year of Graduation
Ph.D.	METU, Psychology	2022
MS	Kadir Has University, Social/Health Psychology	2018
BS	Istanbul Medeniyet University, Psychology	2016

WORK EXPERIENCE

Year	Place	Enrollment
2018-present	METU, Psychology	Research Assistant
2017-2018	Düzce University, Psychology	Research Assistant
2016-2018	Kadir Has University, Psychology	Graduate Assistant

SELECTED PUBLICATIONS

1. Tosyali, F., & Aktas, B. (2021). Does training analytical thinking decrease superstitious beliefs? Relationship between analytical thinking, intrinsic religiosity, and superstitious beliefs. *Personality and Individual Differences, 183*, 111122.

2. Tosyali, A. F., & Harma, M. (2021). The role of co-regulation of stress in the relationship between perceived partner responsiveness and binge eating: A dyadic analysis. *International Journal of Psychology*, *56*(3), 435-443.

APPENDIX H: TURKISH SUMMARY/TÜRKÇE ÖZET

BÖLÜM 1

1. GİRİŞ

Özellikle Avrupa ve Amerika'da sağlık belirleyicileri üzerine yapılan çalışmalar, yaşam beklentisi ve kronik hastalıkların artmasıyla birlikte en önemli halk sağlığı sorunları arasında yer almıştır. Bu çalışmalarda, sağlıkla ilgili sonuç(lar) farklı operasyonel tanımlara göre değişiklik gösterebilir (Xue ve diğerleri, 2020). Örneğin sağlıklı birey genellikle herhangi bir hastalığı veya engeli olmayan kişi olarak tanımlanmaktadır (Aydın, 2020). Ancak Dünya Sağlık Örgütü'nün (DSÖ) tanımını hatırlayacak olursak, sağlık "yalnızca hastalık ve sakatlığın olmayışı değil, bedenen, ruhen ve sosyal yönden tam bir iyilik halidir" (DSÖ, 1946). Bu nedenle, nesnel değerlendirmelere (örneğin biyomedikal ölçümler, klinik bir tanı) ek olarak, bireylerin öznel değerlendirmesi de sağlığın kritik bir göstergesidir (DSÖ, 2014). Bu bağlamda, bireylerin fiziksel ve zihinsel sağlık durumlarını tahmin etmek için kişinin kendi sağlık durumunu değerlendirmesi (KKSD) ölçümü yaygın olarak kullanılmaktadır. Bu nedenle, KKSD küresel olarak nesnel sağlığın (örneğin, Idler ve Benyamini 1997; Wu ve diğerleri, 2013), ölümlülük ve morbiditenin (örneğin, Jylhä ve diğerleri, 2006; Lekander ve diğerleri., 2004; Leung ve diğerleri, 1997) yordayıcısı olarak kullanılmıştır.

Ayrıca, öncelikle fiziksel ve biyolojik faktörlere odaklanan bu tanım ekonomik, psikolojik, sosyal ve kültürel gibi sağlığı etkileyen toplumsal düzeydeki göstergeleri gözden kaçırarak sağlığın belirleyicileri hakkındaki anlayışımızı sınırlayabilir (Marmot & Wilkinson, 1999; DSÖ, 2008). Toplumdaki farklı sosyal yapılarla (örneğin aile, mahalle, kamu kurumları) güvene dayalı ilişkileri içeren sosyal sermaye (Putnam, 2000; Szreter ve Woolcock, 2004), sağlık açısından geniş çapta

araştırılan toplumsal düzeydeki değişkenlerden biridir (Helliwell ve Putnam, 2004; Kawachi ve diğerleri, 2008). 20 yıllık bilgi birikimini kapsayan bu araştırmalara göre, farklı kavramsallaştırmalar (örneğin, sosyal sermayenin farklı yönlerinin dahil edilmesi) ve farklı bağlamlardan (örneğin, afet sonrası/krizler veya farklı ülkeler) (Aldrich, 2010; Moore ve Kawachi, 2017) dolayı literatürde karışık sonuçlar raporlanmıştır. Bununla birlikte, mevcut meta-analiz çalışmalarına dayanarak, sosyal sermaye hem fiziksel (Rodgers ve diğerleri, 2019) hem de zihinsel sağlığın (Xue ve diğerleri, 2020) tutarlı bir yordayıcısı olarak gösterilebilir.

1.1 Sosyal Sermaye ve Sağlık

Sosyologlar ekonomik ve sosyal sorunlara ilişkin öneriler için güven, değerler, karşılıklılık ve normlar gibi temel sosyal sermaye bileşenlerini tartışmışlardır (Woodhouse, 2006). Kökeni tarihsiz olmasına rağmen, sosyal sermaye kavramını operasyonel olarak tanımlamak hala zor olabilir (Sun ve Lu, 2020). Değişen tanımlara rağmen, ilişkilerde güven, sosyal sermayenin en sık kullanılan bileşeni olmuştur (Rodgers vd., 2019). Güven, insanların ilişkileri hakkında nasıl algıladıkları veya hissettikleri anlamına gelen sosyal sermayenin bilişsel kısmını temsil etmektedir (Kawachi vd., 2008). Bu araştırma önerisinde, sosyal sermaye, bilişsel yönüne (yani güvene) dayalı olarak tanımlanmıştır.

En basit ifadeyle, sosyal sermaye, toplumun farklı seviyelerinde oluşan karşılıklı güvene dayalı sosyal ağları içerir. Bu farklı seviyeler, *dayanışmacı, aracı* ve *bağlayıcı* sosyal sermaye olarak kategorize edilir (Kawamoto ve Kim, 2019). Dayanışmacı sosyal sermaye, homojen, yatay grup içi sosyal ilişkilere (örneğin, aile, akrabalar, en iyi arkadaşlar, komşular) atıfta bulunur. Aracı sosyal sermaye, yatay ilişkilere atıfta bulunur; ancak, bağlanma yönünden daha heterojendir (örneğin, diğer dinlerden veya milliyetlerden insanlar). Bu nedenle, bize benzer biriyle bağlantı kurmak için geliştirdiğimiz en güçlü sosyal bağ, dayanışmacı sosyal sermaye iken, aracı ilişkiler, daha az ortak noktamız olan daha zayıf sosyal bağlardır (Kawachi, 2006).

Daha sonra Szreter ve Woolcock, bağlayıcı sosyal sermaye olarak adlandırılan başka bir boyutla insanlar ve devletler arasındaki heterojen ve dikey ilişki dinamiklerini tanımlayarak sosyal sermaye literatürüne katkıda bulunmuştur. Bağlayıcı sosyal sermaye, "Toplumdaki açık, resmi veya kurumsallaşmış güç veya otorite arasında etkileşimde bulunan insanlar arasındaki saygı normları ve güvene dayalı ilişkiler ağları" olarak tanımlanmştır (Szreter ve Woolcock, 2004, s.655).

