

Unveiling the Bonds of Unity: A Conceptual and Methodological Framework for the Index of National Cohesion in Saudi Society

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Abstract

The present study aims to construct a valid and reliable measure that provides indicators for assessing the degree of national cohesion within Saudi society, which is considered one of the most important societal values. Data were randomly collected from 1,020 participants using the third edition of the National Cohesion Index, developed by the King Abdulaziz Center for Cultural Communication, comprising 68 items. Exploratory Factor Analysis (EFA) was conducted, revealing that 56 items in the Cohesion Index were grouped into four main factors: 17 items on two political factors, 21 items on five sociocultural factors, 13 items on two economic factors, and 5 items on one social security factor. In conclusion, the National Cohesion Index is a valid and reliable index that can be used in Saudi society.

Keywords: National Cohesion, Index, Validity, Reliability, Saudi Arabia

كشف روابط الوحدة: إطار مفاهيمي ومنهجي لمؤشر التلاحم الوطني في المجتمع السعودي

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ملخص البحث

تهدف هذه الدراسة إلى بناء مقياس يتمتع بالصدق والثبات، ويوفر مؤشرات لقياس درجة التلاحم الوطني داخل المجتمع السعودي، والذي يُعد من أهم القيم المجتمعية. وقد تم جمع البيانات من خلال عينة عشوائية تتكون من ١٠٢٠ مشاركاً باستخدام الإصدار الثالث من مؤشر التلاحم الوطني الذي طوّره مركز الملك عبد العزيز للتواصل الحضاري، ويتكوّن من ٦٨ فقرة. وتم إجراء التحليل العاملي الاستكشافي (EFA)، وكشف التحليل عن أن ٥٦ فقرة من فقرات المؤشر تجمّعت ضمن أربعة عوامل رئيسية: ١٧ فقرة على عاملين سياسيين، و ٢١ فقرة على خمسة عوامل اجتماعية ثقافية، و ١٣ فقرة على عاملين اقتصاديين، و ٥ فقرات على عامل واحد متعلق بالأمن الاجتماعي. وبناءً على النتائج، يُعتبر مؤشر التلاحم الوطني مقياساً يتمتع بالصدق والثبات، ويمكن استخدامه في المجتمع السعودي.

الكلمات المفتاحية: التلاحم الوطني - المؤشر - الصدق - الثبات - المملكة العربية السعودية.

Introduction

Social cohesion has garnered significant attention from numerous international organizations as a key factor in fostering development and unity among countries and their populations. According to the Organization for Economic Cooperation and Development (OECD, 2023), social cohesion is both a desired objective and a mechanism for achieving comprehensive development. The United Nations has also emphasized this matter, actively contributing to efforts to enhance social cohesion within Arab nations (Harb, 2017). The United Nations Development Program (UNDP, 2021) highlights that social cohesion plays a pivotal role in fostering solidarity across diverse societal factions, actively working to advance these principles globally.

Within this framework, Saudi Arabia is committed to strengthening social cohesion, demonstrated by the establishment of organizations such as the King Abdulaziz Center for National Dialogue in 2003 and the Family

Affairs Council in 2016. Additionally, the Saudi Vision 2030 encompassed initiatives such as the Human Capabilities Development Program and the Quality of Life program, which support social cohesion. Research on identity and belonging underscore their interconnection and significance for social cohesion and well-being, particularly for migrants and minority groups (Jensen, 2020; Näre, 2017). Belonging encompasses both emotional attachment and social practices (Näre, 2017). Factors like social, cultural, and material components, including shared symbols and experiences, shape identity and belonging (Filstad, 2022). While shared identities can promote social cohesion through increased trust and solidarity (Holtug, 2017), the relationship between identity, belonging, and cohesion remains complex and context-dependent (Goodman, 2022).

The conventional definition of social cohesion refers to the interconnectedness among

individuals within a society, encompassing their affiliation, capacity to integrate and engage in diverse activities, self-acceptance, acceptance of others, and belief in the significance and function of societal institutions (Saleh, 2017). In this study, social cohesion is operationally defined as the state of a society that is built on strong connections between its members through active social processes, which include belonging, solidarity, security, respect for diversity, justice, participation in society, and acceptance of others, to foster development and improve quality of life for all members.

Based on Saleh's (2017) definition, the political component of social cohesion encompasses the active engagement of individuals and their trust in public institutions. It involves citizens' actions and beliefs about their roles within the political sphere and their interactions with the state. This includes involvement in political decision-making through activities such as voting, participating in elections, showing interest in political matters, and articulating their viewpoints. The

study also reveals that social cohesion significantly impacts various development indicators. Additionally, Fan et al. (2022) suggest that increasing trust in government institutions can enhance social cohesion. Huang (2015) similarly identifies trust in government as a core indicator of social cohesion.

