The International Journal of Social Sciences and Humanities Invention 6(05): 5430-5436, 2019
DOI: 10.18535/ijsshi/v6i5.05 **ICV 2015: 45.28**
ISSN: 2349-2031

Research Article

National resilience, country corruption and quality of life: An international study

Shaul Kimhi[1], Yarden Oliel[2]

[1]PhD, Department of Psychology, Tel Hai College, Israel.
[2]Department of Psychology, Tel Hai College, Israel.

Correspondence: Prof. Shaul Kimhi

Abstract: The present study examines levels of corruption and quality of life as predictors of national resilience among six samples of students from Australia, Germany, Britain, South Korea, Israel and Greece (*N*=1199). Results indicated that the level of corruption and quality of life index significantly predicted national resilience: the lower the level of corruption and the higher the level of quality of life, the higher the national resilience reported. Comparing the two predictors indicated that the level of corruption is a better predictor of national resilience compared with the quality of life index. This study points to the significant link between national resilience and corruption among low-level countries in the world's corruption hierarchy.

Keywords: National resilience, country corruption index (CPI), Human Development Index (HDI).

Introduction

The main question addressed in this paper is straightforward: to what degree does a country's level of corruption and quality of life predict national resilience across six different countries: Australia, Germany, Britain, Korea, Israel, and Greece. A literature survey indicates that there are a number of studies focusing on national resilience, country corruption or quality of life but, to the best of our knowledge, no research has examined their associations across various countries. In the current study, we have examined two opposing social predictors estimated to be significant predictors of national resilience. The first, world level of corruption, associates with various countries' negative characteristics. The second, a country's quality of life, associates with various positive ones. Furthermore, we have examined whether corruption and quality of life, controlling for each other, significantly predict national resilience across six different countries and to what degree.

Resilience

Research indicates that potentially traumatic events (PTE, Bonanno, 2004) such as war and terror, natural disasters, or economic crises quite often result in detrimental psychological outcomes (Johnson et al., 2009). It has been argued further that the effects of stressful events are cumulative. Prolonged stress is a major contributor to a detrimental physical and psychological aftermath of distress (Besser and Neria, 2009). A literature survey indicates that the concept of resilience relates to several types of resilience, including psychological strength, social resilience, economic resilience, and more (Castleden, McKee, Murray & Leonardi, 2011).

Researchers have proposed a large number of definitions for people's resilience (e.gl, Fletcher & Sarkar, 2013; Masten, 2011). According to these researchers, resilience is a process, personal disposition, outcome, or a set of behavioral tendencies, and its multidimensional definitions include both the facet of exposure to adversity and the ensuing positive adjustment. Consequently, it has been measured by a variety of resilience fostering elements such as the gain of resources (Hobfoll et al., 2008), satisfactory performance in age-salient developmental tasks (Masten, 2011) or level of distress symptoms (bonanno, 2004).

Beyond the various definitions, researchers seem to agree on two main issues: First, resilience is a complex, multifaceted concept whose measurement arouses rich debate (Bonanno, Romero, & Klein, 2015). Second, the concept of resilience has often been used in discussing people's ability to withstand stress and adversity (Ajdukovic, Kimhi & Lahad, 2015; Bonanno 2004; Luthar, Cicchetti, & Becker, 2000).

Researchers have claimed that it is essential to differentiate between indicators and predictors of resilience. *Indicators* are measures taken *after* the occurrence of adversity and *predictors* (or perceived resilience) are measures of resilience taken before the harsh event has taken place, in order to predict people's ability to withstand adversity in the future, or to create baseline data (Bonanno, Galea, Bucciarelli, & Vlahov, 2007). In addition, researchers distinguish among three levels of psychological resilience: individual, community and national. The present study examines a prediction of national resilience by the Quality of Life Index and the Corruption Index, among six different countries. To the best of our knowledge, this has not been examined so far. Accordingly, we consider our study as a preliminary one.

