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Methodological Experiences of Localization the Rural Family Well-being Spatial Core Indicators (R.F.W.S.C.I.), Case study: Jiroft-Iran

Ali Shahdadi Khajeh Askari[1], AbdolReza Rokn-al-din Eftekhari*[2], Mehdi PourTaheri[3]
[1.] *Ph.D. student of Geography and Rural Planning at Tarbiyat Modares University, Tehran, Iran*
[2.] *Full professor at Tarbiyat Modares University, Tehran, Iran*
[3.] *Associate professor at Tarbiyat Modares University, Tehran, Iran*

*Corresponding author's e-mail: eftekhaa@modares.ac.ir

ABSTRACT: The indicators of well-being are socially and locally constructed based on the cultural values of communities. This allows for different indicators to be produced from one community to another. A painstaking review of Researches shows that studies of rural family spatial well-being indicators in Iran are limited and generally are not suitable for explaining the rural family spatial well-being, hence the need for this study. The primary goal of this article, therefore, is to extract and localize the rural family well-being spatial core indicators, with concern on Jiroft city. A secondary goal is to rank the R.F.W.S.C.I., by elite's triangle. For fulfilling the goals, by using a decision model of paired comparison with 30 elites triangle, have usually only been asked the extent to identify and ranking the core state indicators that monitors a real image of rural family well-being in Jiroft, Iran. Findings determined the R.F.W.S.C.I. and rank of them for monitoring the rural family well-being.
Keywords: Rural family well-being, Spatial indicators, Monitoring, health, Jiroft.

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INTRODUCTION

Analysis of international organizations reflects the centrality of the health component as a key index in measuring sustainable development (Roy & Hansen, 1997: 4). Enjoyment of the highest attainable standard of well-being in the WHO Charter is listed as one of the fundamental rights of every human being, regardless of differences in race, religion, and political belief, economic or social status (Barton, H. & Tsourou C. 2000: 7). In this regard, it can be said that the health of individuals, groups, environments and activities has attracted the most attention after the twentieth century in modern societies (Vaznoniene G.; Vaznonis B. 2011). The reliable and accurate measurement of population health is fundamental to the development of evidence for health policy and for the evaluation and planning of health systems and interventions (Ploubidis G. B. & Grundy, E., 2011).

The international community uses standardized indicators to determine people's well-being. However, using such standardized indicators may not always be appropriate. The knowledge of people's goals, objectives and local indicators is therefore important in measuring their well-being because of the likely differences resulting from cultural values. Thus, culture plays an important role in determining what people may consider as wellbeing indicators. Indicators of well-being can differ between urban and rural residents within a country because of differences in needs. Although there are common indicators related to the improved well-being of both. This allows for different indicators to be produced from one community to another (Arku, S. F.et al. 2008).

A painstaking review of Researches shows that studies of rural family spatial wellbeing indicators in Iran are limited and generally are not suitable for explaining the rural family spatial well-being, hence the need for this study.

Despite advances in the assessment of family health programs and determining health indicators, there are problems in overall assessment and explaining of the health condition in a region, especially in rural settlements in which main health indicators in the analysis are assessed beyond the household level (village, district, and city). Such data and indicators do not give researchers the opportunity to explain health status at the household level. Therefore, the output of such analytical models only shows the key factors affecting the health at settlement level. This may lead to wrong conclusions from models and we may pay attention to factors for improving the health of families which are not basically effective at the household level. Therefore, the primary goal of this article is to derive and localize the Rural Family well-being spatial core indicators, with concern on Jiroft city. A secondary goal is to rank the R.F.W.S.C.I., by elite's triangle.

In recent years, definitions of human and community health have extended beyond traditional biomedical models, which relate to absence of disease, to capture broader concepts of well-being (Waltner-Toews, 1993). The World Health Organization (W.H.O.) definition proposes that human health is: ''a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'' (W.H.O., 1948). This definition refers to

the fact that in order to understand and describe concept of health completely, a full range of relevant biological, psychological and social factors should be considered (K. Tzoulas a et al, 2007).