Yirmi yılı aşkın süredir devam eden araştırmalar, sosyal sermaye ve sağlık arasındaki bağlantıya odaklanmıştır (Kawachi vd., 2008; Rodgers vd., 2019). Bu araştırma sonuçlarına göre yukarıda bahsedilen üç sosyal sermaye boyutu ve sağlık çıktıları arasında anlamlı ilişkiler bulunmuştur. Buradan yola çıkarak, bu çalışmada şu üç hipotez ortaya atılmıştır:

H1: Dayanışmacı sosyal sermaye KKSD'yi pozitif olarak yordayacaktır.
H2: Aracı sosyal sermaye KKSD'yi pozitif olarak yordayacaktır.
H3: Bağlayıcı sosyal sermaye KKSD'yi pozitif olarak yordayacaktır.

İlişki bilimi, stresli veya sosyal desteğin olmadığı zamanlarda sağlıkla ilgili sonuçlar üzerinde yakın ilişkilerin telafi edici rolüne odaklanmıştır (örneğin, Bradbury ve Karney, 2004; Cohen ve Pressman, 2004). Bu argümandan yola çıkarak yakın ilişki dinamiklerini içeren dayanışmacı sosyal sermayenin bir nevi telafi edici rolü olup olmadığı şu hipotezle incelenmiştir:

H4: Dayanışmacı sosyal sermaye ve KKSD arasındaki pozitif ilişki bağlayıcı sosyal sermayesi daha düşük bireyler için daha belirgindir.

1.2 Bağlama Özgü Meseleler: COVID-19

Sosyal sermaye ve sağlık arasındaki bağlantıyı sunan mevcut bilgi birikimi, bu bağlantının doğal afetler (ör., deprem, sel, kasırga, tsunami), ekonomik kriz, (ör., Sarracino ve Piekałkiewicz, 2020) ve pandemi (ör., Gu ve Zhu, 2020) gibi afet/kriz sonrası durumlarda araştırıldığı bağlama özel çalışmaları içerir (Aldrich, 2012). Bu

araştırma önerisinde, ABD'de 13 Mart 2020'de ciddi afet ilan edilen COVID-19 pandemisi (Federal Acil Durum Yönetim Ajansı, 2020) sosyal sermaye ve KKSD ilişkisinin ele alındığı bağlama özel konulardan biri olacaktır. Bağlama özel ikinci konu, bir sonraki bölümde tartışılan sosyal sermaye ve sağlık bağlantısına ilişkin potansiyel bir ülke düzeyinde karşılaştırmaya dayanacaktır.

Sosyal sermaye ile bulaşıcı hastalıklar arasındaki ilişkiyi inceleyen çalışma sayısı azdır (Borgonovi ve Andrieu, 2020). Bu çalışmaların çoğu cinsel yolla bulaşan hastalıklara odaklanmıştır (ör., Frumence ve diğerleri, 2014; Mukoswa ve diğerleri, 2017). Bununla birlikte, COVID-19 salgını sırasında sosyal sermayenin sağlık üzerindeki kritik rolünü incelemeyi amaçlayan birkaç mevcut girişim bulunmaktadır. Örneğin, Çin'de yaşlı bireylerle gerçekleştirilen bir araştırma, sosyal sermayenin bilişsel yönünün (örneğin, ilişkilerde güven ve karşılıklılık) yapısal sosyal sermaye (yani, COVID-19 ile ilgili gönüllülük, organizasyon üyeliği) ve zihinsel sağlık arasındaki ilişkiye aracılık edip etmeyeceğini incelemiştir (Sun ve Lu, 2020). Bulgular, bilişsel sosyal sermayenin tam aracı rolünü göstermiştir; bu da yapısal sosyal sermayenin zihinsel sağlığı doğrudan yordamadığı anlamına gelir. Bu bulguya göre, literatürde daha önce de vurgulandığı gibi, bilişsel sosyal sermayenin sağlık üzerindeki kritik rolü, yapısal sosyal sermayeye göre daha tutarlıdır (Kim vd., 2008; Sarracino ve Piekałkiewicz, 2020). Bu tez çalışmasında özellikle bilişsel sermayenin ele alınmasındaki bir sebep bu tutarlılıktır. Ayrıca, pandemi gibi fiziksel ve sosyal mesafenin arttığı zamanlarda davranışsal örüntüleri incelemek daha az uygulanabilir bir durum olabilir. Bu ise bilişsel sermayenin ele alınmasındaki bir diğer sebeptir.

1.3 Mevcut Çalışma

Mevcut araştırma, yeni bir araştırma sorusunu ve orijinal hipotezi araştırmayı ve sosyal sermaye ile sağlık arasındaki bağlantıya ilişkin önceki bulguları tekrarlamayı amaçlamaktadır. Bu amaçla, bu araştırmanın, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK) tarafından finanse edilen ve COVID- 19 sırasında psikososyal değişkenler ve sağlıkla ilgili sonuçlar arasındaki ilişkiyi araştıran daha kapsamlı bir projenin (Proje No:120K392) parçası olması amaçlanmıştır. Proje, bir

pilot çalışma ve ana çalışma (yani Çalışma 1) olmak üzere iki anketten oluşmaktadır. Ayrıca, bulguların güvenilirliğini ve genellenebilirliğini artırmak ve mevcut çalışmada yeni araştırma sorularını keşfetmek için ikincil veri analizini içeren Çalışma 2 önerilmiştir.

Bu araştırma teorik olarak mevcut bilgi birikimine çeşitli şekillerde katkıda bulunacaktır. Birincisi, Türkiye'de sosyal ilişkiler ve sağlık arasındaki bağlantıyı sosyal sermaye teorisi perspektifinden inceleyen herhangi bir ampirik bulgu bulunmamaktadır. İkincisi, sosyal ilişkiler ve sağlık arasındaki bağlantı, insan ilişkileri ve bunun sağlık ve esenlik üzerindeki etkisi göz önüne alındığında oldukça spesifik bir bağlam olan COVID-19 salgını sırasında nadiren araştırılmıştır. Üçüncüsü, Hipotez 4, literatürde hiç test edilmemiş benzersiz bir araştırma sorusunu yansıtmaktadır. Aynı şekilde, pandemi sırasında sosyal sermayenin farklı yönlerinin sağlık üzerindeki tahmin gücünü test etmeyi amaçlayan Araştırma Sorusu, orijinal bulguların peşinden gitmeye değer bir başka soru olabilir. Son olarak, önerilen hipotezler, sosyal ilişkilerin sağlık üzerindeki etkisine ilişkin literatürü zenginleştiren gelecekteki araştırma önerilerini üretebilecek bulguların güvenilirliğini ve genellenebilirliğini daha fazla araştırmak için 69 ülkeden gelen veriler dahil olmak üzere ikincil veriler aracılığıyla test edilecektir.

