

Vulnerability of Social Capital in Medical Education Due to Economic Sanctions: A Qualitative Study

Shahram Yazdani¹, Mahour Mellat Parast², Snor Bayazidi³, Poorandokht Afshari^{4*}

Received: 27 Feb 2025

Published: 8 Sep 2025

Abstract

Background: Economic sanction is a planned action by one or more governments to limit economic, commercial, and/or financial relations to exert pressure on the target country. Information about the impact of sanctions on social capital within Iranian society is scarce. Therefore, this study investigated how an economic crisis affects social capital in medical education.

Methods: This qualitative study involved conventional content analysis. Faculty members or employees with notable work experience in education in universities of medical sciences constituted the population of this study. Participants were purposefully selected and invited to be interviewed. Semi-structured, in-depth interviews were used to collect the data. Eleven interviews were conducted in person, while 2 were conducted remotely via WhatsApp. Data were analyzed using the Graneheim and Lundman method.

Results: Out of a total of 13 interviews analyzed, 161 initial codes were extracted. After removing similar codes and merging the remaining codes, 17 codes remained. Continuous comparison of these 17 codes led to the emergence of 3 subcategories: (1) Damage to ethics, human dignity, human values, and human principles; (2) Reduction of the genetic resources of intelligence and genius; and (3) Damage to human resources and human infrastructure. Finally, we merged these subcategories into 1 category, which we called Damage to Social Capital.

Conclusion: Economic crises or sanctions will unavoidably damage medical science universities' social capital. Creating an ethical charter and using it as the basis for human resource training is advised.

Keywords: Medical education, Economic sanctions, Social capital, Human resources, Ethics

Conflicts of Interest: None declared

Funding: None

**This work has been published under CC BY-NC-SA 4.0 license.*

Copyright© Iran University of Medical Sciences

Cite this article as: Yazdani S, Mellat Parast M, Bayazidi S, Afshari P. Vulnerability of Social Capital in Medical Education Due to Economic Sanctions: A Qualitative Study. *Med J Islam Repub Iran*. 2025 (8 Sep);39:117. <https://doi.org/10.47176/mjiri.39.117>

Introduction

Economic sanction is a planned action by one or more governments to limit economic, commercial, and/or financial relations to exert pressure on the target country, which

is done with different political objectives. It is one of the capitalist countries' tools to deal with countries that do not act in accordance with their policies in the global system

Corresponding author: Dr Poorandokht Afshari, afshari-p@ajums.ac.ir

¹ Department of Medical Education, School of Medical Education and Learning Technologies, Shahid Beheshti University of Medical Sciences, Tehran, Iran

² Ira A. Fulton Schools of Engineering, Arizona State University, Tempe, Arizona, USA

³ Department of E-learning in Medical Sciences, Tehran University of Medical Sciences, Tehran, Iran

⁴ Reproductive Health Promotion Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

↑What is "already known" in this topic:

- Economic sanctions can affect areas that are not directly related to economic activities.
- When faculty members possess strong social capital, they develop a sense of identification and belonging within their teams or groups, which in turn can promote learning.
- The most valuable asset of a medical university is its diverse and specialized human resources. These assets are called social capital.

→What this article adds:

- Economic sanctions lead to a tendency among faculty members to establish out-group relationships and weaken in-group ties.
- By affecting the financial situation, economic sanctions will make material things more important and ethical values less important.
- Economic sanctions and the difficulty of material living conditions reduce people's
- Motivation to work and consequently damage social and human capital.

(1). Sanctions are an important factor in reducing the level of social welfare (2). Although the impact of sanctions on different resources of a country is well-documented, there is little, if any, information available regarding the impact of sanctions on social capital.

Social capital can be understood as an intangible asset arising from social connections and networks. Like any other human motivation, people form networks because they serve their own interests, and when people's interests are aligned, the relationship becomes mutually beneficial (3). Various theoretical perspectives on social capital have been developed. Bourdieu (1986) initially defined it as the totality of actual or potential resources tied to a persistent network of more or less institutionalized relationships of mutual acquaintance and recognition. Coleman (1990) later presented a more optimistic interpretation, suggesting that social capital facilitates the achievement of otherwise impossible objectives. Building upon this, Putnam (2000) extended the concept to include the context of teachers, emphasizing its role in generating a sense of identification and belonging within a team or group. Consequently, in education, social capital stands as a valuable conceptual instrument for explaining and comprehending the nature and structure of relationships among teachers, grounded in instrumental and expressive outcomes that support learning (4). Health research commonly regards social capital as an asset at the individual level that enables individuals "to secure benefits through membership in social networks or other social structures." (5). Olcott and Oliver define social capital as "a reservoir of goodwill in a community of individuals or companies characterized by a sense of obligation to help other members of the community who are in trouble, relying on the fact that those who give or receive help do not unreasonably abuse the situation for their own benefit." It develops through the accumulation of shared knowledge and understanding over repeated interactions (6). According to Bourdieu, capital is any resource that has an effect on a specific field and allows a person to obtain a specific benefit through participating in the competition over it (7). According to Potocan, the academic community is becoming more aware of the detrimental effects of crises on societal economies. However, the influence of economic crises on organizational behavior remains less explored. Notably, social studies in the past decade have emphasized the crucial role of behavior in organizations, and this has led to the emergence of studies that have examined ethical behavior in organizations with regard to the development of social factors such as culture, values, and education (8). Iran has been under strict economic sanctions for years, and the severity of these sanctions has intensified in recent years. However, no research has yet examined the consequences of this economic crisis for social capital, especially in medical education. Therefore, the present study was a scholarly attempt to bridge this gap in the literature.