National Resilience. The concept of national resilience is a comprehensive one, addressing the issue of society's sustainability and strength in several diverse realms (Chemtob, 2005; Eshel & Kimhi, 2016; Obrist et al., 2010). According to earlier research (Kimhi, Eshel, Leykin & Lahad, 2017; Kimhi et al., 2019), national resilience includes four main social

components: patriotism, optimism, social integration, and trust in political and public institutions.

Researchers have reasoned that members of a resilient society will display a better ability to cope successfully with adversity and will return more quickly to everyday life as before the adversity, compared to a society with lower resilience. One of a few studies of antecedents of national resilience has shown that it is positively associated with economic conditions of the respondents and negatively with the level of exposure to the horrors of war (Kimhi & Eshel, 2009).

A comparison of students'perceptions of national resilience (NR) in the United States and Israel (Canetti, Waismel-Manor, Cohen, & Rapaport, 2014) claims similarly that NR should be defined as the nation's ability to cope successfully with its adversities (such as poverty, terrorism, or corruption) while keeping its social fabric intact. This study shows that themes that are similar to those delineated by Ben-Dor et al. (2002) underlie the perceptions of NR of both United States and Israeli citizens.

Based on earlier studies that examined national resilience in Israel (Gal, 2014; Kimhi, et all, 2017; Kimhi et al., 2019), we expected that national resilience would be significantly and positively correlated with countries' quality of life and negatively correlated with levels of corruption across all six participant countries.

Corruption

According to the Oxford English Dictionary, corruption is defined as the ''perversion or destruction of integrity in the discharge of public duties by bribery or favor.'' Researchers have reported that corruption is associated with countries' social characteristics, such as subjective well-being (Tay, Herian, & Diener, 2014), social trust (Rothstein & Eek, 2009), social responsibility (Rodriguez, Siegel, Hillman, & Eden, 2006), life satisfaction (Wu & Zhu, 2016), people's willingness to accept and deal with negative outcomes (Lind &Tyler, 1997), and economic growth (Ormerod, 2016; OECD, 2016). In addition, corruption lowers levels of public trust in national institutions, which is essential for national resilience and well-being (Hudson, 2006). According to Lewis (2017), corruption exists in all strata of the population, at different levels. Overall, there seems to be broad agreement among researchers from different disciplines that corruption negatively affects the basic fabric of every human society.

One of the leading bodies examining corruption among most nations is the Corruption Perception Index (CPI) published by Transparency International (TI) (Transparency International, 2016). Since 1996, this index has annually ranked countries "by their perceived levels of corruption, as determined by expert assessments and opinion surveys." The CPI generally defines corruption as "the misuse of public power for private benefit." In the current study, we have used the CPI scores for 2016 across the six participant countries as predictors of national resilience. The countries participating in the study according to the CPI are (from lower levels of corruption to higher): Germany (tenth place), Britain (tenth place), Australia (thirteenth place), Israel (twenty-eighth place), South Korea (fifty-second place) and Greece (sixty-ninth place). Based on earlier studies examining a various aspect of corruption and social characteristics, we assumed that the level of corruption would significantly and negatively predict national resilience.

Quality of Life: Human Development Index

The Human Development Index (HDI) is an objective estimation of a country's quality of life. This index is a composite statistic of life expectancy, education and income per capita indicators (Human Development Reports, 2018). The HDI publication ranks 188 countries according to their level of HDI. The six countries included in this study are all in the upper level of the HDI world list (data refer to 2017): Australia (third place), Germany (fifth place), Great Britain (fourteenth place), Korea (twenty-two place), Israel (twenty-two place) and Greece (thirty-one place).