2. PİLOT ÇALIŞMA VE ÇALIŞMA 1

2.1 Çalışmanın Amaçları

Pilot araştırma, kolayda örnekleme (N = 445) yoluyla ilk bulguları (örneğin, iki değişkenli korelasyonlar, faktör yapıları) incelemek için yapılmıştır. Yaklaşık 30 dakikada tamamlanabilen tüm ölçümlerin kısa formları pilot çalışmanın bulgularına göre uyarlandığından, ilk bulgular kritiktir. Böyle bir zaman ayarlaması önemliydi çünkü ana çalışma için Türkiye'deki temsili bir örneklemden veri toplanması amaçlanmıştır ve bunu yapmak için birincil endişe, kayıp verileri en aza indirmeye çalışarak ana çalışmanın (yani Çalışma 1) kalitesini artırmaktı.

2.2 Yöntem

2.2.1 İşlem ve Katılımcılar

Türkiye Bilim ve Teknoloji Kurumu (TÜBİTAK) tarafından onaylanan çalışma, Qualtrics anket linki ile sosyal medya kanallarında duyuruldu. Bu çalışmaya katılım, açık bir teşvik olmaksızın tamamen gönüllük esasına dayanmaktadır. Tek dışlama kriteri 18 yaşından küçük olmaktı. Tüm ölçümleri veya odak değişkenleri tamamlamadan anketi yarıda bırakan (N = 82) katılımcılar hariç tutulmuştur. Nihai örneklemde 363 katılımcı yer aldı.

2.2.2 Ölçümler

2.2.2.1 Kendi Kendine Sağlık Değerlendirmesi (KKSD)

Katılımcıların öznel değerlendirmeye bağlı raporladıkları sağlık durumu, mevcut çalışmanın bağımlı değişkeniydi. Katılımcılara, “Genel olarak, bugünlerde sağlık durumunuzu nasıl tanımlarsınız?” diye soruldu ve 1 (kötü) ile 10 (mükemmel) arasında bir ölçek verildi. Bu tek, kendi kendine puanlanan sağlık sorusu, nesnel sağlık, morbidite ve ölüm riskini öngören çok sayıda çalışma tarafından küresel olarak geçerli ve güvenilir bir araç olarak gösterilmiştir (ör., Idler & Benyamini, 1997; Meng ve Chen, 2014).

2.2.2.2 Sosyal Sermaye Boyutları

Sosyal sermayenin tüm boyutları, sosyal sermayenin temel unsuru olan güven düzeyi ile değerlendirilmiştir (Fukuyama, 1995; Putnam, 2000; Uslaner, 1999). Dayanışmacı boyutu için katılımcılara “ailenize, mahallenize, şahsen tanıdığınız insanlara” ne kadar güvendikleri soruldu. Ölçüm güvenilir bulundu (Cronbach alfa katsayısı = .60). Aracı sermaye için, katılımcılara şu kişilere ne kadar güvendikleri soruldu: "ilk kez tanıştığınız insanlar, başka bir dinden insanlar, başka bir milletten insanlar." Bu ölçek iyi bir güvenilirlik göstermiştir (Cronbach's alpha = 0.77). Bağlayıcı boyutu için,

katılımcılara şu kurumlara/kamu hizmetlerine ne ölçüde güvendikleri sorulmuştur: "sağlık hizmetleri, güvenlik hizmetleri (ör., polis, jandarma, mahalle bekçisi), eğitim hizmetleri, elektronik olarak sağlanan kamu hizmetleri" Bu ölçek iyi bir güvenilirlik göstermiştir (Cronbach's alpha = 0.76). Katılımcılar bu soruları daha önceki çalışmalarda da kullanıldığı gibi 1 (hiç güvenmiyorum) ile 4 (tamamen güveniyorum) arasında değişen Likert tipi bir ölçeğe göre yanıtlamışlardır (ör., Chu ve diğerleri, 2018; Alpaslan ve Yıldırım, 2020).

2.2.2.3 Kontrol Değişkenleri

Cinsiyet, yaş, eğitim, sosyoekonomik statü, ilişki durumu, çocuk sahibi olma/olmama, hane halkı sayısı, ailede COVID-19 teşhisi almış kişi sayısı, ailede COVID-19 nedeniyle ücretsiz izne ayrılmış kişi sayısı, ailede COVID-19 virüsüne duyarlı kişi sayısı.

2.3 Sonuçlar

Pilot çalışma sonuçlarına göre sosyal sermaye boyutlarının faktör yapısı kullanılmaya elverişli bulunmuştur. Ayrıca, ikili korelasyon sonuçlarına bağlı kalınarak yorumlanan ilk bulgulara göre üç sosyal sermaye boyutu da KKSD ile pozitif ilişkili olarak bulunmuştur.

2.4 Çalışma 1

Bu çalışmanın temel amacı, pilot çalışmanın ilk bulgularını daha fazla araştırmaktır. Önerilen hipotezler (yani, Hipotez 1-4) ve ek bir keşif sorusu (yani, sosyal sermaye boyutlarının tahmin gücünü inceleyen Araştırma Sorusu) bu çalışmada test edilmiştir. Pilot çalışma, kolayda örnekleme yoluyla katılan ve bulguların genellenebilirliğini sınırlayan bir katılımcı örneğini içermiştir. Bu nedenle, mevcut çalışma, ilk bulguların tekrarlanabilirliğini test etmek ve Türk nüfusunu temsil eden ülke çapındaki veriler aracılığıyla ilk bulguların genellenebilirliğini artırmak için bir fırsat olabilir.

2.4.1 Yöntem

2.4.1.1 İşlem ve Katılımcılar

TÜBİTAK projesinin bir parçası olarak, pilot çalışmadan bir ay sonra, ana anket bir araştırma şirketi tarafından Türk nüfusunu temsil eden bir örneklemde (N = 2012) uygulanmıştır. Bu çalışmada kullanılan soru bataryası, pilot çalışmada geçerliliği ve güvenilirliği yüksek olan ölçeklerden oluşturulmuştur. Projede kullanılan tüm ölçüm araçlarına şuradan ulaşılabilir: https://osf.io/3248d/. Ayrıca, pilot çalışma ile aynı olan ve mevcut çalışmaya dahil edilen ölçekler için Ek D'ye bakınız. Ölçekler Qualtrics üzerinden online olarak toplanmak üzere hazırlanmış ve her katılımcıya dengeli ve rastgele bir sırada dağıtılmıştır. Bu çalışmaya katılım, açık bir teşvik olmaksızın tamamen gönüllük esasına dayanmaktadır.

Her yaş grubundan ve ekonomik düzeyden katılımcılar tarafından çevrimiçi ölçümler doldurulamadığından, görüşmeciler katılımcılara telefon görüşmeleri yoluyla ulaşmışlardır. COVID-19 salgını nedeniyle veriler yüz yüze toplanamadı; bunun yerine telefon görüşmeleri yapıldı. Görüşmeciler, katılımcılardan çevrimiçi anketi yanıtlamalarını istedi ve yanıtları işaretledi. Ölçekler doldurulduktan sonra bilgilendirme formu görüşmeciler tarafından tüm katılımcılara okunmuştur. Daha sonra, araştırma şirketi ankete katılıp katılmadıklarını teyit etmek için ankete katılanların %40'ını (N = 758) tekrar telefonla aramıştır. Böyle bir kalite kontrol sürecinden geçemeyen vaka olmamıştır.