A review of development theories including community development and sustainable livelihoods implies that indicators of well-being are subjective. McCreary and Shirley (1982, p. 41) indicate that Community Development is ''concerned with the general wellbeing of the 'community' as opposed to any special interest group''. Dunham (1970), Littrell (1971), McCreary and Shirley (1982), Kamara and Kargbo (1999) and Barr (2005) all emphasize that communities have, for instance, the freedom to determine their sense of well-being indicators.

Approaches for analyzing rural community well-being have adopted models, in various forms, based on community health. Studies often view health and well-being as synonymous (Hayes and Willms, 1990; Larson, 1993). While both concepts have been adopted for analyzing the human condition of individuals within rural communities, at the community level, well-being provides a broader conceptualization of community conditions by considering such characteristics as social networks, social interactions, employment opportunities in the community and economic soundness of the community, attributes which are not definable at the individual level. In addition to these characteristics, well-being includes the traditional measures based on attributes of human ''health'' (Ramsey D. & Smit B. Ibid: 370).

The distinction between well-being at the individual and the community level is not clear. Certainly, well-being can be analyzed at both scale, and some community indicators of well-being are fairly straightforward aggregations of individual attributes (e.g. employment rates, income levels, morbidity rates). However, some community-scale indicators do not have direct individual equivalents (e.g. community economic viability, social networks). In addition, individual well-being can be affected by the perceptions a person has of the rural community as a whole (Ibid).

Health is difficult to measure consistently across populations and population subgroups. The considerable controversy surrounding trends in indicators of the health status of populations to a large extent arises from measurement problems and the difficulties involved in making comparisons between health's indicators derived in different ways (Robine et al. 1992; Wolf et al. 2005).

Self-assessment of health is an easy to use measure and has been shown to strongly predict mortality, even when other measures of current health, such as chronic illness and functional limitations, are statistically controlled (DeSalvo et al. 2006; Idler and Benyamini 1997). Despite its widespread use in the quest for an indicator of "true" population health status (Quesnel-Vallee 2007) and the agreement that this simple global question provides a useful summary of how people perceive their overall health status (Fayers and Sprangers 2002), self-rated health is not without its limitations. In common with other self-reported measures, it suffers from the influence of response bias, such as social desirability (Hebert et al. 2001). In addition, the information people use to assess their own health is derived from a combination of information about specific health problems, general physical functioning, health behaviors (Benyamini et al.2003b; Krause and Jay 1994), mental health (Singh-Manoux et al. 2006), and general social experience (Sen 2002). there may be differences in the way that individuals assess their health depending on socioeconomic position (Dowd and Zajacova 2007), gender (Benyamini et al. 2003a), national population (Desesquelles et al. 2009), and age group (Singh-Manoux et al. 2006).

Both types of indicator have been used as outcomes or predictors in health-related research with considerable discrepancies between self-reported and observer measured/objective indicators reported (Barsky 1988; Elam et al. 1991; Ferrer et al. 1999). Conceptually, it may be appropriate to assume that self-reported measures are all equally biased by some process that is driven by the respondent's personality and circumstances (Groot 2000; Lindeboom and van Doorslaer, 2004). In contrast, observer-led measures may be simply affected by instrumental errors (Ploubidis G. B. & Grundy, E., 2011).

Given the different sources of error affecting self-reported and observer-measured health indicators, Ploubidis G. B. & Grundy, E., 2011, consider three general latent structures to derive a Latent Index of Somatic Health (LISH):

1. A unidimensional model, where a single latent factor accounts for the variation in all health indicators.

2. A multidimensional latent structure model of health is assumed, representing self-reported and observer-measured health, but also systematic error due to measurement method bias as first order factors, whereas health is conceptualized as a second-order factor that subsumes all the first-order domains.