Methods

To obtain an in-depth understanding of the point of view of the professors and university staff regarding the topic un-

der investigation, we used a qualitative research method relying on conventional content analysis for data analysis. In this method, we are able to extract the explicit and implicit concepts present in the participants' descriptions. By coding these concepts, we can access the main themes of their opinions (9).

The research population included faculty members or employees with notable work experience in education in universities of medical sciences. The reason for selecting this group was because these individuals had direct work experience in the university education system and had direct contact with students and officials, and some of them were even in charge of educational positions in their universities. A purposive sampling method was used to select the participants. In this study, our sampling method was snowball or chain sampling. In this method, one participant is identified based on the research objectives, and that participant refers us to another participant who has the same characteristics until the required sample size is completed (10).

The inclusion criteria for the faculty members were employment as an official faculty member and teaching theoretical, practical, or clinical courses at the time of the study. For university employees, the inclusion criteria were working in offices or positions of education for more than 10 years in universities of medical sciences and willingness to participate in the study. Eligible individuals were sent short text messages (SMS) indicating the general purpose of the research, and they were asked to meet in person to conduct an interview or, if necessary, receive more explanations through a phone call. Out of the 16 individuals who were sent text messages, 10 set a meeting time, and 6 agreed after a call was made to provide them more explanations. Three out of these 6 people agreed to attend the meeting. Since the participants were selected from different universities, it was not possible to have face-to-face interviews with 2 of the participants; thus, these interviews were conducted through WhatsApp. The interviewer's profile included being a PhD candidate in medical education and a faculty member with a strong background in the midwifery department, knowledge in qualitative research methods, and experience in performing content analysis. Prior to the commencement of the interviews, based on the knowledge gained from studying various documents, a preliminary interview guide was prepared. Following preliminary testing, this guide was approved by the research team and used as the basis for the interviews.

To begin, the researcher provided the interviewees a complete introduction and confirmed the confidentiality of their responses. Following the introduction and confidentiality assurance, participant consent was obtained for the interview. Data collection employed semi-structured, in-depth individual interviews, chosen for their flexibility and ability to elicit rich, detailed information. The interview was conducted with each participant only once. The main question was as follows: Are human resources specialized in medical education affected by economic sanctions? Following each interview, more detailed questions were formulated based on the interviewee's responses and the established framework. Interview duration ranged from 25 to 55

minutes, contingent on participant willingness. Immediately after each interview concluded, the audio recordings were transcribed verbatim. Throughout the interviews, the researcher fostered a friendly and relaxed atmosphere to encourage participants to freely express their views comfortably. To ensure accurate comprehension, the researcher employed techniques such as restating key points and summarizing answers for confirmation. Each interview concluded with the open-ended question: "Is there anything else you would like to talk about?" Data saturation was achieved in this study after 11 interviews because no new information surfaced; nonetheless, 2 additional interviews were carried out to make sure data saturation was achieved. Consequently, 13 interviews in all were eventually carried out.

We followed Granheim and Lundman's method for data analysis. The transcribed interview data were meticulously examined multiple times, allowing for the emergence of key concepts and patterns. The "content of analysis" and "unit of analysis" were then determined as the primary focus for the subsequent content analysis. Subcategories gradually took shape through the constant comparative analysis of the identified units, a process encompassing "data compression, summarization, and abstraction." Thematic categories were developed through an iterative process of reading and comparing codes. Building upon this, subcategories further emerged, and through integration, inference, and ongoing analytical reflection, the main category was ultimately identified. To strengthen the credibility of the study's findings, Graneheim's 4 criteria were employed: sufficient duration of data collection, sampling for maximum variation (across sex, age, work experience, etc, as presented in Table 1), prolonged research immersion in the data, and member checks. This manuscript was prepared in accordance with the COREQ guidelines for qualitative research. In the areas of participant communication and individual characteristics, study design, analysis, and reporting findings, this checklist gives researchers report-

ing guidelines for qualitative research, especially that conducted through interviews (11).