Türkiye örneklemini temsil eden her il (N = 81) kendi nüfus oranlarına göre (ilçeler dikkate alınarak) çalışmaya dahil edilmiştir. Tek dışlama kriteri 18 yaşından küçük olmaktı. Çalışma değişkenlerinin veya ana değişkenlerin yarısına yanıt vermeyen katılımcıların verileri (N = 57) hariç tutulmuştur. Nihai örneklem, 1955 katılımcıyı içermiştir.

2.4.3 Bulgular

Sonuçlara göre Hipotez 1 ve Hipotez 3 onaylanmıştır. Fakat Hipotez 2 ve Hipotez 4 onaylanmamıştır. Dayanışmacı sosyal sermaye ve bağlayıcı sosyal sermayenin KKSD üzerindeki yordayıcı gücünün incelendiği analiz sonucunda ise dayanışmacı boyutun daha güçlü bir yordayıcı olduğu sonucuna ulaşılmıştır.

2.4.5 Takip Analizi

Bölgesel istatistikleri belirlemek ve bu istatistikleri Avrupa Birliği Bölgesel İstatistik Sistemi ile karşılaştırmak için 2002 yılında Türkiye İstatistik Bölgesel Birimleri Sınıflandırması (NUTS) yayınlanmıştır. Bölgeler ekonomik, sosyal ve coğrafi benzerliklere göre sınıflandırılmıştır (Türkiye Cumhuriyeti Resmi Gazetesi, 2002, s. 1). Bu sınıflandırmaya göre Tablo 8'de gösterildiği gibi 12 bölge bulunmaktadır. NUTS sınıflandırmasına göre Türkiye İstatistik Kurumu (TÜİK), Türkiye'deki vatandaşların gelir ve yaşam koşullarına ilişkin yıllık verileri yayınlamaktadır. Bu yıllık istatistikler, bölgeler arasında yalnızca benzerliklerin değil, farklılıkların da olduğunu göstermektedir (ör., TÜİK, 2021). Bu nedenle, bölgeler arasındaki bu farklılığı göz önünde bulundurarak, keşifsel bir analiz olarak, Türkiye'den elde edilen mevcut temsili verilerde yukarıda belirtilen aynı ilişki kalıplarının bölgeler arasında farklı olup olmayacağının araştırılması amaçlanmıştır. Böyle bir takip analizi, aşağıdaki önerilere dayalı olarak düşünülmüştür:

1) Takip analizi, her bölge içinde yerleşik her bir bireyden toplanan verilerin incelenmesinin mümkün olacağı aynı ilişki modellerinin çok düzeyli bir analizine dayanıyordu. Böylece, Çalışma 1'de incelenen bireysel düzeydeki değişkenlerle birlikte bağlamın (yani farklı bölgelerin) KKSD üzerindeki herhangi bir potansiyel etkisi tespit edilebilir. Çok düzeyli analiz tekniğinin arkasındaki ana neden olan, bireysel ve bağlamsal düzeydeki değişkenler arasındaki karşılıklı bağımlılığın göz önünde bulundurulmasının her iki düzeyde de standart hatanın azaltılarak doğru tahminini artırdığı düşünülmektedir (Enders ve Tofighi, 2007).

2) TÜİK tarafından yayımlanan yıllık istatistiklere göre, bu bölgeler arasındaki göze çarpan farklılıklardan biri, hem sosyal sermayenin hem de sağlığın tutarlı bir yordayıcısı olan gelir eşitsizliğidir (TÜİK, 2021). Önceki bulgular (ör., Kawachi ve diğerleri, 1997), gelir eşitsizliğinin sosyal sermayeyi olumsuz bir şekilde tahmin edeceğini, bunun da ölüm oranını artıracağını veya kötü sağlığa yol açacağını göstermiştir.

3) Ayrıca, her bir sosyal sermaye boyutu, bağlam düzeyinde bir değişken olarak yalnızca gelir eşitsizliğinin dahil edildiği çok düzeyli bir analize dayalı olarak tahmin edilmiştir. Bu analiz aynı zamanda bölgeler arasında sosyal sermaye düzeyi açısından herhangi bir farklılık olup olmadığını da gösterecektir. Son olarak, bu tür girişimler, mevcut tezde önerilen aynı ilişki kalıplarındaki bağlamsal farklılıkları göz önünde bulundurarak daha ileri bir çalışma yürütmenin gerekliliğine işaret edebilir.

2.4.5.1 Bulgular

KKSD'nin yordanan değişken olduğu çok düzeyli regresyon analizi sonuçlarına göre 12 bölge arasında KKSD bağlamında farklılıklar bulunmuştur. Bu sonuç, bölgesel farklılıkların göz önünde bulundurulması gerektiğine dair ilk ipucu olarak değerlendirilebilir. Bununla beraber, gelir eşitsizliği KKSD'yi anlamlı olarak yordamamıştır. Benzer şekilde, gelir eşitsizliği sosyal sermaye boyutlarını anlamlı olarak yordamamıştır ancak her bir sosyal sermaye boyutu bağlamında anlamlı bölgesel farklılıklar tespit edilmiştir.

Diğer regresyon modellerinde gelir eşitsizliğinin sosyal sermaye boyutlarıyla olası etkileşimi incelenmiştir. Buna göre, KKSD üzerinde dayanışmacı ve aracı sermaye boyutlarıyla gelir eşitsizliğinin ayrı ayrı anlamlı etkileşimleri bulunmuştur. Bu tür etkileşimler de bölgesel farklılıkların dikkate alınması gerektiğine işaret etmektedir.

2.4.4 Tartışma

Önceki çalışmalar, felaket durumlarında güçlü sosyal bağların adaptif rolünü vurgulamıştır (ör., Aldrich, 2012; Nakagawa ve Shaw, 2004; Smiley vd, 2018). Özellikle kriz yönetimi sırasında sosyal sermayenin dayanışmacı ve bağlayıcı boyutları hayati önem taşımaktadır (ör., Hilfinger vd., 2012; Kyne ve Aldrich, 2020). Sosyal sermaye, kriz yönetimi sırasında topluluk tepkisi için temel olabilecek, güvene dayanan sosyal bağları temsil eder (Dynes, 2005). Böyle bir kriz durumunda, yakın ilişkiler, sosyal destek sağlayarak stresörlere karşı tampon olabilecek daha güvenli bir kaynak olacaktır. Mevcut bilgi birikimi, sosyal desteğin yakın çevrede güven duygusunu besleyen odak bir belirleyici olduğunu ve bunun da sağlıkla ilgili olumlu sonuçlara yol açtığını göstermektedir (Glanville ve Story, 2018). Sosyal sermaye dediğimiz şeyin temelde insan ilişkileri ve bu ilişkilerin güven düzeyine göre tanımlanan niteliklerinden oluştuğu kabul edilmektedir (Pitas ve Ehmer, 2020). Böylece, yakın ilişki dinamiklerinin (Cohen ve Pressman, 2004), yani bağlanma ilişkilerinin stresi tamponlayıcı rolü, pandemi sırasında duygusal ve araçsal (örneğin, yemek finansal yardımı gibi temel ihtiyaçların sağlanması) destek sağlayabilir ki bu da olumlu sağlık çıktılarıyla ilişkili olabilir (Borgonovi ve Andrieu, 2020).