The quality of life index has received a series of studies. For example, earlier studies have reported that lower HDI associates with lower levels of physical health (Wang & Arah, 2017), self-reported well-being (Eshel & Kimhi, 2016a; 2016; Eshel, Kimhi, & Goroshit, 2014), social policy (Sant'Anna, de Araújo Ribeiro & Dutt-Ross, 2011) and sustainability (Naumayer, 2001), and this is only a partial list. For example, a number of studies have examined the association between individual resilience and quality of life in the context of health problems (e.g., Tansey, Bezyak, Ditchman, & Catalano, 2017). However, we are not aware of a study that examined the association between national resilience and quality of life comparing different countries. In the current study, we examine national resilience in six different countries. Based on earlier studies regarding quality of life, we have assumed that the higher the country's level of HDI, the higher national resilience reported.

Hypothesis

1. Participants from countries higher in corruption will report lower levels of resilience. This will be true when controlled for the level of HDI.
2. Participants from countries higher on the HDI will report higher levels of resilience. This will be true when controlled for level of corruption.
3. The question of the relative importance of the CPI and the HDI is posed as an open research question, due to lack of earlier studies regarding this issue.

Method

Sample

We used a snowball sampling technique of students from six different countries: Australia (*n*=171), Germany (*n*=93), Great Britain (*n*=134), Israel (*n*=480), Greece (*n*=144) and South Korea (168) and overall, our sample included 1,190 participants. A university researcher from each country was assigned to collect the data at his/her institute after getting ethical committee approval from his/her university. All participants signed informed consent prior to filling out the questionnaire, including the right to withdraw and anonymity.

Table 1: Demographic characteristics of participants (*N*=1190) **across the six participating countries**

Variable	Countries	M / %	SD	Scale
Gender (% male)	1. Australia	64%		
	2. Germany	67%		
	3. GB	15%		
	4. Korea	26%		
	5. Israel	40%		
	6. Greece	62%		
Age (average)	1. Australia	29	1.09	
	2. Germany	27	8.67	
	3. GB	23	6.90	
	4. Korea	23	2.03	
	5. Israel	26	5.57	
	6. Greece	28	9.73	
Family average SES (scale 1-5)	1. Australia	4.41	1.09	1=much below average
	2. Germany	3.93	1.24	3=average
	3. GB	3.20	1.18	5=much above average
	4. Korea	3.21	.85	
	5. Israel	3.04	1.14	
	6. Greece	3.27	1.04	
Size of community (scale 1-6)	1. Australia	5.14	1.28	1=very small
	2. Germany	5.01	1.59	2=up to 5000
	3. GB	3.14	1.33	3=up to 10,000
	4. Korea	1.84	1.74	4=up to 50,000
	5. Israel	3.29	1.66	5=up to 100,000
	6. Greece	4.73	1.46	6= above 100,000
Born in the country of study	1. Australia	74%		
	2. Germany	93%		
	3. GB	84%		
	4. Korea	100%		
	5. Israel	92%		
	6. Greece	80%		
Political attitudes	1. Australia	3.43	.77	1= strong right
	2. Germany	3.55	.87	2=right
	3. GB	3.32	.77	3=center
	4. Korea	3.35	.77	4=left
	5. Israel	2.91	.95	5=strong left
	6. Greece	3.18	.89	
Religiosity	1. Australia	1.48	.70	
	2. Germany	1.40	.72	1=secular
	3. GB	1.68	.87	2=traditional
	4. Korea	1.54	.85	3=religious
	5. Israel	1.43	.70	4=very religious
	6. Greece	1.70	.87	
		Married	Single	
Family status	1. Australia	22%	57%	
	2. Germany	11%	61%	
	3. GB	13%	73%	
	4. Korea	.6%	99%	
	5. Israel	15%	72%	
	6. Greece	22%	67%	

Looking at Table 1 indicates some similarities and differences among the five countries: Most of the participants were born in the country where they were studying; average family income was in accordance with the HDI index (Australians reported the highest while Greeks reported the lowest family income). Participants' genders differ across the samples (the GB and Korea samples had a much lower percentage of males). Community sizes differ for different samples (Korean participants reported living in the smallest communities, following by GB and Israeli participants). The ages of the participants also varied, with the Australian sample being older and more homogenous in age.