The economic aspect of social cohesion pertains to individuals' perceptions of the state's efforts to provide equitable economic opportunities and promote national economic growth aligned with collective welfare. This includes attitudes toward the financial and commercial institutions within the nation that work to reduce unemployment, ensure equitable opportunities, and contribute to the domestic economy's development (Sommer, 2019). Research by Zebun (2016) highlights the importance of cultural and economic factors in achieving social cohesion. Furthermore, Sommer (2019) reports a positive association between social cohesion and economic growth, noting that income inequality poses a risk to

social cohesion (Nadeem et al., 2023). Social cohesion may be strengthened by job creation, education, and reducing income inequality and resource disparities (Sommer, 2019).

Social and cultural aspects represent a key dimension of social cohesion. Recently, neighborhood and societal diversity have become important considerations for social cohesion (McKenna et al., 2018). For instance, a study in Italy found that students' attitudes toward multiculturalism revealed low levels of perceived social cohesion (Pagani, 2014). According to Herwitz (2018), social cohesion emphasizes human rights and social justice agendas. Strong social cohesion requires social justice, making it essential to address any issues related to social justice (Le Roux et al., 2018). Durkheim (2014) proposed two types of solidarity, which are mechanical solidarity and organic solidarity. Share of conscience is known as mechanical solidarity and it is a kind of social cohesion. Solidarity processes are associated with cohesion (Afanasieva et al., 2021). Research

by Prabhleen Kaur (2023) shows a positive correlation between cohesion and life satisfaction, while social networks are found to be positively related to social cohesion (Boessen et al., 2014). Belonging is also a significant factor in social cohesion, with a positive correlation between social cohesion and belonging (Cramm & Nieboer, 2015; Breedvelt, 2022).

Social protection programs are also related to social cohesion (Burchi et al., 2022). Koehler (2021) suggests that programs and services designed to protect individuals can enhance social cohesion by reducing poverty and promoting social inclusion. For example, Cash for Work programs in Ethiopia and Yemen increased social inclusion by involving participants in program design (Andrews & Kryeziu, 2013). Additionally, social programs targeting street children build social cohesion among these children (Ongowo, 2022).

The primary objective of this study is to establish the methodological and theoretical foundations of the National Cohesion Index "Fourth

Edition". This objective will be achieved by constructing a valid and reliable measure to assess the degree of national cohesion within Saudi society. The previous three editions of the National Cohesion Index failed to fully capture the four main aspects of national cohesion outlined in the introduction and lacked a rigorous psychometric approach to validate the index structure.

Method

This study employed a national survey with a random sample from each of the 13 administrative regions in Saudi Arabia, utilizing a cross-sectional design. This approach is appropriate for gathering objective data about a population and social issues within a specific society. To represent the Saudi population accurately, the study includes Saudi citizens aged 18 and older from urban (cities), peri-urban (governorates), and rural (centers) areas across all 13 administrative regions.

The Sample and Sampling Method

The research team aimed to acquire a sample representative of the Saudi community. To achieve this, the study utilized a random sampling methodology, focusing on understanding the attitudes and viewpoints of Saudi society regarding the National Cohesion Index and its various domains and sub-domains. The study employed a geographical sampling method, a type of cluster sampling technique.

In the first phase, the 13 administrative regions in Saudi Arabia were identified as clusters. In this phase, the capital city of each region was selected for data collection. The second phase involved randomly selecting 26 governorates, while the third phase included the selection of 26 centers (villages). Based on these criteria, each region contributed one city (regional capital), two governorates, and two centers (villages) to the data collection sites.

Each selected city and governorate was further divided into smaller units, such as communities or

residential squares. The required sample size was then evenly distributed across these communities or squares. Subsequently, researchers used a random allocation technique to select a representative sample of individuals from each area. Neighborhood selection was conducted systematically by dividing cities and governorates into square units using geographical maps. This approach ensured fair distribution across various orientations, including east, west, south, north, and central areas.

The sampling process resulted in a sample of 1,020 participants (Table 1), of whom 43.2% identified as female. The age group with the highest representation was individuals aged 18 to 39, constituting 59.9% of the overall sample. Whereas participants aged 60 and above accounted for only 3.9%. The majority of participants (48.1%) held a bachelor's degree, while a small percentage (2.1%) had only completed elementary school. Notably, participants from Makkah comprised 22.2% of the total sample, while those from Tabuk

made up only 2.5%. Most participants (53.4%) lived in urban areas, with a significantly smaller proportion residing in rural areas (20.2%).