Results

The results of this study are based on interviews with 13 participants. According to Table 1, the characteristics of the participants showed sufficient diversity, which increases the validity of the findings.

Out of a total of 13 interviews, 161 initial codes were obtained. After removing similar codes and merging the remaining codes, 17 codes remained. Continuous comparison of these 17 codes led to the emergence of 3 subcategories, namely 1. Damage to ethics, human dignity, human values, and human principles; 2- Reduction of the genetic resources of intelligence and genius; 3- Damage to human resources and human infrastructure. Finally, we merged these subcategories into one category, which we called Damage to Social Capital (Table 2).

Damage to Ethics, Human Dignity, Human Values, and Human Principles

This subcategory was formed from the integration of the following codes: Damage to human values due to highly competitive environments, Loss of morality, Lack of respect for one's dignity, Damage to participation and empathy in society, Damage to human dignity, Damage to professional ethics, Lack of role models, Damage to moral values, and Violation of ethics.

This subcategory was formed from the integration of the following codes: damage to human values due to high competition in the environment, loss of ethics, lack of attention to individual dignity, damage to participation, empathy in society, damage to human dignity, damage to professional ethics, lack of role model, damage to moral values and non-observance of ethics.

Regarding the loss of morality, Participant 1 said, "According to the staff members, we don't work since they don't pay us overtime. This implies that morals is

Table 1. Characteristics of the Participants

Column	Sex	Age	Group	Work experience (year)	Education
1	Male	55	Employee	21	PhD Health in Economics
2	Female	50	Faculty member	24	PhD in Nursing
3	Male	66	Faculty member	27	PHD
4	Male	47	Faculty member	20	PhD in Medical Education
5	Female	36	Faculty member	7	PhD in Pharmaceutical Economics Management
6	Female	59	Faculty member	30	PhD in Medical Education
7	Male	43	Employee	19	Master's degree in Public Administration
8	Female	60	Faculty member	33	Master's degree in Nursing
9	Male	45	Employee	20	General practitioner
10	Female	55	Faculty member	28	Sub-specialist
11	Male	58	Faculty member	34	Community medicine specialist
12	Male	65	Employee	40	MD and PhD in Management
13	Female	57	Faculty member	30	PhD in Reproductive Health

Table 2. Codes Extracted From the Study

Primary codes	Sub-categories	Main Category
Damage to human values due to highly competitive environments Loss of morality Lack of respect for one's dignity Damage to participation and empathy in society Damage to human dignity Damage to professional ethics Lack of role models Damage to moral values Violation of ethics Damage to social intelligence (empathy, etc.) Damage to the average IQ of a population Damage to the genetic resource of intelligence Difficulty in strengthening inner and inherent capabilities	Damage to ethic, human dignity, human values, and human principles Reduction of the genetic resources of intelligence and genius	 Damage to social capital
Weakness in conveying noble and valuable human concepts Damage to scientific human resources Negligence of human capital The necessity of increasing inner strength (reducing external dependence)	Damage to human resources and human infrastructure	

harmd along with the economic sanctions.”

Participant 8 also commented in this regard,
“Because inflation is unpredictable, according to economic analysts, morality leaves a community through a larger door while it enters through a smaller one.”

Participant 2 mentioned the following about the lack of ethics,

“In terms of education, the new university professors incorrectly deliver the teachings and disregard ethics. This is one example of how sanctions are applied.

That’s why we see people who say, they work as much as they are paid.”

Participant 3 talked about damage to moral values, which was one of the codes of this subcategory,

“Moral principles have been lost. “Since there are penalties, I don't perform my job well," some people claim. Although I disagree with this adage, I do believe that those who fail to perform their duties are not motivated to teach. A person with a strong commitment to education will never take it easy just because they aren't getting paid for overtime. We must strive for moral principles; the more we pursue materialistic pursuits, the more we drift away from morality.”

According to Participant 12:

“Humans have a natural tendency to act however they choose and to defend their choices. People like that might ask, “Why don't I do it? What would come next? The disintegration of moral values and its impact on people's behavior were evident.”

Participant 8 stated that intense competition is the cause of damage to human values:

“As you can see, competition for resources rises when they are scarcer. Let's say you are taking 10 students to a picnic, and there is an A in the quantity of food needed for each student to be satisfied. If there are 10 students and 15 As, there won't be any rivalry over food, thus everything will be alright and there won't be any stress. The struggle for basic necessities will get more fierce if we only have 5 As for these 10 kids, and tension and conflict will be stoked so they can acquire enough and stay, which will diminish

human dignity and values.”