Ayrıca, otoriteye/güce karşı güven duygusunun güçlü olduğu toplumlarda bireyler, kişisel çıkarlarını bir kenara bırakarak, toplum yararını koruyacak şekilde sağlık davranışlarını kolaylaştıracak ve bunun sonucunda da toplum yararını gözetecek davranışları benimseyebileceklerdir. Bu tür bir tutum ve davranışın benimsenmesi, bireylerin sosyoekonomik geçmişleri ne olursa olsun sağlık hizmetlerine ve ekipmanlarına ulaşmasına bağlıdır (ör., Wong ve Kohler, 2020).

Sosyal sermaye ve sağlık arasındaki bağlantıyla ilgili olarak, önceki bulgular, sosyal sermaye ve sağlıkla ilgili sonuçlarda ülke içi değişkenlik olabileceğini öne sürmüştür (Chen ve Meng, 2015). Bu nedenle, ülke çapında anket verilerinde sosyal sermaye ve sağlık bağıntısını araştıran ve karşılıklı bağımlılığı açıklayan çok düzeyli analize dayanan birçok çalışma (ör. Chu vd., 2018; Murayama vd., 2012; Sundquist vd., 2006) bulunmaktadır. Bu önerilerin ardından, ülke çapındaki mevcut verilerden

yararlanarak, Türkiye için NUTS sınıflandırmasına göre 12 bölgede potansiyel sosyal sermaye ve sağlık farklılıklarını göz önünde bulundurarak bir takip analizinde aynı ilişki modelleri incelenmiştir.

İzleme analizi sonucunda bulgular, sadece bireysel düzeyde değil, aynı zamanda bağlamsal düzeydeki değişkenlerin de dikkate alınmasının gerekliliğini göstermiştir. Analiz sonucu, KKSD ve sosyal sermayenin tüm yönleri açısından 12 bölge arasında önemli bir farklılık olduğunu göstermiştir. Ancak, bölgeler arasında hem KKSD hem de sosyal sermaye boyutlarında bu önemli farklılığa gelir eşitsizliğinin anlamlı bir etkisi olmamıştır.

3. ÇALIŞMA 2

3.1 Çalışmanın Amacı ve Hipotezleri

Çalışma 1'deki takip analizi, sosyal sermaye ve sağlığın incelendiği belirli bir örneklemde bölgesel farklılıklar olabileceğini göstermiştir. Bu fikir, sosyal sermaye ve sağlık konusundaki bilgi birikimi ile tutarlıdır ve bu bağlantı için herhangi bir bağlam düzeyinde (örneğin ülkeler arasında) karşılaştırmaların çok düzeyli analizle araştırılması gerektiği vurgulanmıştır (Murayama vd., 2012; Sundquist vd., 2006). Bu öneriye dayanarak, KKSD'nin ülke düzeyinde bir yordayıcısı olarak gelir eşitsizliği belirlendikten sonra bu modellerin farklı ülke verileriyle tutarlı olup olmayacağını görmek için aynı ilişki modellerinin incelenmesi amaçlanmıştır.

Bu keşifsel analizde, gelir eşitsizliğinin KKSD ve sosyal sermaye boyutları üzerindeki doğrudan yordayıcı rolü önemli olmasa da, gelir eşitsizliğinin dayanışmacı ve aracı sermayeyle etkileşimleri, farklı ülkelerde gelir eşitsizliğinin olası bağlamsal rolü hakkında merak uyandırmaktadır. Bu nedenle Çalışma 2, Dünya Değerler Anketi (DDA) ve Avrupa Değerler Anketi'nin (ADA) son dalgalarından oluşan ortak veri setini kullanarak yeni bir değişkene, yani gelir eşitsizliğine dayalı olarak ülke düzeyindeki farklılıkları dikkate alan önceki çalışmanın bir tür uzantısıdır. Ancak, COVID-19 bağlamı göz önünde bulundurularak ilk çalışmanın

bulguları, sosyal sermaye ve sağlık arasındaki bağıntıyı kapsayan afetle ilgili literatüre dayalı olarak değerlendirildi. Bununla birlikte, Çalışma 2'de, ilk çalışmanın bulgularıyla karşılaştırmak yerine, bu tür ilişki kalıplarının genel bir resminin sunulması amaçlanmıştır. Bu nedenle, iki çalışma arasındaki teorik tartışmanın farklılaştırılması gerekmektedir.

3.2 Yöntem

3.2.1 İşlem ve Katılımcılar

DDA, dünya nüfusunun yüzde 90'ını temsil eden verilerden oluşur ve 1981'den beri çeşitli sosyal bilim alanlarından oluşan geniş bir ağ ile işbirliği içinde toplanmıştır. Herkese açık olarak paylaşılan ve herkes tarafından erişilebilir en büyük veri setidir (World Values Survey, n.d.-a). İnsan inançları, değerleri ve çeşitli motivasyonları içeren bu veriler, uluslararası gelişim raporları, üniversitelerde öğretim kursları, doktora tezleri ve medya yayınları gibi çeşitli amaçlar için sıklıkla kullanılmaktadır. (World Values Survey, n.d.-a). Benzer şekilde, ADA 1970'lerin sonlarında bir grup akademisyen tarafından Avrupa ülkelerindeki ahlaki ve sosyal değerleri incelemek için başlatılmıştır. DDA ve ADA'nın 2017-2020 yıllarını kapsayan son dalgalarında yürütülen çalışmalarının birleştirilmesi için resmi olarak iş birliği yapılmıştır (EVS/WVS, 2021). ADA, Avrupa ülkelerinin araştırılmasından sorumluyken ve DDA ekibi anketin Avrupa dışında yürütülmesinden sorumluydu. Çalışma 2'de bu açık veri setlerinden yararlanılarak, ilk çalışmada önerilen hipotezlerin, ülke düzeyindeki olası varyasyonlar göz önünde bulundurularak çok düzeyli modellemede incelenmesi amaçlanmıştır.

DDA 51 ülkede (N = 76.897) ve ADA (N = 58.103) 35 ülkede (N_{toplam} = 135.000) yürütülmüştür. Her iki ankette de dahil edilen beş ülke (Almanya, Romanya, Rusya, Sırbistan ve Ukrayna) bulunmaktadır. Tüm ülkelerde anketler, ülke çapındaki verileri temsil eden rastgele örnekleme yoluyla yayımlandı. Her iki anket çalışması için metodoloji ve tanımlayıcı sonuçlar daha önce başka bir yerde ayrıntılı olarak

açıklanmıştır (bk., sırasıyla World Values Survey, n.d.-b, European Values Survey, n.d.).