3. A bifactormodel, which assumes that health is a single latent construct measured by several distinct methods, with multiple indicators within each, otherwise referred to as a multi method measurement model. An attractive feature of this model is that systematic error due to measurement method bias is quantified, resulting in additional outcomes that can be used in further analysis along with health status estimate that has been corrected for measurement error(Ibid). In following, some Models of well-being have been summarized (table 1).

The results of Haghdoust et al.(2013) show that the most significant indicators from the viewpoint of experts and elites are life expectancy at birth (mean 4.3±0.3), infant mortality (4.2±0.3), maternal mortality (4.2±0.2), the standard deviation of life expectancy between different towns of the country (3.8±0.3), the percentage paid out of pocket for well-being(4± 0.4), the total cost paid by the government for the health sector (4.1 ± 0.3) and general coverage of health insurance (4.4 ± 0.2) (Haghdoust et al., 2013).

Table 1. Selected models of well-being:

Main subject/scale	Central concepts/attributes/indicators	Measures of indicators	Author(s)
Child well-being domains and indicators	Health	Health at birth/ Breastfeeding/Immunization/Nutrition/Children's health	**Maggie, l. & Bradshaw, J. 2010**
Health indicators framework	Health status	Well-being/ Health conditions/ Human Function/ Disability/Death	**Canadian Institute for Health Information"2012**
indicators of child and youth well-being	Health domain	Health insurance Coverage Very good or excellent health Activity Limitations Obesity	**D.J. Hernandez, K.G. Marotz, 2011**
Preconception health indicators for women aged 18–44 years	General health status and life Satisfaction	Self-rated health	**Broussard D. L. et al., 2011**
	Mental health	General mental distress/ Anxiety and depression/Postpartum depression	
	Chronic conditions	Diabetes/ Hypertension	
	Infections	Asthma/ HIV/ Sexually transmitted infections/Immunizations	
Livability in housing	Social well-being Environmental integrity	Employment Affordability, suitability Housing density and design	**Sherwood(1993)**
Rural area well-being	Economic well-being Social indicators State and fiscal indicators	Employment, income, economic structure Poverty , crime, education, population density Fiscal need and capacity	**Reeder(1990)**
Community social impact assessment	Individual well-being Community social organizations Community resources	Behaviors, access to resources, perceptions of well-being Diversity, outside linkages, personal interaction Cultural, demographic, labor force, economic characteristics	**Branch et al.(1984)**
Human well-being	Physical well-being Mental well-being Social well-being	Disability and impairment, Functional dependency Life satisfaction, Psychological assessment Social support, social activity, economic well-being	**Wan et al. (1982)**
Community health	Social well-being Physical health Mental health	Income, self-sufficiency, employment, education Disease rate, infant mortality, life expectancy Mental health, administration, suicide rates	**P.C.A.(1977)**

Sources: The Authors

MATERIAL AND METHODS

In a process of systematic research using spatial models and parameters for sustainable health, tried to offer helpful spatial indicators for assessment of well-being status, at the household level, in rural areas in general and rural households covered by the Health center of Jiroft County in special. In addition to the extraction of indicators by measurement method and using a decision model of paired comparison with elite's triangle, the ratio of the indicators is specified. Due to the nature of the objectives, the present study is based on descriptive-analytic method. Data collection of theoretical foundations is mainly based on the library method and the study of documents and researches on various aspects of the research main goal. To achieve a logical reasoning, regardless of the positivism attitude in understanding and identifying indicators, it is tried to follow these guidelines:

- Recognizing indicators and reflective and then abstract units;
- Abstraction of issues and criteria;
- Composition and analysis of factors affecting rural well-being;
- Synchronization between the parameters in determining logical relationships and forming components with objective and external affairs;
- Considering all possible factors;
-Agreement with reasonable the ideas;
- Enjoying internal logic;
- Possibility of being analyzed by all;

- Being simple (inspired by Rokn-al-din Eftekhari and Tavakoli, 2003: 74).