Participant 11 did not associate economic sanctions with damage to moral values. He considered the impact of proper moral education to be more important than sanctions.

“You see, people who have been taught moral principles will remain unwavering regardless of the consequences. Their lives will even be sacrificed. You cannot claim that all of these people are morally or spiritually educated, however, because their morals are not all on the same level.”

Participant 10 described damage to professional ethics as follows:

“In a sense, many moralities are called into question by economic constraints. One might say, for instance, “I used to get so much, now I get less, even though my experience has increased, even though I know more," after performing basic math. I don't have to pay for all the lessons because my income has decreased. Morality is thus called into question, and the institution is truly beset with issues in every way.”

Participant 5 talked about the existence of professional ethics in older people:

“The reason for the damage to professional ethics is that things have changed now. In the past, choosing a field of study was based on one's interest, but now, because it is not based on interest, the motivation for promotion has decreased.”

Participant 6 stated the damage to human dignity as a negative consequence of the sanctions:

“A sense of human dignity that comes from being happier and more driven makes teachers more enthusiastic, which in turn improves their performance and greatly aids them in teaching the students.”

Participant 7 complained about neglecting one's sense of human dignity:

“We can draw attention to the nonmonetary rewards. These nonmonetary incentives, in my opinion, can be very important. Maslow's hierarchy of needs states that meeting

one's needs at the top entails recognizing and honoring one's inherent dignity."

Participant 12 believed that the distorted role model is one of the negative consequences of economic sanctions:

"The pupils should be aware that Dr. Yalda is one of the rare individuals. Things worsen when students turn to their professor as a role model when they observe that he is not performing well and is not acting ethically. Sometimes, pupils who have not received the proper training believe they can succeed right away. In 2 days, they wish to accomplish what their professor has accomplished in 30 years. Thus, they will do a series of unethical things. I sometimes tell the students to be a person who makes an impact; I tell them that they should know what they want to do. I tell them to try to be 5% similar to their professors. However, most of them cannot become like their professors. This is because social capital has been distorted, and that conflict shows up out of somewhere by itself."

Reduction of the Genetic Resources of Intelligence and Genius

This subcategory was formed out of the following codes: damage to social intelligence (empathy, etc), damage to the average intelligence quotient (IQ) of a population, and damage to the genetic resources of intelligence.

Participant 9 commented:

"Our genetic resources for brilliance and intelligence will decline when the professors' educated children leave the country. In reality, intelligent people carry their genes with them when they leave the country, and if our genetic resources decline below a certain threshold, the outcome will be individuals who lack the gene for genius, have little knowledge, and are incapable of learning."

This Participant explained the impact of sanctions on social intelligence by defining social intelligence as follows:

"What is the state of our social intelligence? Is the state of social intelligence such that we can empathize with each other? Can we have empathy and sympathy for each other? Can we support and be kind to each other? These things represent social intelligence. Thus, the main element of social intelligence that we should measure is the social environment that makes people go towards these characteristics and traits. I think that the economic issues have worsened this situation."

Damage to Human Resources and Human Infrastructure

This subcategory was formed out of the following codes: difficulty in strengthening inner and inherent capabilities, weakness in conveying noble and valuable human concepts, damage to scientific human resources, negligence of human capital, and the necessity of increasing inner strength (reducing external dependence).

With regard to weakness in conveying noble and valuable human concepts, Participant 13 made the following statement:

"The children we raise are going to grow up to be physicians, professors, and managers. If we bring them up to believe that at all costs, life is all about earning money, becoming more prosperous, owning a larger home, a better

vehicle, and so forth, at the cost of receiving payment illegally or failing to treat a patient who is impoverished and allowing them to suffer. These are the things they will do. However, what if we teach our children that we are human, that we ought to be human, that our purpose is to help people, and so forth? Up until the end of his life, Dr. Yalda did not own a business. Dr. Gharib, who established contemporary pediatric medicine in this country, is another example. Observe the extent of his community service."

Participant 11 talked about the issue of damage to human resources (ie, human capital) as a result of economic sanctions as follows:

"our most important infrastructure is human capital. Therefore, human capital equips the workplace with machines. Even in some places, the machine was bought, but you can see that it has been left intact because there was no human capital. It was bought, but there was no one to use it."

According to Participant 4:

"Compared to faculty members who teach the fundamental medical sciences, many clinical medicine specialists could be less concerned about money. The latter are less financially well-off. Given that therapy is essentially costly, let's take note of the fact that the treatment industry truly uses a significant portion of our resources. As long as human resources are met, you can offer beneficial training by hosting a few sessions in basic training facilities, a skill lab that is well-equipped, and by looking after the students."