Instrument

The Saudi National Cohesion Index was initially formulated by the King Abdulaziz Centre for National Dialogue, with its first and second iterations introduced in 2018 and 2019, respectively. In 2021, the index underwent significant refinement in collaboration with specialists from the United Nations Development Programme, resulting in an enhanced third version. This study seeks to further reconstruct and improve the psychometric properties of the third version, resulting in the development of the fourth version.

The index is organized into four main domains:

1 Social and Cultural Dimension (5 sub-dimensions):

- Diversity Acceptance – 5 items
- Social Justice – 6 items
- Social Belonging – 6 items

- Social Solidarity – 6 items
- Achievement Appreciation – 6 items
- 2.Economic Dimension (2 sub-dimensions):
 - Economic Growth – 8 items
 - Economic Justice – 9 items
- 3.Political Dimension (2 sub-dimensions):
 - Political Participation – 7 items
 - Trust in Government Institutions – 10 items.
- 4.Social Security Dimension – 5 items.

The instrument consists of a total of 68 items and a five-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree").

Statistical Analysis

Data analysis was conducted using the "psych" package in R version 4.2.2. Exploratory Factor Analysis (EFA) was performed to validate the Cohesion Index. As the index is a 5-point Likert scale, the data was treated as ordinal, and a polychoric correlation matrix was generated for use in the EFA (García-Santillán,

2021). Before conducting the EFA, two essential conditions were verified (Mertler et al., 2021):

1.Adequate Sample Size: Sample size adequacy was assessed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. This measure compares observed correlation coefficients with partial correlation coefficients. A sample size is considered sufficient when the KMO score exceeds the threshold of 0.50.

2.Statistically Significant Correlation: Bartlett's test of sphericity was conducted to assess the presence of statistically significant correlations among variables, a requirement for factor analysis. This test evaluates whether the correlation matrix significantly differs from an identity matrix, where off-diagonal elements are zero and diagonal elements are one. A p-value below 0.05 confirms statistically significant correlations.

Following these checks, the data was analyzed using Kaiser's varimax rotation to enable orthogonal estimation of the index components through principal

component analysis (Mertler et al., 2021). Varimax rotation was chosen to evaluate factor independence and facilitate meaningful variable categorization. The following criteria were applied to determine the number of factors in the cohesion index:

- Kaiser Criterion: Retaining factors with eigenvalues ≥ 1 .
- Item's Factor Loading: Factors with item loadings of ≥ 0.36 , with only the highest loading retained if an item loaded on multiple factors (Hair et al., 2010).
- Parallel Analysis: Horn's (1965) parallel analysis compared eigenvalues from the actual data with eigenvalues from randomly generated data, retaining factors where the real data's eigenvalues exceeded the random data's eigenvalues.
- Alignment with Theoretical Framework: Factor alignment and item loadings were examined to ensure consistency with the theoretical and conceptual framework of cohesion.

Result:

Based on the application of KMO and Bartlett's tests, the results (Table 2) show that the KMO value for the Cohesion Index is 0.947, which surpasses the unacceptable threshold (below 0.50) and exceeds the desired threshold in the social sciences (0.70). This demonstrates the adequacy of the sample size utilized in the study. For Bartlett's test, the results yield a statistically significant level ($p < 0.001$), which signifies a statistically significant correlation among all variables, thereby providing sufficient grounds for applying EFA.

Table 1. Sample Characteristics.

	Variable	N	%
Gender	Male	579	56.80
	Female	441	43.20
Age	18 to less than 30	404	39.60
	30 to less than 40	298	29.20
	40 to less than 50	185	18.10
	50 to less than 60	93	9.10
	60 years or older	40	3.90
Educational Level	Read and write	29	2.90
	Elementary school	21	2.10
	Middle school	41	4.00
	High school	244	23.90
	Diploma	141	13.80
	Bachelor's Degree	491	48.10
	Graduate Degree	53	5.20
Administrative Classification	Rural Cities	206	20.20
	Peri-urban Cities	269	26.40
	Urban Cities	545	53.40

Table 2. KMO and Bartlett's Test of Cohesion Index.