RESULTS AND DISCUSSION

When some indicators are in consensus and using in different country for monitor and evaluating the Health and well-being plans. Ranking of every indicator can be done by two methods; 1- by using content analyzes and Meta analyzes technique 2- by survey and interview with elite's triangle.

For fulfilling the goals, three steps were taken in this study;

The first step was extracting general well-being indicators from authentic studies;

In the second step, since indicators and factors presented in earlier research were based on socio-economic and cultural conditions had different meaning and literature in every society, the extracted indicators were deliberated and localized based on social and cultural conditions of Iran, the study area, along with approach and objectives of the research.

Third, by using decision model of paired comparison with 30 elite's triangle, extracted indicators were evaluated and ranked based on a set of five predetermined criteria:

1- Validity: including; A) Relevance and importance of the indicators for spatial-physical Studies, general health status, B) Being Appropriate: analysis level of indicators according to the research objectives (to assess well-being at household level) and a consensus among scientists about being clear and connecting the concept of family well-being- Sensitivity and accuracy of the assay (Sensitive) (Broussard D. L. et al., 2011); (Haghdoust et al., 1392: 18).

2 - Clarity of the meaning of parameters (Rokn-al-din Eftekhari and Tavakoli, 1382: 76); (Haghdoust et al., 1392: 18).

3 - Sampling Validity: Adequacy of health indicators and encompassing much of the important elements (Rokn-al-din Eftekhari and Tavakoli, 1382: 76); (Haghdoust et al., 1392: 18).

4 - Availability of data (Easy) (Rokn-al-din Eftekhari and Tavakoli, 1382: 76); (Haghdoust et al., 1392: 18).

5 - Data quality and complexity of computing index (Broussard D. L. et al., 2011) and (Haghdoust et al. 2013: 18).

Regarding the interdisciplinary nature of well-being, it is necessary to avoid the vague conjectural knowledge and try to have a cognitive, experimental, investigative and even intuitive approach. Therefore, attention the fuzzy logic approach in spectrum classification of indicators, indicating rural well-being and making them multi-value and also its approach in rural research should be addressed in the formulation of policies and plans (Rokn-al-din Eftekhari and Tavakoli, 1382: 81). So, in this data article, required data to localize and determine the coefficient of well-being indicators are presented using questionnaire and appropriate decision-making models have been identified.

To determine the coefficient of the indicators for rural family well being, a questionnaire made by Likert spectrum and paired comparison technique was used. Methodological experiences from this stage of research show that using Likert spectrum to determine the coefficient of the indicators for household health can be misleading. This is because the individual should compare 11 indicators of family well-being based on 9 criteria and write indicator coefficient compared to others (comparison combinations in this situation is more than 90(n*n-1), which is beyond the imagination. So simple paired comparison techniques or AHP in such circumstances are appropriate techniques to simplify the decision making process. In this paper, for reasons such as simplicity of deciding, high-speed of answering and conditions and little time of answering elite's triangle team (medical staff) the technique of paired comparison was used.

In this part, the extracted well-being indicators with the sources of them are presented first(table 2), and then resulted findings of ranking or giving weight to the indicators based on a set of five predetermined criteria from the viewpoint of the elites triangle are presented(table 3).

Table 2. The Rural Family well-being spatial core indicators (R.F.W.S.C.I.):

Factor	Indicators	measurement Tools	Analysis Level	Sources
Self-rated health: Mental Health Physical health	Self-rated/ reported health: Physical performance- social performance- Activity Limitations /physical problems - mental health - vitality - physical pain	Researcher-made or standard Questionnaires	Individual Family Rural	SF-36 & GHQ questionnaires; WHO, 1948; Begin, 1993; H.W.C., 1992; Wan et al., 1982; Wissing & Fouri, 2000; Wan et al., 1982; Vaznoniene, G., Vaznonis B., 2011; Diener, 2006; Pavot and Diener 1993; Dolan et al. 2008; Frey and Stutzer 2002; Ramsey, D. & Smit, B., 2002: 370; P.C.A., 1977; Reeder,1990; Branch et al., 1984; Sherwood, 1993; Canadian Institute for Health, Health Indicators 2012; Maggie, l. & Bradshaw, J. 2010; Mc Horney et al, 1994 & Medical Outcome Trust, 2008; DeSalvo