Participant 9 believed that for resilience in economic crises, it is necessary to strengthen internal and inherent capabilities, enhance internal power, and, as a result, reduce external dependence. She/he considered this as the empowerment of the organization's human resources and said:

"What does empowerment mean? It means the ability to recognize the situation and make the best decision at a specific moment. When we empower the personnel, it means that you have strengthened the power of decision-making in the moment so that you know your situation correctly and can make the right decision and implement it. Therefore, empowerment means making a timely and correct decision. If you want to create resilience in your organization, you need to know that this resilience is created by people who have already been empowered, which means that they can make the best decision at the moment."

Social Capital

We summarized all the negative consequences of the economic sanctions, which were organized into 3 subcategories, into one larger category, and called this new category "damage to social capital."

Participant 9 said the following about social capital:

"For an activity like medical education, the social capital infrastructure is crucial. We lack this social capital infrastructure and are losing it at an increasing rate every day. We don't know what social capital is, and we don't grasp this. Social capital is a crucial piece of infrastructure that poses a threat to medical education. Since I have to teach so much, some university professors will say, "How much money do they give me? The lessons I'm teaching now are far more than they merit. They say I get a lot of money, but

I only use it for commuting. I am not compensated for my lessons. This indicates that our social capital has diminished."

According to Participant 12:

"Payment systems and organizations influence employee behavior. In such a scenario, our social capital will be inappropriate since the social goals will surely be skewed. This is where the economics comes into play. The economics affects behavior and even beliefs. It's harvest time for someone who thinks he's been studying for twenty-four to twenty-five years. By the way, before taking any action, one always protects himself."

Discussion

This research aims to determine whether economic sanctions or economic crises can damage the relations of human resources specialized in medical education. The data that we collected for this purpose were extracted from interviews with 13 faculty members and staff involved in medical education. We identified damage to different dimensions of medical education, which could be summarized as social capital. Damage to social capital caused by the sanction was found to lead to impaired human communication.

One of the dimensions is damage to moral values and human dignity. Ethical teachings have their roots in 1500 BC. The body of principles of practical ethics is well visible as a part of the Persian literature (12). Professional ethics is the rule of correct behavior or practice in a profession. The medical profession is considered a noble profession, as doctors have a duty to follow ethics. The oldest law of medical ethics is 2000 years old and is known as the Hippocratic Oath (13). The concept of inherent personal dignity deserving intrinsic respect has been a long-standing argument among Western philosophers (14). Every medical decision entails ethical considerations that must be observed. Violation of moral rules or personal ethics may lead to adverse psychological effects such as moral injury or mental health problems (15). According to the Treaty of Lisbon approved by the European Union on December 13, 2007, ethics (common values that carry basic human rights) is 1 of the 6 values and responsibilities mentioned and the key to responsible research and innovation (16). In 2004, the United Nations Educational, Scientific and Cultural Organization (UNESCO) established the Ethics Education Program to support and strengthen ethics education in member countries (15). According to Jagsi and Lehmann, the effective application of these principles in medical student education requires systematic training. Moreover, the historical trajectory of research ethics indicates that the medical profession must be proactive in addressing the ethical dimensions of medical education (14). According to Singh, there is a wide range of different approaches to solving ethical problems, and one approach might be to determine the "facts" that might influence the decision (13). In medical education and training, ethics is also an issue. When it comes to equality, fairness, or justice, especially in the field of education, moral issues are raised in one way or another (17).

The United States Agency for International Development (USAID) proposed a term called "leadership ethics." According to USAID, an effective educational administrator

must professionally concentrate on educational quality improvement, consistently prioritize the learner's health, be objective, be impartial and avoid unwarranted favoritism, never accept a gift that jeopardizes their position, judge fairly and based on evidence, and treat others with respect (18). Ethics education should be tailored to students and the challenges that they will face in their future professional lives. Basic knowledge of ethical principles is not enough for professional challenges. Extensive ethical and legal education during and after medical school is critical to protecting patient rights, improving the quality of patient care, and maintaining the mental health of healthcare workers (15). Areas such as how employees behave at the workplace, interemployee relationships and organizational environmental actions have already received considerable scholarly attention. However, researchers have not yet paid due attention to the unethical behaviors of employees, such as conflict of interest, theft, irregularities in accounting, fraud, waste, abuse, and discrimination in organizations, and management of such behaviors in the changing conditions of society. Due to the diverse nature of individual unethical actions, their impact on organizational behavior is correspondingly varied. Despite theoretical recognition of the importance of employee behavior in organizational dynamics, empirical research on its long-term impact within evolving economic landscapes remains scarce (8).