Index	KMO	Bartlett's Test	
			p
Cohesion Index	0.947	35966.08	($p < 0.001$),

Based on the results of the two previous tests, EFA was employed to assess the validity of the Cohesion Index. EFA was conducted on 68 Cohesion Index items, initially revealing the presence of 11 factors, each with eigenvalues greater than 1. Parallel analysis results also supported retaining these eleven factors. However, upon examining the item loadings on the eleventh factor, it was found that the loadings were low ($< .36$) and overlapped with other factors. Consequently, this

factor was removed, and the analysis was limited to ten factors. Additionally, 12 items with low loadings ($< .36$) and overlap with other factors were excluded. Based on the Scree Plot and Parallel Analysis (Figure 1), ten factors with 56 items were retained for the Cohesion Index. These factors are considered meaningful and capture the underlying dimensions of cohesion. The EFA was re-applied to the ten retained factors and 56 items.

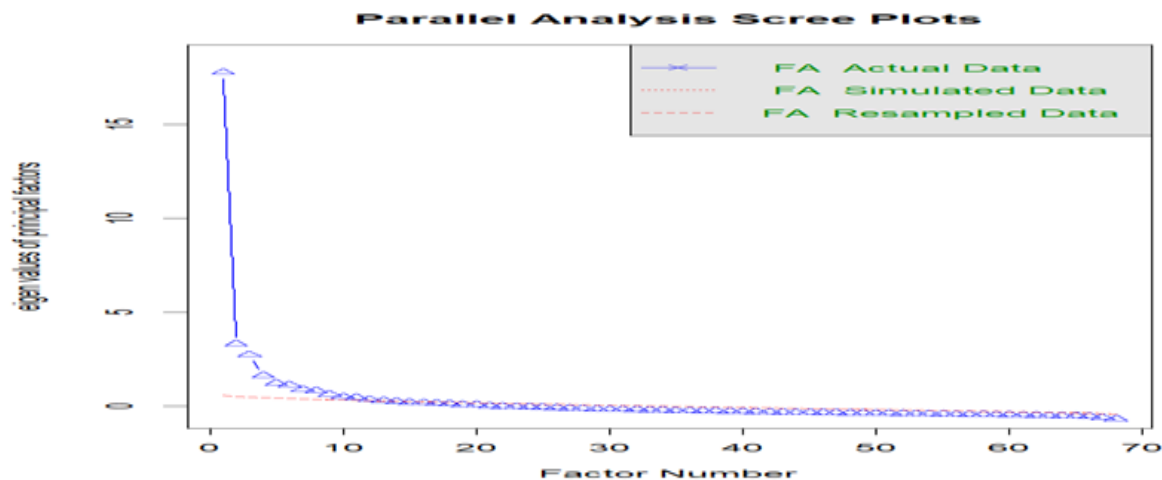


Figure 1. The results of the Scree Plot and Parallel Analysis for the dimensions of the Cohesion Index

Further stages of EFA were applied to the remaining items, with any items not loading significantly at 0.36 or above—or those loaded on multiple factors simultaneously—being removed. This process resulted in 56 items that were strongly loaded onto 10 distinct factors. As anticipated, EFA revealed that these 56 items of the Cohesion Index loaded onto ten

main factors, each with an eigenvalue greater than 1. The total explained variance accounted for 60.71% of the factor matrix's overall variance, exceeding the required threshold of 50%. Upon examining the rotated factor loading coefficients, all items met the study's criterion of a factor loading of 0.36 or higher. Table 3 presents the factor matrix of the 56 items, showing their loadings on the ten main extracted factors, along with eigenvalues, total explained variance, and item commonalities.

Table 3. EFA Results for the Cohesion Index.

Name	Item	Factors										Commonalities
		1	2	3	4	5	6	7	8	9	10	
TG.3	I trust the Regional Councils	0.76	-0.09	-0.01	0.04	0.05	0.29	-0.12	0.02	0.01	-0.05	0.65
TG.4	I trust the Provincial Councils	0.76	0.05	-0.16	0.03	-0.04	0.13	-0.07	0.13	0.04	0.00	0.66
TG.9	I trust that government entities provide suitable opportunities for citizens to express their opinions (referring to receiving issues, feedback, and suggestions)	0.72	-0.13	0.01	-0.09	-0.05	-0.02	0.05	-0.03	0.01	0.02	0.67
TG.2	I trust the overall performance of government entities (referring to ministries, authorities, and government institutions)	0.71	-0.02	-0.03	-0.03	0.03	-0.17	-0.02	-0.03	-0.01	0.00	0.62
TG.10	I am confident that government entities respond to the opinions of citizens (referring to receiving issues, feedback, and suggestions)	0.70	-0.01	0.03	0.01	-0.15	-0.06	0.01	0.09	-0.02	-0.03	0.65
TG.1	I trust that the law is applied equally among Saudi citizens in all government agencies	0.66	0.09	-0.06	-0.06	0.04	0.22	-0.09	-0.03	-0.03	0.10	0.59
TG.8	I trust that government entities provide	0.67	0.09	-0.07	-0.06	-0.10	0.19	-0.05	0.00	0.04	-0.07	0.55