Measurements

National Resilience. This scale (Kimhi, Eshel, Lahad & Lykin, 2019) consists of 25 items. The 6-point response scale ranges from 1= very strongly disagree to 6= very strongly agree. According to an earlier study (e.g., Ben-Dor et al., 2002;

Kimhi et al., 2017), the contents of the scale consists of the following: trust in the prime minister and the government, patriotism, coping with national crises, feelings of social justice, and trust in national institutions. The scale's reliability across the six countries was α = .820 to .923 and .924 for the whole sample.

Human Development Index. HDI in the current study consisted of participant country scores and order (from high to low): Australia (.94), Germany (.93), Great Britain (.91), Korea (.90), Israel (.90) and Greece (.87) (Human Development Index, 2016).

Corruption Perceptions Index (CPI). Levels of corruption in this study were the level of CPI scores: Germany (81), Britain (81), Australia (79), Israel (69), Korea (53) and Greece (44). A higher score means lower corruption (Transparency International, 2016).

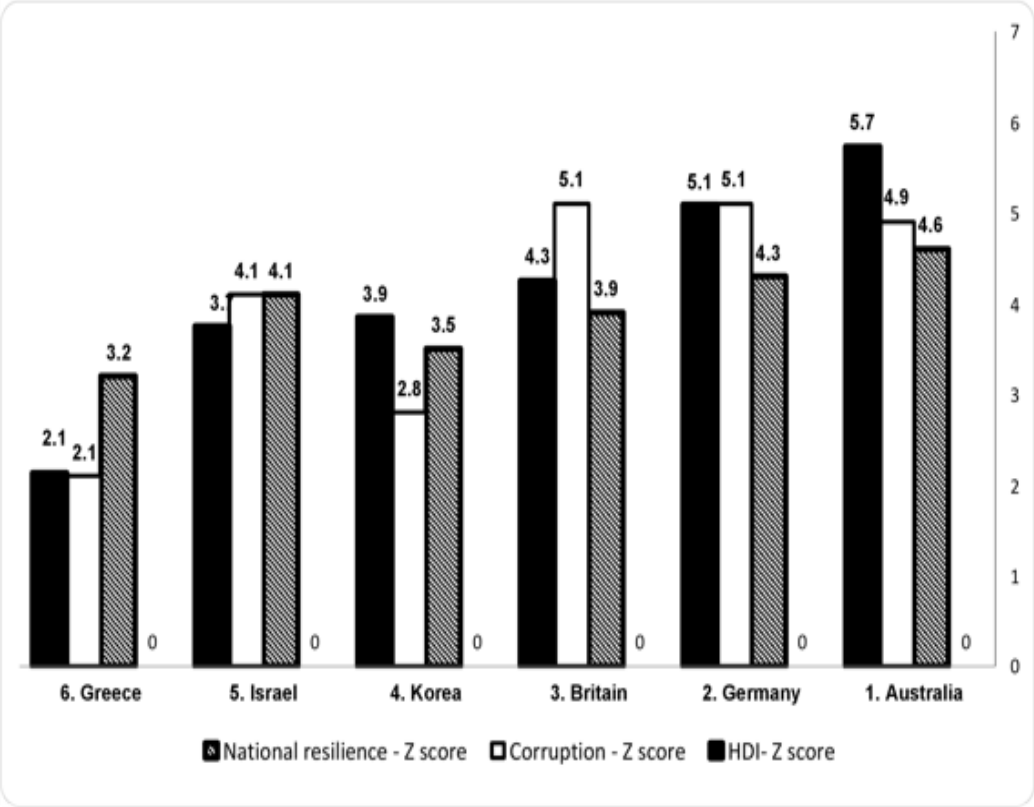
For frequency distribution of the three variables (CPI and HDI scores and ratings) across the six countries, see Table 2 and Figure 1.