The necessity of ethics in medicine and medical education is approved by all institutions and researchers. However, to comply with ethical principles, minimum economic standards must be met first, according to our findings. Brall et al cite the European health policymakers who state that ethics are very relevant in the daily decision-making of policymakers, but they lack ethical guidance regarding what to base their decisions on (19). As far as the relationship between ethics and economics is concerned, Jaffe and Tsimmerman maintain that either the violation of values occurs due to financial problems or the lack of ethics is a factor in the economic crisis. The degree of decline in trust is apparently closely related to the financial crisis in countries (20). Market volatility in the global economy is a fundamental reality that must be dealt with on a daily basis. Peaceful order is based on moral principles, and in the absence of order, chaos occurs. The unethical decisions that fueled the 2008 crisis demonstrated the human capacity for selfishness (21). The conventional expectation that economic actors will prioritize legal frameworks and property rights over ethical imperatives, guided by financial gain rather than virtuous conduct, constitutes a critical moral lacuna. This orientation exacerbates widespread inequality, financial instability, and environmental crises. The internalizing of purely economic values can cultivate selfishness and opportunism, potentially eroding empathy and solidarity (22). Jaffe and Tsimmerman hold that if the occurrence of a crisis was related to economic issues, conventional wisdom says that ethical behavior should decline during economic and financial crises. However, studies on managers and employees in the United States have shown that the financial crisis of 2008-2009 did not lead to an increase in unethical behavior. The possible reason for this reinforcement may be that su-

pervisors and managers talk more convincingly about ethical behavior or other ethics-related issues when they are concerned about the welfare of the company or even its survival (20). Managers should, therefore, focus more intently on preempting unethical employee conduct and its ramifications for organizational ethical standards. Political and health crises disrupt the functioning of society and lead to aggravation of the economic crisis. The results of Potocan and Nedelko's research showed that the unethical behavior of employees during the crisis was significantly less acceptable than before the crisis. The disparate nature of unethical individual actions consequently produces varied effects on organizational behavior (8). According to DeSousa, government regulation is necessary when the collective moral compass of a society is out of order (21).

Our participants highlighted the factor of human capital and intelligence as one of the vulnerable points negatively affected by sanctions. University is an area of opportunity, and seizing these opportunities is what makes universities different. This is where having efficient human resources becomes a competitive advantage. In this context, Chitsaz et al believe that opportunities do exist in the environment and are waiting to be discovered, and those who have superior human capital can discover these opportunities (23). Human capital theory, which was employed in the 1960s to analyze immigration, is very suitable for the cultivated human force from the point of view of some analysts (24). Valero and van Reenen stress the importance of human resources in education and describe the ways through which universities may affect growth. These encompass an increased supply of human capital, greater innovating capacity, stronger valuing of democratic principles, and more significant demand generation. Obviously, universities are the generators of human capital (25). In 2009, some social commentators linked brain drain to a phenomenon termed the "genetic impoverishment of the elite," arguing that the emigration of highly skilled individuals has long-term consequences for a nation's intellectual capital (26). This perspective also suggests a connection between increased brain drain and declining national IQ scores (27). Mohammadi elaborates on this point, stating that societal development and progress depend heavily on the contributions of its intelligent and elite members. When societal conditions compel these individuals to emigrate, the immediate impact is significant. However, Mohammadi contends that the long-term effect is even more concerning, as it depletes the nation's "genetic reserve," disrupting the intergenerational transmission of high intellectual capacity. The logical consequence, according to this argument, is a gradual decline in the average IQ of subsequent generations (28).

Social capital was the general category obtained in this research. According to Kenton et al, social capital represents the beneficial product of human interaction, residing not within individuals but in the latent potential of their social network connections. They propose that it accounts for the organizational success derived from personal relationships and networks both internally and externally (29). In a related vein, Levdokymova et al identify social networks, trust, and social norms as the foundational elements of social capital, a significant asset for generating organizational