Name	Item	Factors										Commonalities
		1	2	3	4	5	6	7	8	9	10	
	transparent information to citizens through their websites (referring to ministries, authorities, and government institutions)											
TG.5	I trust the Shura Council	0.64	0.13	-0.06	0.00	0.04	-0.01	-0.01	-0.12	0.05	-0.13	0.55
TG.6	I trust the judiciary	0.62	-0.09	0.09	-0.03	-0.01	-0.04	0.09	-0.04	0.01	-0.04	0.49
TG.7	I trust the police	0.60	-0.01	0.06	0.03	0.10	-0.09	0.00	-0.09	0.08	-0.05	0.46
EJ.2	In general, people receive a fair salary considering the job they perform	-0.02	0.75	-0.02	0.03	-0.07	0.18	0.00	0.02	0.03	-0.07	0.71
EJ.4	In general, employment in the public sector is based on merit rather than personal connections	0.08	0.73	0.11	0.04	-0.03	0.09	-0.07	-0.02	0.04	-0.03	0.69
EJ.1	In general, people obtain jobs that align with their qualifications and experiences	-0.03	0.73	0.02	-0.01	0.21	-0.07	0.02	0.21	-0.01	0.21	0.69
EJ.5	When jobs are scarce, priority is given to Saudi citizens by employers	-0.04	0.60	0.12	-0.10	0.23	-0.29	0.00	0.08	-0.10	0.23	0.53
EJ.3	In general, women are given equal employment opportunities as men	-0.09	0.55	-0.11	0.09	0.28	-0.05	0.05	0.10	0.09	0.28	0.44
EJ.8	Government entities strive to reduce economic disparities among citizens	-0.04	0.55	0.01	-0.10	0.16	-0.07	-0.01	0.07	-0.10	0.16	0.55
EJ.6	There is fairness in the distribution of national income among citizens	0.05	0.51	0.11	0.12	0.03	-0.10	-0.01	0.09	0.12	0.03	0.49
EJ.7	I have opportunities for training or professional development to enhance my career	0.09	0.43	0.07	0.11	0.03	0.02	-0.03	0.09	0.11	0.03	0.44
PP.4	I feel comfortable discussing public affairs with individuals outside my family (referring to government programs and policies)	.11	.09	0.83	-0.07	0.19	-0.07	0.06	-0.07	-0.07	0.19	0.74
PP.1	I discuss public affairs with individuals outside my family (referring to government programs and policies)	-0.07	-0.05	0.81	-0.14	0.04	-0.07	0.00	-0.14	0.04	-0.07	0.72
PP.5	I can share my opinions, even if they differ, through various available channels	0.03	-0.10	0.78	0.09	-0.07	0.35	0.10	0.09	-0.07	0.30	0.68
PP.2	I contact a government institution when I have feedback or observations regarding public affairs (referring to government programs and policies)	0.16	0.07	0.75	-0.01	-0.12	0.08	0.04	-0.01	-0.12	0.08	0.63