Analizlere geçmeden önce veri seti iki dışlama kriterine göre gözden geçirildi. COVID-19, 11 Mart 2020 tarihinden itibaren pandemi ilan edildiği için bu tarih ve sonrasında veri toplanan ülkeler analize dahil edilmedi. Ayrıca sosyal sermaye boyutlarından herhangi birine anketinde yer vermeyen ülkelerin verisi de analize dahil edilmedi. Sonuç olarak geriye 69 ülke verisi kalmıştır.

Ölçümler bir önceki çalışmayla neredeyse aynıdır. Ek olarak bu çalışmada gelir eşitsizliğini tespit etmek amacıyla Gini indeksi kullanılmıştır. Bu indeks için temel kaynak olarak Dünya Bankası verilerinden faydalanılmıştır. Cinsiyet, yaş, eğitim, sosyoekonomik statü, medeni durum, çocuk olup/olmadığı ve hane halkı sayısı kontrol değişkenleri olarak ele alınmıştır.

3.3 Bulgular

Üç sosyal sermaye boyutu da KKSD'yi pozitif yönde yordamıştır. Ayrıca, dayanışmacı ve bağlayıcı boyutlar arasındaki etkileşim KKSD üzerinde anlamlı bulunmuştur. Dayanışmacı sosyal sermaye ve KKSD arasındaki pozitif ilişki bağlayıcı sosyal sermayesi daha yüksek bireyler için daha belirgin bulunmuştur.

Bir önceki çalışmadaki takip analiziyle tutarlı olarak, dayanışmacı ve aracı boyutlarla gelir eşitsizliğinin etkileşimi tutarlı bir şekilde bu çalışmada da tespit edilmiştir. Sosyal sermayenin etki büyüklükleri ise büyükten küçüğe sırasıyla şu şekildedir: dayanışmacı, bağlayıcı ve aracı.

3.4 Tartışma

Sosyal sermaye ve sağlık arasındaki ilişkiyle ilgili olarak bilim adamları farklı açıklamalarda bulunmuşlardır. Örneğin, destekleyici ilişkiler, güven ve sosyalleşme yoluyla bireylerin stres düzeyi azaltılabilir (Folland, 2008). Ayrıca güven

duygusunun yüksek olduğu bir sosyalleşme ortamında daha fazla sağlık bilgisi elde edilebilir (Kawachi ve Berkman, 2000). Ayrıca, güçlü sosyal ilişkiler, düzenli sağlık kontrolleri ve sigarayı bırakmak gibi olumlu sağlıklı davranışların uygulanması için bir sorumluluk duygusu sağlayabilir (Folland, 2008). Ek olarak, sağlıksız davranışları önlemek için sağlık davranışları sosyal baskı yoluyla gayri resmi olarak kontrol edilebilir (Story, 2014).

Daha spesifik olarak, dayanışmacı sermayeyi ifade eden ilişkilerde, aile üyeleri veya komşular tarafından sağlanan sosyal destek, yalnızca ani sağlık krizleri veya kronik sağlık koşullarında değil (Story ve diğerleri, 2016) aynı zamanda insanların stresli bir durumla veya olumsuz bir uyaranla karşı karşıya kaldığı herhangi bir zamanda sıkıntıyı azaltmaya yardımcı olabilir (Bradbury & Karney, 2004). Bu destek, bireylere önemsendiklerini ve değer verildiğini hissettiren duygusal (ör., empati, bakım), bilgilendirici (ör., sağlıkla ilgili bilgi sağlama) veya araçsal (ör., finansal yardım) bir yolla sağlanabilir (Kawachi, 2010).

Ayrıca, aracı ilişkiler kurma konusunda daha yüksek güven duygusuna sahip toplumlarda, güçlü bağlar, bir aidiyet ve birliktelik duygusu yaratarak sağlıkla ilgili sonuçları iyileştirebilecek seferberliği ve toplu eylemi kolaylaştırabilir. Bu tür olumlu duygular, bireylerin kendi çıkarlarını bir kenara bırakıp toplum yararını koruyacak şekilde sağlık davranışları sergilemelerine ya da sağlıklı davranışları kolaylaştıran sosyal politikaların değiştirilmesi için topluca hareket etmelerine (Glanville ve Story, 2018) yol açabilir. Ek olarak, sağlıkla ilgili sonuçlar için faydalı olan yeni bilgilerin bu tür güçlü sosyal bağlarda yayılması daha olası olacaktır zira bu bağlar arasındaki daha yüksek güven, bu bilgilerle uyumlu tutum ve davranışlar oluşturmak için bu tür bilgilerin benimsenmesini ve kullanılmasını kolaylaştıracaktır (Kawachi, 2010)

Otoriteye duyulan güven eksikliği, barış ve huzuru engelleyerek, toplumda dayanışma ve güvenlik duygusunun zedelenmesine neden olabilir. Buna karşılık, otorite kurumlarına karşı güven duygusu daha yüksekse, bireylerin yaşamlarını etkileyen sağlıkla ilgili politikalar üzerinde daha fazla güç ve kontrol duygusu hissetmeleri sonucu otoriteyle etkileşime girme şansı daha yüksek olacaktır

(Sundquist ve Yang, 2007). Bu nedenle, sosyal sermayenin tüm boyutları aslında sağlık açısından mühimdir. Örneğin, sosyal destek için dayanışmacı sermaye, toplumda dayanışma ve saygı için aracı sermaye ve güç veya otorite tarafından sağlanan kaynakları harekete geçirme yeteneği için ise bağlayıcı sermaye anahtar niteliğindedir (Poortinga, 2012).

KKSD üzerindeki dayanışmacı ve bağlayıcı sermayeler arasındaki önemli etkileşim, ilk kez araştırılan bir araştırma hipotezinin ürünüdür. Hipotez, yakın ilişki dinamiklerinin, mevcut çalışmada dayanışmacı sermayenin, otoriteye karşı daha düşük düzeyde güvene sahip bireyler için sağlıkla ilgili sonuçlar üzerindeki telafi edici rolüne dayanıyordu. Bulgular, ilk çalışmanın takip analizinde dayanışmacı sermaye ile gelir eşitsizliği arasında bulunan güçlendirici etkiye benzer belirgin bir ilişki örüntüsünü göstermiştir. Dayanışmacı ilişkiler ve KKSD arasındaki pozitif ilişki, bağlayıcı ilişkilerin tüm seviyelerinde (düşük, orta ve yüksek) mevcut olmasına rağmen, bu tür bir ilişki modeli, otoriteye karşı daha fazla güven duyan insanlar için daha belirgindi. Bu tür güçlendirici etki, kurumsal/dikey güven ile kişilerarası/yatay güven arasındaki ilişki ile açıklanabilir. Farklı bağlamlarda ve ülkelerde iki tür güven arasında karşılıklı bir ilişki olduğunu öne süren bulgular bulunmaktadır (ör., Rothstein ve Stolle, 2008; Sønderskov ve Dinesen, 2014; 2016).