value. Any attempt to quantify economic phenomena is inappropriate (30), or threats related to the community, which is very important in the face of extreme events (31). The 2008-2009 financial crisis highlighted the protective role of social capital; companies with high corporate social responsibility (CSR) intensity, a proxy for social capital, saw stock returns that were 4 to 7% higher than those with low social capital (32). Rözer and Volker's study of European social capital (social trust in formal and informal networks) during the economic crisis (33) reveals a general negative impact, albeit with counteracting mechanisms such as heightened social solidarity and left-wing political mobilization. Hörisch and Obert (34) propose that economic crises serve as natural experiments for investigating social capital formation, particularly in terms of volunteering, networking, and trust-building. The theoretical literature on social capital and economic development underscores their mutual influence. Furthermore, Lins et al's findings (31) indicate that during the crisis, firms with robust CSR outperformed those with low social responsibility in terms of sales growth and employee productivity. During the Puerto Rico crisis, Delilah Roque et al found that recovery efforts were facilitated and resilience amplified by social capital's 3 key dimensions—bonding, bridging, and linking—which fostered shared values, expanded networks, enabled new partnerships, and cultivated a collective drive to strengthen communities against future environmental disturbances (35). The results of these studies show the importance of appropriate human resources and human infrastructure, as well as factors such as intelligence and genius. These factors are classified under the umbrella term of social capital in medical education. Appropriate human communication is the key to resistance and even growth in economic crises in medical education. Maslow believes that humans strive to satisfy their needs in order and step by step because they are motivated by the next higher-level needs. We start with our physiological needs because they underlie everything else. According to Maslow's theory, these must be met before moving on to the next level of needs. Only when these requirements are met can we turn our attention to our desire for higher levels (36). Accordingly, in economic crises, especially in long-term crises that are accompanied by damage to the financial infrastructure of individuals and organizations, neglecting to meet the basic needs of people in the organization prevents them from taking steps toward the higher levels of Maslow's hierarchy. We place a strong emphasis on having ethical guidance, educating the organization's employees about it, taking it into account when evaluating individuals, and adhering to it in order to achieve human values and social capital beyond merely satisfying financial needs.

Conclusion

The results of this qualitative research showed that the human forces working in fields related to medical sciences under the conditions of sanctions or economic crisis would suffer serious consequences in terms of human and moral values, genetic resources of intelligence and genius, and human resources or human capital. We describe this condi-

tion as damage to social capital. We recommend the development of a code of ethics and training of human resources to teach them the importance of social capital to overcome crises.

Strengths and Weaknesses

A strength of this study was the diversity of participants, which increased the trustworthiness of the data. However, what we consider to be a weakness of our work was that, despite efforts to establish effective communication, some participants seemed reluctant to fully express their views in response to some of the questions. It seems that conducting a quantitative study on a larger number of faculty members could help overcome this shortcoming due to the complete anonymity of the participants and complement the results of this research.

Authors' Contributions

SH.Y. conceived and designed the study and analyzed the data. M.M.P. drafted the manuscript and critically revised it for intellectual content. S.B. contributed significantly to data analysis and interpretation. P.A. contributed significantly to data collection and interpretation and led the manuscript drafting. All authors read and approved the final manuscript.

Ethical Considerations

This study was approved by the Ethics Committee of the School of Medical Education and Learning Technologies, Shahid Beheshti University of Medical Sciences (IR.SBMU.SME.REC.1401.094). Participants in this qualitative study were informed of their right to decline participation.

Acknowledgment

The authors are grateful to all the participants in this research who helped us with their careful answers.

Conflict of Interests

The authors declare that they have no competing interests.