Name	Item	Factors										Commonalities
		1	2	3	4	5	6	7	8	9	10	
PP.3	I am informed about current public affairs in the Kingdom through various media outlets (referring to government programs and policies)	0.05	0.05	0.73	0.05	0.09	0.05	0.01	0.05	0.09	0.05	0.63
PP.7	I visit websites or social media accounts of government and nongovernmental entities to obtain information (referring to government entities such as ministries, authorities, and government institutions)	-0.07	-0.05	0.68	0.10	-0.11	0.16	0.01	0.10	-0.11	0.16	0.53
PP.6	I can comfortably express my opinion if a government entity asks for my input on public affairs (referring to government programs and policies)	0.03	-0.10	0.59	0.08	-0.03	0.07	0.04	0.08	-0.03	0.07	0.54
DA.4	I do not feel bothered when I have neighbors from a country other than Saudi Arabia	-0.02	-0.01	0.01	0.79	0.01	0.18	0.18	0.18	0.18	0.18	0.69
DA.2	I do not feel bothered when I have neighbors from a different economic class than mine	0.00	0.00	0.06	0.77	0.05	-0.07	-0.06	-0.07	-0.06	-0.07	0.69
DA.3	I do not feel bothered when I have neighbors from a different region within Saudi Arabia than mine	-0.01	0.02	-0.14	0.73	-0.02	-0.06	-0.08	-0.06	-0.08	-0.06	0.66
DA.1	I do not feel bothered when I have neighbors from different religious denominations than mine	0.01	0.00	-0.01	0.65	0.08	-0.09	0.29	-0.09	0.29	-0.09	0.53
DA.5	I do not feel bothered when I have neighbors from a different tribe than mine	0.05	0.01	0.11	0.65	0.18	0.06	-0.08	0.06	-0.08	0.06	0.58
SJ.4	My family's housing needs are being met	-0.02	0.01	0.06	-0.12	0.72	0.07	0.16	0.07	0.16	0.07	0.72
SJ.2	My family's healthcare needs are being met	-0.05	0.03	0.22	0.15	0.63	0.10	-0.02	0.10	-0.02	0.10	0.54
SJ.3	My family's educational needs are being met	0.09	-0.01	0.01	0.17	0.63	-0.13	0.28	-0.13	0.28	-0.13	0.58
SJ.1	I have equal opportunities to access suitable housing compared to other Saudi citizens	-0.07	-0.07	0.06	-0.12	0.61	0.08	0.12	0.08	0.12	0.08	0.56
SJ.5	When my family and I face difficult circumstances, I trust that relevant public institutions will provide us with sufficient social support		0.03	-0.14		0.46						0.53
EG.3	I believe that the relevant authorities	0.12	0.26	0.12	0.26	0.12	0.73	0.07	0.05	0.01	0.01	0.69

Name	Item	Factors										Commonalities
		1	2	3	4	5	6	7	8	9	10	
	support productive families to contribute to the development of the Saudi economy											
EG.2	I believe that the relevant authorities are involved in developing economic cities to contribute to the development of the Saudi economy	0.09	0.37	0.09	0.37	0.09	0.71	0.03	0.03	0.05	0.05	0.66
EG.4	I believe that the relevant authorities support small- and medium-sized enterprises to contribute to the development of the Saudi economy	0.01	-0.13	0.01	-0.13	0.01	0.66	0.03	0.06	-0.14	-0.02	0.65
EG.5	I believe that the relevant authorities are working on increasing non-oil revenues, such as the tourism sector and other sectors, to contribute to the development of the Saudi economy	-0.04	-0.18	-0.04	-0.18	-0.04	0.65	0.03	-0.10	0.12	-0.16	0.59
EG.1	I believe in the importance of Saudization policy in developing the Saudi economy	0.04	-0.05	0.04	-0.05	0.04	0.57	-0.03	-0.06	-0.19	-0.08	0.47
SSE.2	I feel that my possessions are secure	-0.03	0.01	-0.03	0.01	-0.03	0.01	0.76	0.02	0.03	-0.05	0.67
SSE.1	I feel that my physical safety and security are assured	-0.02	0.04	-0.02	0.04	-0.02	0.04	0.69	0.01	0.04	-0.02	0.61
SSE.3	I trust that government entities promote moderation and centrism	-0.01	0.01	-0.01	0.01	-0.01	0.01	0.65	-0.08	0.06	0.11	0.61
SSE.4	I trust that government entities effectively address both forms of extremism in Saudi society	0.04	-0.01	0.04	-0.01	0.04	-0.01	0.62	0.01	0.01	0.02	0.54
SSE.5	I trust that government entities adequately protect the country from terrorism	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	0.60	0.18	-0.01	-0.11	0.52
SS.3	Saudi citizens act in the best interest of the community	0.02	-0.03	0.02	-0.03	0.02	-0.03	0.69	0.12	0.22	0.09	0.71
SS.4	Saudi citizens respect laws and regulations	-0.09	-0.01	0.04	0.05	0.29	-0.12	0.64	0.02	0.32	0.12	0.63
SS.1	Saudi citizens contribute to environmental protection	0.05	-0.16	0.03	-0.04	0.13	-0.07	0.57	0.13	0.02	0.15	0.56
SS.2	In my local community, there are societal figures whom I trust	-0.13	0.01	-0.09	-0.05	-0.02	0.05	-0.03	0.44	0.12	0.13	0.40
AA.1	In general, I am satisfied with my life as it is now	-0.02	-0.03	-0.03	0.03	-0.17	-0.02	-0.03	0.04	0.69	-0.14	0.62
AA.2	In general, I feel that my family appreciates	-0.01	0.03	0.01	-0.15	-0.06	0.01	0.09	-0.09	0.69	0.17	0.67