Table 2: National resilience, corruption and HDI scores across the six participant's countries - scores and rating

Country		National resilience	Corruption		HDI	
	N	Score	Rating	Score[1]	Rating	Score
Australia	171	3.86	3	79	6	.939
Germany	93	3.64	1	81	5	.926
Britain	134	3.32	2	81	4	.909
Korea	168	3.00	5	53	3	.901
Israel	480	3.46	4	69	2	.899
Greece	144	2.75	6	44	1	.866
Overall/ M (SD)	1190	3.38 (.90)	-	67.26 (12.4)	-	.90 (.02)

[1]The higher the score, the lower level of corruption

Figure 1: Z-scores[1] of levels of National resilience, CPI[2] and HDI, across the six-participating countries



[1] we added 4 to all z scores in order to avoid negative values.
[2] Corruption (CPI): The higher the score, the lower level of corruption.

Results

As a first step, we calculated correlations among the three investigated variables (Table 3).

Table 3: Person correlations among national resilience, corruption index (CPI) and quality of life index (HDI)

	1	2	3
1. National resilience	α=.925	.368***	.360***
2. CPI[1]		--	.815***
3. HDI[2]			--

[1] Corruption Perception Index (CPI): The higher the score, the lower level of corruption.
[2] Human Development Index (HDI).

Results indicated the following: Both CPI and HDI significantly correlate with national resilience: the lower the CPI and the higher the HDI, the higher national resilience reported, and vice versa. Each of the two predictors, CPI and HDI, explain about 13% of national resilience variance. In addition, CPI and HDI are highly correlated with each other: the higher the HDI, the lower the CPI and vice versa. These results support our first hypothesis.

Next, in order to examine our second hypothesis, we launched a path analysis (Arbuckle, 2009; 2014). Results indicated that both CPI and HDI, controlling for each other, significantly predict national resilience: the lower the CPI and the higher the HDI, the higher national resilience reported (Table 4).

Table 4: Path analyses with standardized estimates of corruption index (CPI) and quality of life index (HDI) predicting national resilience

societal attitudes **Variables**	**National Resilience**
HDI	.18***
CPI	.22***
% of explained variance	15

[1] Corruption Perception Index (CPI): The higher the score, the **lower** level of corruption.

The two predictors together explained 15% of national resilience variance. We repeated the same analysis using the country's CPI and HDI ***rating*** (scale 1-6). Analysis indicated different results: HDI was significant predictor while corruption order was not significant. However, the explained variance of national resilience by these two predictors was 13%.

Discussion

Our results corroborated earlier studies indicating associations between corruption and several of the country's social characteristics (Ormerod, 2016; Tay, Herian, & Diener, 2014; Rothstein & Eek, 2009) as well as positive associations between level of quality of life and positive country social characteristics (Eshel & Kimhi, 2016a; 2016; Sant'Anna et al., 2011: Wang & Arah, 2017). However, the prediction of national resilience by corruption and quality of life needs further research support from other studies using larger samples and other countries.

The most prominent result of our study is the finding that level of corruption and HDI, controlling for each other, significantly predict national resilience. Accordingly, the higher the level of a country's corruption, the greater the difficulties are expected when recovering from major adversity, such as a natural disaster, economic crisis or war.

It is worth noting the fact that the six countries included in our study were all from the upper level of the HDI internationally and from the lower level of corruption. One way to explain the importance of corruption predicting national resilience, even among countries from the lower part of the world corruption list, is to claim that any corruption, undermines the basic trust of citizens in their country (Rodriguez et al., 2006; Rothstein & Eek, 2009). In addition, we may suggest that countries with lower HDI and higher CPI results will show higher levels of predicting national resilience by corruption and HDI. Having said this, only future studies will support this suggestion.