Karşılıklı ilişkinin de ötesinde, kurumsal güvenden kişilerarası güvene doğru sebep-sonuç ilişkisi vurgusunun yapıldığı çalışmalar bulunmaktadır. Örneğin, iki temsili Danimarka anket verisi aracılığıyla tekrarlanan bir ölçüm analizi, kurumsal güvenin vatandaşlar arasındaki kişilerarası güveni etkileyebileceğini göstermiştir (Sønderskov & Dinesen, 2016). Yazarlar ayrıca, böyle bir nedensel yolun, ortak değişkenler (örneğin, kişilik özellikleri) kontrol edildikten sonra bile geçerli olduğunu raporlamıştır. Bir açıklama, insanların diğerlerinin ne kadar güvenilir olduğuna dair algılarının, toplum üyelerinin davranışlarını yöneten kural koyucular aracılığıyla oluşturulabileceği olabilir. Bir anlamda, devlet kurumlarının adaleti, şeffaflığı ve verimliliği, toplumun diğer üyeleri için normların ve güvenilirliğin teşvik edilmesinin göstergesidir (Sønderskov ve Dinesen, 2016). Basitçe söylemek gerekirse, dürüst olmama olağandışı olarak görülür ve vatandaşlar bu tür normları

ihlal edenlere ciddi yaptırımlar uygulanacağına inanabilirler (Rothstein ve Stolle, 2008). Fakat tam tersi durumda, kurumlardaki yolsuzluk veya diğer arızalar kurumlara olan güveni sarsacak ve kişiler arası güveni azaltacaktır (Sønderskov ve Dinesen, 2014). Bu nedenle, makro düzeyde daha büyük bir güven duygusu, dayanışmacı ilişkilerde olan güven duygusunu daha belirgin hale getirebilir ve dolayısıyla sağlıkla ilgili sonuçlar için daha etkili olabilecek düzeyde olumlu bireysel deneyimler olarak açığa çıkabilir. Başka bir deyişle, devlete daha fazla güven duyan insanlar, sağlıkları üzerinde etkili dayanışmacı ilişkilerinde bilişsel bir kaynak olarak güvenin adaptif etkisini deneyimlemek için daha avantajlı olacaktır.

Son olarak, gelir eşitsizliği ile KKSD arasındaki zayıf ikili ilişki, çok düzeyli analizde, sosyal sermaye boyutlarıyla birlikte birçok bireysel düzeyde değişken analize dahil edildiğinde anlamsız hale gelmiştir. Bu sonuç, gelir eşitsizliği, sosyal sermaye ve sağlık bağlantısına ilişkin önceki yorumlar (ör., Kawachi vd., 1997; Wilkinson, 2005) dikkate alındığında şaşırtıcı değildir. İlgili literatürde en çok atıf alan önceki çalışmalarında Kawachi ve diğerleri (1997), sosyal sermaye etkisi kontrol edildikten sonra gelir eşitsizliği ile sağlıkla ilgili sonuçlar (örneğin ölüm) arasındaki ilişkinin ihmal edilebilir hale geldiğini belirtmiştir. Bu nedenle yazarlar, doğrudan bir bağıntıdan ziyade gelir eşitsizliğinin sosyal sermaye yoluyla sağlıkla ilişkilendirilebileceği aracı bir mekanizmayı vurgulamışlardır.

4. GENEL TARTIŞMA

Sosyal sermaye kavramı, toplumla bütünleşmeye ve güçlü bağlar kurmaya vurgu yapılan psikososyal bir yapıdır. Teoriye göre, güçlü sosyal ağlar, yalnızca temel bir bileşen, yani güven yoluyla etkinleştirilebilecek faydalı kaynakları içerir (Putnam, 2000). Bu nedenle güven, yaşamdaki anlamı ve olumlu duyguları destekleyen kaliteli ilişkilerin bir yansımasıdır (Sun ve Lu, 2020). Bu bağlamda, çok sayıda çalışma, güçlü sosyal bağları olan kişilerin, bu tür bağların sağlıkla ilgili sonuçlar üzerindeki uyarlayıcı rolünden fayda sağlayacağını raporlamıştır (Rodgers vd., 2019; Xue vd., 2020).

Sosyal sermayenin tanımı konusunda net bir fikir birliği olmamasına rağmen güven, böyle bir psikososyal yapının iyi bir temsili ve en sık kullanılan bileşeni olarak kabul edilmiştir (Rodgers ve ark., 2019). Bir eleştiri, kime karşı güvenden bahsettiğimiz sorusunu gündeme getiren hedef ilişkinin ölçümü ile ilgiliydi (Elgar vd., 2011; Glanville ve Story, 2018). Bu durumda, sosyal ilişkilerin üç boyutu hedef ilişki kalıpları için iyi kurulmuş ve test edilebilir bir çerçeve sağlayan en net ayırt edici kavramsallaştırma olarak önerilmiştir (Szreter ve Woolcock, 2004). Ancak, üç boyutun hepsini aynı anda dahil etmek için sınırlı bir girişimde bulunulmuştur (Ehsan vd., 2019). Bununla ilgili olarak, bu çalışma, birçok çalışmada yaygın olarak kullanılan ikincil veriler sağlayan, fiziksel sağlık, zihinsel sağlık ve ölüm riskini yordama noktasında geçerli ve güvenilir bir değişken olarak önerilen (Gilbert vd., 2013) KKSD ile tüm bu boyutlar arasındaki ilişkiyi inceleme girişimidir.

Önceki bulgular, sosyal sermaye ve sağlık arasındaki ilişki örüntüsünün krizler veya afetler sırasında insanların günlük rutinlerindeki ve deneyimlerindeki değişimler nedeniyle değişebileceğini ve dolayısıyla sosyal ağ kaynaklarında da farklılıklar olabileceğini göstermiştir (Noel vd., 2018). Ayrıca, topluluk katılımı ve güçlü sosyal bağların sosyal entegrasyonu kolaylaştırabileceği, kriz sırasında ve sonrasında bireysel dayanıklılığı artırabileceği gösterilmiştir (Kyne ve Aldrich, 2020). Bu nedenle, ilk çalışmanın bulguları, Türkiye'de ilk kez ele alınan ilişki kalıplarında tutarlılık veya farklılık olup olmadığını incelemek için büyük küresel felaket olan COVID-19 dikkate alınarak yorumlanmıştır. Bulaşıcı hastalıkların sadece enfekte olanların sağlığını değil, aynı zamanda diğer insanların genel psikolojik sağlığını ve esenliğini de etkileyebileceğini unutmamak gerekir. Örneğin, şiddetli akut solunum sendromu (SARS) hastalığı, genel popülasyonda anksiyete, depresyon ve stres düzeyini artırmıştır (Wu vd., 2005). Bu tür kritik sağlık sonuçlarıyla ilgili olarak, Borgonovi ve Andrieu (2020) tarafından yapılan bir analiz, güçlü sosyal ilişkileri olan toplumların, özellikle bulaşıcı hastalıkların yayılmaya başladığı erken evrelerde daha hazırlıklı olabileceği ve toplumun, diğer üyeleri korumak için uyumsal davranışlar sergileyecekleri fikrini desteklemiştir.