Name	Item	Factors										Commonalities
		1	2	3	4	5	6	7	8	9	10	
	my contribution to the community											
AA.3	In general, I feel that my community appreciates my contribution to the community	0.09	-0.06	-0.06	0.04	0.22	-0.09	-0.03	-0.01	0.67	0.22	0.69
AA.4	In general, I feel that my country appreciates my contribution to the community	0.09	-0.07	-0.06	-0.10	0.19	-0.05	0.00	0.00	0.63	-0.03	0.67
SB. 2	I feel a sense of closeness to the residents of the area I live in	0.13	-0.06	0.00	0.04	-0.01	-0.01	-0.12	0.06	.14	0.84	0.79
SB. 1	I feel a sense of closeness to the people who live in the neighborhood where I reside	-0.09	0.09	-0.03	-0.01	-0.04	0.09	-0.04	0.01	.19	0.81	0.74
SB. 3	I feel a sense of closeness to other Saudis	-0.01	0.06	0.03	0.10	-0.09	0.00	-0.09	-0.08	.12	0.64	0.54
Eigenvalue		15.74	3.72	3.41	2.26	1.77	1.67	1.52	1.47	1.26	1.19	
Variance percentage		28.11	6.65	6.08	4.03	3.17	2.97	2.72	2.62	2.24	2.12	
Cumulative variance percentage		28.11	34.76	40.84	44.87	48.04	51.1	53.73	56.35	58.59	60.71	
Alpha reliability		0.78	0.82	0.75	0.81	0.87	0.81	0.81	0.82	0.88	0.89	
Omega reliability		0.92										

Note. SB = social belonging; SJ= social justice; SS=social solidarity; AA=achievement appreciation; DA= diversity acceptance; EJ=

economic justice ; EG= economic growth; SSE= social security ; PP= political participation; TG= trust in government institutions

The results identified four main dimensions, each with distinct subdimensions. The first primary dimension, the political dimension, includes two factors. The first factor, trust in government institutions, consists of 10 items that focus on confidence in various governmental entities and institutions in Saudi Arabia, such as councils and law enforcement. This factor had an eigenvalue of 15.74, accounting for 28.11% of the variance. Additionally, the political dimension includes the third factor, political participation, with seven

items evaluating Saudi citizens' engagement, communication, and awareness regarding public affairs and government programs and policies. The eigenvalue of this factor was 3.4, explaining 6.08% of the variance.

The second main dimension, the economic dimension, includes two subfactors. The first is economic justice, with eight items covering employment, fairness, and opportunities in Saudi Arabia. This factor's eigenvalue was 3.72, contributing 6.65% of the variance. Another subfactor in this dimension

is the sixth factor, economic growth, with five items assessing beliefs about the role and support of authorities in promoting and contributing to the Saudi economy's development. This factor had an eigenvalue of 1.67, explaining 2.97% of the variance.

The third main dimension, the social-cultural dimension, comprises five subfactors. One is the fourth factor, diversity acceptance, with five items focusing on attitudes towards neighbors of varying nationality, economic class, regional background within Saudi Arabia, religious denomination, and tribal affiliation. This factor's eigenvalue was 2.26, accounting for 4.03% of the variance. Another subfactor in this dimension is the fifth factor, social justice, with five items evaluating perceptions of fulfillment regarding basic family needs, including housing, healthcare, and education. This factor had an eigenvalue of 1.77, contributing 3.17% of the variance. The eighth factor, social solidarity, has four items capturing individuals' perceptions of Saudi citizens' attitudes toward community, law,

regulations, environmental protection, and trusted community figures. This factor yielded an eigenvalue of 1.47, explaining 2.62% of the variance. The ninth factor, achievement appreciation, includes four items assessing individuals' satisfaction with life and perceptions of appreciation for their contributions to their family, community, and country. This factor's eigenvalue was 1.26, explaining 2.24% of the variance. The final subfactor in this dimension, social belonging, consists of three items measuring individuals' sense of closeness to people in their neighborhood and fellow Saudi citizens, with an eigenvalue of 1.19, explaining 2.12% of the variance.

The fourth main dimension includes only one subfactor, the seventh factor, social security. This factor consists of five items evaluating trust in the government's provision of personal and national security in Saudi Arabia. It had an eigenvalue of 1.52, explaining 2.72% of the variance.

In addition to using EFA for validity assessment, alpha reliability coefficients were calculated for each of the ten dimensions of the Cohesion Index. Omega reliability, suited for multidimensional indices, was also computed for the overall cohesion index (Viladrich et al., 2017). Results indicated good internal consistency across the separate dimensions, with alpha values ranging from $\alpha = .75$ to $\alpha = .89$. The overall index showed excellent reliability with $\omega = .92$.