Limitations. It is important to point out the three main limitations of the current study: First, the samples in each of the six countries are based on student samples, which are not necessarily representative of the whole population. Second, all six participant countries surveyed belong to the highest group in terms of high quality of life and relatively low levels of corruption. Third, we have measured predicted national resilience and not resilience indicators that examine resilience after adversity has taken place.

Authors note: On behalf of the two authors, the corresponding author states that there is no conflict of interest.

References

1. Ajdukovic, D, Kimhi, S. & Lahad, M., (Eds.). (2015). Resiliency*: Enhancing coping with crisis and terrorism*. Amsterdam, the Netherlands: IOS Press. The NATO Science for Peace and Security Programme.
2. Arbuckle, J. L. (2009). *Amos 19*. Crawfordville, FL: AMOS Development Corporation.
3. Arbuckle, J. (2014). *Amos* (Version 23.0) [Computer Program] IBM SPSS.
4. Ben-Dor, G., Pedahzur, A., Canetti-Nisim, D., & Zaidise, E. (2002). The role of public opinion in Israel's national security. *American Jewish Congress: Congress Monthly*, 69(5), 13–15.
5. Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after aversive events? *American Psychologist*, 59, 20–28.
6. Bonanno, G., Romero, S.A., & Klein, S.I. (2015, on line first). The Temporal Elements of psychological resilience: An Integrative framework for the study of Individuals, families, and communities. *Psychological Inquiry*, 26(2), 139-169.
7. Bonanno, G.A., Galea, A., Bucciarelli, A., & Vlahov, D. (2007). What predicts psychological resilience after disaster? The role of demographics. *Journal of Consulting and Clinical Psychology*, 75(5), 671-682.
8. Besser A and Neria Y (2009) PTSD symptoms,

satisfaction with life and prejudicial attitudes toward the adversary among Israeli civilians exposed to ongoing missile attacks. *Journal of Traumatic Stress* 22(4): 268–275.