Bu tür krizlerin ilk aşamalarında hükümetler farklı kaygılar (mali veya siyasi) nedeniyle harekete geçmeyi erteleyebilirler ve bu noktada bireyler zorunlu tedbirler uygulanmadan kendi sorumlu tutum ve davranışlarıyla otorite üzerindeki yükü hafifletebilirler. Kısacası, kriz durumlarında hem bireysel hem de toplumsal düzeyde sosyal sermaye stoku, sağlık açısından maddi stok (ör., yüz maskeleri, test kitleri) kadar önemlidir. Sağlıklı davranışların teşviki ve geliştirilmesini hedefleyen müdahalelerin, toplum düzeyini dikkate almadan yalnızca bireysel düzeyde ele alındığında, beklenenden daha düşük bir etkiye yol açacağını unutmamak gerekir (Glass, 2000).

DSÖ ve OECD, sosyal sermaye stokunun toplum düzeyinde önemini vurgulayarak, sosyal sermayenin toplum sağlığını koruyucu faktörlerden biri olduğu girişimlerde bulunmuştur (Keeley, 2007; World Health Organization, 2013). Örneğin, sağlıkla ilgili bir politika olan Sağlık 2020'de DSÖ Avrupa, sosyal sermayenin yaşam kalitesi ve uzun ömürlülüğün kritik bir yordayıcısı olabileceğini ve bu konuda daha fazla araştırma yapılması gerektiğini öne sürmüştür (World Health Organization, 2013). Ek olarak, yukarıda belirtildiği gibi, sosyal ilişkilere çok boyutlu bir yaklaşım, daha ayrıntılı bir anlayış (Chen ve Meng, 2015) ve sağlık tesisleri üzerindeki büyük yükü azaltabilecek gelecekteki müdahaleler için bir iç görü sağlayabilir (Lofors ve Sundquist, 2007). Bu nedenle, tüm boyutları dahil olmak üzere farklı toplulukların sağlıkla ilgili tutum ve davranışlar açısından ayırt edilip edilemeyeceğini belirlemek için tutarlı kavramsallaştırma ve sosyal sermaye ölçümü ile kültürler arası çalışmalara ihtiyaç bulunmaktadır.

Bununla birlikte, genel olarak, veriler ABD ve Batı Avrupa ülkeleri gibi daha zengin, gelişmiş ülkelerden gelmektedir (Ehsan vd., 2019) ve gençleri içeren örneklemler neredeyse yoktur (Rodgers vd., 2019). Bununla birlikte, kültürel veya sosyo-demografik özelliklerdeki çeşitlilik, güven düzeyini, dolayısıyla sağlıkla ilgili sonuçları etkileyebilir. Örneğin, Balliet ve Van Lange (2013) tarafından yürütülen önceki DDA ve ADA verilerinin kapsamlı bir analizi, ülkeler arasında güven seviyelerinde büyük farklılıklar olduğunu göstermiştir. Bu bulgunun ardından Van Lange (2015), farklı ülkelerde güven üzerinde bir genetik etki olabileceğini

savunmuştur. Bu bağlamda, çok çeşitli demografik ve sosyal özellikler de dahil olmak üzere DDA ve ADA'nın ortak verilerinin ve Türkiye verisinin pandemi sürecindeki analizi, mevcut bilgi birikimi için ilgili literatüre biricik bir katkı sağlamaktadır.

Literatürdeki bir diğer sınırlılık ise sosyal sermaye ve sağlık bağıntısı açısından düzenleyici ve aracı mekanizmaların olmamasıdır (Rodgers vd., 2019). Mevcut araştırmada özgün bir sonuç olarak, dayanışmacı sermaye ve KKSD arasındaki ilişkide bağlayıcı sermayenin düzenleyici bir rolü ortaya konulmuştur. Ek olarak, diğer düzenleyici ilişki kalıpları (ör., dayanışmacı sermaye ve gelir eşitsizliği arasındaki etkileşim) ilk kez sunulmuştur. Gelecek çalışmalar sosyal sermayenin farklı yönleri arasındaki potansiyel etkileşimi sağlık çıktıları bağlamında araştırarak bu bulguları genişletebilir, örneğin bilişsel sermaye – insanların ne hissettiğine veya algıladığına (örneğin güvene) atıfta bulunan – ve sosyal sermayenin davranışsal boyutlarını temsil eden yapısal sermaye arasındaki etkileşim bu araştırmalara örnek olabilir.

Mevcut araştırmanın kesitsel doğası, neden-sonuç ilişkilerini ortaya koyabilmek adına bir engeldir. Ayrıca, ilk çalışmanın bulguları Türkiye örneklemi ile sınırlıdır ve günlük sosyal rutinleri etkileyen büyük küresel felaket, COVID-19 pandemisi dikkate alınarak yorumlanmalıdır. Bununla birlikte, 69 ülke çapında geniş bir tablo sunan ikincil veri analizi, mevcut bulguların tekrarlanabilirliğini ve genelleştirilebilirliğini artırabilir. Ayrıca, büyük örneklemlerden elde edilen verilerin sağlık sonuçları üzerinde çok küçük etkiler bulma olasılığını artırmış olabileceği ve istatistiksel bir anlamlılığın mutlaka pratik bir anlamlılık demek olmadığı kabul edilmelidir. Bu nedenle, ikinci çalışmada pratik anlamlılığı değerlendirmek için p-değerlerinden ziyade etki büyüklükleri raporlanmıştır. Cohen'in (1977) kabul ettiği etki büyüklüğü sınıflandırmasına göre mevcut çalışmada sağlık üzerinde sosyal sermaye boyutları için küçük etki büyüklükleri olduğu görülmektedir. Ancak Cohen (1977), bu tür etki büyüklüğü sınıflandırmalarının geçici olabileceğine ve bu nedenle araştırmacıların bu alandaki önceki çalışmaları değerlendirmeleri gerektiğine işaret etmiştir. Bu bağlamda, mevcut etki büyüklükleri, sosyal sermaye boyutlarının sağlık üzerindeki

mütevazı etkilerini vurgulayan mevcut bilgilerle tutarlıdır (Gilbert vd., 2013; Xue ve diğerleri, 2020). Bu durumda, etkilerin ne ölçüde "etkili" olduğu çalışma alanına bağlıdır. Örneğin, büyük örneklemler vasıtasıyla sağlanan daha fazla istatistiksel güç, sağlıkla ilgili çalışmalarda (ör., ilaç çalışmaları veya kardiyovasküler cihaz çalışmaları; Lantz, 2013) kritik olabilecek küçük etkileri tespit etmek için faydalı olacaktır. Dolayısıyla bu tezdeki bulguların, sağlıkla ilgili teorik ve pratik anlamda kümülatif bilgiye katkı sağlayacağı söylenebilir.

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TEZİN TÜRÜ / DEGREE: Yüksek Lisans / Master ☐ **Doktora** / PhD ☒

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