In conclusion, the EFA results for the Cohesion Index indicated that 56 items were organized into four main factors with ten subfactors, aligning well with the hypothesized structure of the scale.

Discussion

This study conducted an Exploratory Factor Analysis (EFA) to examine the dimensions of the Cohesion Index, identifying four primary dimensions comprising a total of 10 sub-dimensions.

The first primary dimension, the political dimension, includes two factors. The first sub-dimension, trust in government institutions,

includes 10 items focused on various Saudi governmental entities and institutions. Supporting this, Fan et al. (2022) found that increasing trust in government institutions can improve social cohesion. Additionally, Huang (2015) identified trust in government as a crucial indicator of social cohesion. The second sub-dimension, political participation, comprises seven items that address citizens' involvement in public affairs and government programs and policies. Mukherjee and Saraswati (2011) support this finding, indicating that social cohesiveness fosters citizen involvement in decision-making and policy development.

The second primary dimension, the economic dimension, consists of two sub-dimensions. The first sub-dimension, economic justice, includes eight items. Prior studies confirm that income inequality can significantly impact social cohesion, underscoring the relevance of economic justice in cohesion frameworks (Sommer, 2019; Nadeem et al., 2023). The second sub-dimension, economic

growth, comprises five items and emphasizes the role of authorities in supporting Saudi Arabia's economic development. Consistent with this, Zebun (2016) highlighted the importance of economic factors in social cohesiveness, and Sommer (2019) found a positive correlation between economic growth and social cohesion.

The third primary dimension, the social-cultural dimension, includes five sub-dimensions. The first, diversity acceptance, contains five items and is supported by McKenna et al. (2018), who asserted that diversity within neighborhoods and societies contributes positively to social cohesion. The second sub-dimension, social justice, is consistent with findings from Herwitz (2018) and Le Roux et al. (2018), who emphasize that upholding human rights and social justice is essential for enhancing social cohesion.

The third sub-dimension in the social-cultural dimension, social solidarity, includes four items. Durkheim (2014) argued that social cohesion can be fostered through

mechanisms of solidarity, while Afanasieva et al. (2021) further supported the association between cohesion and solidarity processes. The fourth sub-dimension, achievement appreciation, has four items measuring individual life satisfaction and perceived recognition of personal contributions. This aligns with Kaur (2023), who found a positive relationship between cohesion and life satisfaction. The fifth sub-dimension, social belonging, includes three items and is supported by Van Bergeijk et al. (2008), who recognize belonging as a fundamental component of social cohesion. Cramm and Nieboer (2015) also confirmed the positive correlation between cohesion and a sense of belonging.

The fourth primary dimension, social security, includes a single sub-dimension with five items assessing trust in governmental provision of personal and national security. Supporting this, Burchi et al. (2022) identified a strong relationship between social protection and cohesion. Furthermore, studies by Koehler

(2021), Andrews and Kryeziu (2013), and Ongowo (2022) underscore how protection programs contribute to improved social cohesion.

Limitations and Strengths

Although the Social Cohesion Index was developed and validated based on a theoretical background, an extensive literature review, and statistical procedures, it is essential to acknowledge certain limitations. Since this study primarily relied on Exploratory Factor Analysis (EFA), further validation using Confirmatory Factor Analysis (CFA) is needed to enhance accuracy. Additionally, the Index was specifically constructed based on Saudi cultural and religious factors; therefore, adaptation and modification would be necessary for application in other countries. Furthermore, as data collection was conducted through a self-report survey, the possibility of social desirability bias may have influenced the results.

This study also has several strengths. The sample size was sufficiently large to support factor

analysis procedures, enhancing the robustness of the findings. Moreover, the study results can be generalized across Saudi Arabia due to the use of a comprehensive sampling technique that incorporated diverse residences across all Saudi regions.

Conclusions

This study has developed a 56-item, ten-factor Social Cohesion Index tailored for evaluating social cohesion within Saudi Arabia. This Index encapsulates various dimensions of social cohesion, encompassing five social-cultural, two economic, two political, and one social security dimension. The Index serves as a valuable tool for assessing social cohesion across different aspects within the Saudi context. Additionally, it provides insights into areas where social cohesion is either high or low, equipping government and non-governmental institutions to implement needed interventions.

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Conceptualization, N.A. and K.A.-M.; methodology, S.A., K.A.-M. and N.A; validation, G.A, S.A.,

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