9. Canetti, D., Waismel-Manor, I., Cohen, M., & Rapaport, C. (2014). What does national resilience mean in a democracy? Evidence from the United States and Israel. *Armed Forces & Society*, 40(3), 504-520.
10. Castleden, M., McKee, M., Murray, V., & Leonardi, G. (2011). Resilience thinking in health protection. *Journal of Public Health*, 33(3), 369-377.
11. Chemtob, C. M. (2005). Finding the gift in the horror: Toward developing a national psychosocial security policy. *Journal of Aggression, Maltreatment & Trauma*, 10, 721–727.
12. Eshel, Y. & Kimhi, S. (2016). A new perspective on national resilience: Components and demographic predictors. *Journal of Community Psychology*, 44(7), 833-844.
13. Eshel, Y. & Kimhi, S. (2016a). Community resilience of civilians at war: A new perspective. *Community mental Health Journal*, 52, 109-117.
14. Eshel, Y. & Kimhi, S., & Goroshit, M. (2014). Posttraumatic recovery to distress symptoms ratio mediates relations of resilience fostering resources and their predictors. *Stress & Health*, 32(3), 216-223.
15. Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist, 18*, 12-23.
16. Gal, R. (2014). Social resilience in times of protracted crises: an Israeli case study. *Armed Forces & Society*, 40(3), 452-475.
17. Hobfoll, S. E., Canetti-Nisim, D., Johnson, R. J., Varley, J., Palmieri, P. A., & Galea, S. (2008). The association of exposure, risk and resiliency factors with PTSD among Jews and Arabs exposed to repeated acts of terrorism in Israel. *Journal of Traumatic Stress*, 21, 9–21.
18. Hudson, J. (2006). Institutional trust and subjective well-being across the EU. *Kyklos*, 59(1), 43-62.
19. Human Development Reports. Table 1. Human Development Index and its components. Retrieved (25-1-2019) from: http://hdr.undp.org/en/composite/HDI
20. Johnson RJ, Canetti D, Palmieri PA, et al. (2009). A prospective study of risk and resilience factors associated with posttraumatic stress symptoms and depression symptoms among Jews and Arabs exposed to repeated acts of terrorism in Israel. *Psychological Trauma: Theory, Research, Practice, and Policy* 1(14): 291–311.
21. Kimhi, S., Eshel, Y., Lahad, S., & Lykin, D. (2019). National resilience: A new self-report assessment scale. *Community Mental Health Journal*, 55(4), 721-731.
22. Kimhi, S. & Eshel, Y. Lykin, D. & Lahad, M. (2017). Individual, community and national resilience in the peace-time and in the face of terror: A longitudinal study. *Journal of Loss and Trauma*. 22(8), 698-713.
23. Kimhi, S., & Eshel, Y. (2009). Individual and public resilience and coping with long-term outcomes of war. *Journal of Applied Biobehavioral Research*, 14, 70-89.
24. Lewis, J. (2017). Social impacts of corruption upon community resilience and poverty. Jàmbá: *Journal of Disaster Risk Studies*, 9(1), 8-pages. Retrieved (1-1-2018) from: https://www.jamba.org.za/index.php/jamba/article/view/391
25. Lind, E. A., Tyler, T. R., & Huo, Y. J. (1997). Procedural context and culture: Variation in the antecedents of procedural justice judgments. *Journal of Personality and Social Psychology*, 73(4), 767-780.
26. Luthar, S.S., Cicchette, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71(3), 543-562.
27. Masten, A. S. (2011). Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy. *Development and Psychopathology*, 23, 493-506.
28. Neumayer, E. (2001). The human development index and sustainability—a constructive proposal. *Ecological Economics*, 39(1), 101-114.
29. Obrist, B., Pfeiffer, C., & Henley, R. (2010). Multi-layered social resilience: A new approach in mitigation research. *Progress in Development Studies*, *10*(4), 283-293.
30. OECD (Organisation for Economic Co-operation and Development) (2013). Issues Paper on Corruption and Growth. Paris: OECD. Retrieved (1-1-2018) from: http://www.oecd.org/g20/topics/anti-corruption/Issue-Paper-Corruption-and-Economic-Growth.pdf.
31. Ormerod, P. (2016). Corruption and economic resilience: recovery from the financial crisis in western economies. *Economic Affairs*, 36(3), 348-355.
32. Rodriguez, P., Siegel, D. S., Hillman, A., & Eden, L. (2006). Three lenses on the multinational enterprise: Politics, corruption, and corporate social responsibility.
33. Rothstein, B., & Eek, D. (2009). Political corruption and social trust: An experimental approach. *Rationality and society*, 21(1), 81-112.
34. Sant'Anna, A. P., de Araújo Ribeiro, R. O., & Dutt-Ross, S. (2011). Employing the components of the human development index to drive resources to educational policies. *Social Indicators Research*, 104(3), 523-532.
35. Tansey, T. N., Bezyak, J., Kaya, C., Ditchman, N., & Catalano, D. (2017). Resilience and quality of life: An investigation of Kumpfer's resilience model with persons with spinal cord injuries. *Rehabilitation Counseling Bulletin*, 60(3), 163-174.
36. Tay, L., Herian, M., & Diener, E. (2014). Detrimental effects of corruption and subjective well-being: Whether, how, and when. *Social Psychological & Personality Science*, 5, 751-759.
37. Transparency International (2016). "Corruption Perceptions Index 2016". Transparency International. Transparency International. Retrieved 14 August 2017. Retrieved from: *https://www.transparency.org/news/feature/corruption_perceptions_index_2016*

38. Wang, A., & Arah, O. A. (2017). The impact of human development on individual health: a causal mediation analysis examining pathways through education and body mass index. *PeerJ*, 5, e3053.
39. Wu, Y., & Zhu, J. (2016). When Are People Unhappy? Corruption Experience, Environment, and Life Satisfaction in Mainland China. *Journal of Happiness Studies*, 17(3), 1125-1147.