				et al. 2006; Babakhayr pour, 1388:11; Kafi, 2006:117
Indicators of health status of Rural Household/ Family: Mental Health Physical health. **Functional abilities of family members** **Mortality**	1 - The number of people with physical illness in the family over the past 12 months.	Self-made questionnaire , family health information by rural health centers	Family/ Rural	Maggie, l. & Bradshaw, J. 2010
	2 - The number of people diagnosed with psychiatric problems in the family over the past 12 months.		Family/ Rural	Maggie, l. & Bradshaw, J. 2010
	3 - The number of disabled persons in need of care in the family		Family/ Rural	Iran Ministry of Health, Treatment and Medical Training
	4 - The number of disabled people and disabled / patient in need of care in the family		Family/ Rural	Iran Ministry of Health, Treatment and Medical Training
	5 - Family history of infant mortality in the last two years		Family/ Rural	MDG; Broussard D. L. et al., 2011; Iran Ministry of Health, Treatment and Medical Training
	6 - Family history of deaths of children under 1 year in the past two years		Family/ Rural	WHO; UNICEF; MDG; ICPD, MICS 2006; Center for Health Protection, Hong Kong 2006; Department of Health, Taiwan 2006; Iran Ministry of Health, Treatment and Medical Training, Iran Management and planning organization
	7 - Family history of death for children under 5 years		Family/ Rural	World Bank, WDI 2006;WHO; UNICEF; MDG; ICPD
	8 - Maternal death in the family history of the past two years		Family/ Rural	Iran Ministry of Health, Treatment and Medical Training,Iran Management and planning organization,WHO,UNICEF, MDG, ICPD
	9 - Babies born weighing less than 2.5 kg over the past two years		Family/ Rural	UNICEF, MICS 2006; Bureau of Health Promotion, Taiwan 2006
	10 – Still birth(abortion)in family since the past two years		Family/ Rural	Broussard D. L. et al., 2011, Iran Ministry of Health, Treatment and Medical Training

Sources: The authors uses research: The unit Hope for Health in Europe, 2002, WHO, 2005, 2008; Broussard D. L. et al., 2011; Canadian Institute for Health, 2012; Ramsey, D. & Smit, B., 2002; Wan et al., 1982; P.C.A., 1977; Reeder, 1990; Branch et al. 1984; Sherwood, 1993; Haghdoust et al. 2013.

Table 3. Ranking of (R.F.W.S.C.I.) by elite's triangle with paired comparison model

Indicators	Mean(In the range 1-10)	Std. deviation
Maternal death in the family history of the past two years	8	**2.8**
Family history of infant mortality in the last two years	5.91	**2.26**
Family history of death for children under 5 years	5.91	**2.26**
Family history of deaths of children under 1 year in the past two years	5.82	**1.8**
Still birth(abortion)in family since the past two years	5.091	**2.84**
The number of people with physical illness in the family over the past 12 months	4.43	**2.76**
Babies born weighing less than 2.5 kg over the past two years	4.3	**2.4**
The number of people diagnosed with psychiatric problems in the family over the past 12 months	4.2	**2.5**
Self-rated/reported/ health: Physical performance- social performance- Activity Limitations /physical problems - mental health - vitality - physical pain	3.78	**2.68**
The number of disabled persons in need of care in the family	3.45	**1.97**
The number of disabled people and disabled / patient in need of care in the family	3	**1.67**

Source: File Study of Authors, January. 2014

As presented in the table 3 the" Maternal death in the family history of the past two years indicator (with Mean=8)" were considered the most important and the "The number of disabled people and disabled / patient in

need of care in the family indicator" (with Mean=3) were considered the last important, by elites triangle, for monitoring a real image of Rural family well-being in Jiroft.

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