References

- Raisian M. The importance and necessity of entrepreneurship training in economic sanctions. The first comprehensive international conference on Iranian management, Tehran, 2014.
- Rasoulizadeh E, Sung J. Determinants of the intention of Iranian people to accept the changes of social welfare under the imposed sanctions. WSPS. 2021;5(1):133-156.
- Blessinger P, Sengupta E, Meri-Yilan S. How students and faculty can build their social capital. Tweet. 18 March 2023.
- Demir E. The role of social capital for teacher professional learning and student achievement: A systematic literature review. Educ Res Rev. 2021;33.
- Eriksson M, Emmelin M. What constitutes a health-enabling neighborhood? A grounded theory situational analysis addressing the significance of social capital and gender. Soc Sci Med. 2013 Nov;97:112-23.
- Olcott G, Oliver N. Social Capital, Sense-Making and Recovery from Disaster: Japanese Companies and the March 2011 Earthquake. Calif Manag Rev. 2014;56(2):5-22.
- Fallah Hosseinabadi, F. Sarbayan R. Hosni Khalq, A. Explaining the concept of social capital and its functions. Tenth Congress of the pioneers of progress, Tehran, 2015.
- Potocan V, Nedelko Z. The Behavior of Organization in Economic Crisis: Integration, Interpretation, and Research Development. J Bus Ethics. 2021;174(2):1-19.
- Moghaddam-Tabrizi F, Najjarzadeh M, Mokhtari L. The story of staying out of normal routine life in adolescent mothers in marginal areas in Urmia through the Lenz of conventional content analysis approach. Midwifery. 2024 Oct;137:104108.
- Nyimbili F, Nyimbili L. Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies. Br J Multidiscip Adv Stud. 2024;5(1):90-99.
- Ebrahimipour F, Khabaz Mafinejad M. Guide for reporting a qualitative study. Iran J Med Sci. 2022;22:156-157.
- Farhoud D. A review of the history of ethics along with the compilation of various fields of ethics. Ethics Inf Technol. 2008;2(2-1):1-6.
- Singh A. Ethics for medical educators: an overview and fallacies." Indian J Psychol Med. 2010;32(2):83-6.
- Jagsi R, Lehmann L. The ethics of medical education. BMJ. 2004;329(7461):332-4.
- Faihs L, Neumann-Opitz C, Kainberger F, Druml C. Ethics teaching in medical school: the perception of medical students, Wien Klin Wochenschr. 2022;22:1-8.
- Heshmati AMA. Responsible governance of research and innovation in universities. Iranian Journal of Social Studies. 2017;12(2):28-52.
- Ellis E. The Ethics of Economic Sanctions: Why Just War Theory is Not the Answer. Res Publica. 2021;27:409-426.
- USAID. Education Leadership and Management Training Manual for FORcommunity School head teachers. Ministry of Education, Science, Vocational Training and Early Education/Time to Learn; 2013, First published .https://pdf.usaid.gov/pdf_docs/PA00MWH1.pdf, 2013.
- Brall C, Schröder-Bäck P, Porz R, Tahzib F, Brand H. Ethics, health policy-making and the economic crisis: a qualitative interview study with European policy-makers. Int J Equity Health. 2019;18:144.
- Jaffe E, Tsimmerman A. Do Business Ethics Worsen during Economic Crisis? A Study of Russian Attitudes. JABE. 2011;4:1.
- DeSousa E. The Ethical Dilemmas behind the 2008 Global Financial Crisis." Academic Festival, Event. Accounting & Finance, Honors student, 2020. Available from: https://digitalcommons.sacredheart.edu/acadfest/2020/all/2, 2020.
- Annett A. Restoring Ethics to Economics Modern economics should return to its roots. International Monetary Fund (IMF), 2018, Available from: https://www.imf.org/en/Publications/fandd/issues/2018/03/point2, 2018.
- Chitsaz E, Tajpour M, Hosseini E, Khorram H, Zorrieh S. The Effect of Human and Social Capital on Entrepreneurial Activities: A Case Study of Iran and Implications. Entrep Sustain Issues (discontin.). 2019;6(3):1393-1403.
- Ismailzadeh A, Zakersalehi G. Investigating the migration of scientific elites in Iran. Strategic Studies on Youth and Sports. 2013;13(26).
- Valero A, Van Reenen J. The Economic Impact of Universities: Evidence from Across the Globe, Economics of Education Review. Econ Educ Rev. 2018;68:53-68.
- Comprehensive Portal of Humanities, Declining IQ: The Effects of Brain Drain on Iran's Scientific Position in the World, Iranian Economy Year 12: Issue 133, 2009. Available from: https://ensani.ir/file/download/article/20120326153837-3021-1031.pdf
- Yazdani SH. Elite Migration and Its Impact on IQ. Asr Iran News Analytical Site, 2009. Available from: https://www.asriran.com/fa/news/95966/
- Mohammadi J. Alarm bell for Iran's future: The country's genetic reserve is being depleted of high IQs., 2019. Available from: https://www.asriran.com/fa/news/87290/ The country's genetic reserve is being depleted of high IQs
- Kenton W, James M, Perez Y. What Is Social Capital? Definition, Types, and Examples. Investopedia, 2022. Available from: https://www.investopedia.com/terms/s/socialcapital.asp
- Ievdokymova V, Lehenchuka S, Zakharova D, Andrusivb U, Usatenkoc O, Kovalenkod L. Social capital measurement based on "The value explorer" method. Manag Sci Lett. 2020;10:1161-1168.
- Makridis C, Wu C. How social capital helps communities weather the COVID-19 pandemic. PLoS One. 2021;16(1):e0245135.
- Lins KV, Servaes H, Tamayo A. Social capital, trust, and firm performance: The value of corporate social responsibility during the

- financial crisis. *J Financ Econ*. 2017;72(4).
33. Jesper Rözer H, Volker B. Economic crisis and social capital in European societies: the role of politics in understanding short-term changes in social capital. *Eur Soc*. 2021;23:2:195-231.
34. Hörisch F, Obert P. Social capital and the impact of the recent economic crisis: Comparing the effects of economic and fiscal policy developments. *Soc Policy Adm*. 2020;54(7):1141-1159.
35. Delilah Roque A, Pijawka D, Wutich A. The role of social capital in resiliency: Disaster recovery in Puerto Rico. *RHCPP*. 2020;11(2):204-235.
36. Showkat AD, Sakthivel P. Maslow's Hierarchy of Needs Is still Relevant in the 21st Century. *Journal of Learning and Educational Policy*. 2022;2(5).