

Research Article

THE FACTORS OF STATE POLICY, LAW RULE, ENVIRONMENTAL ISSUES, CITIZEN LAWS AND ECOLOGICAL EDUCATION ON HEALTH, SAFETY ENVIRONMENT: THE CASE OF MONGOLIA

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ABSTRACT

The main objects of this study describe some factors of recognizing the right to live in a safe, clean, healthy, and sustainable environment and implementing the procedural and substantive elements of the right. We analyzed in this study that the impacts of state policy, law rule, environmental issues, citizen laws and ecological education on health, safety environment. The data were collected from 1235 participants who are working in public, private, education, health, small business and international companies in Mongolia. This study is significant in considering both theoretical and practical issues and for practices in Mongolia. Overall, the results showed that employees were mostly had leadership with the factors in this survey. Also, our study discussed the effects of above-mentioned results, the implications for theory and practice along with the limitations of the research and the implications for further research.

Keywords: state policy, law rule, environmental issues, citizen laws and ecological education on health, safety environment.

INTRODUCTION

The citizens of Mongolia are enjoying the following rights and freedoms:

- 1) The right to life. Deprivation of human life is strictly prohibited unless capital punishment as constituted by Mongolian penal law for the most serious crimes is imposed as final decision by a competent court.
- 2) The right to a healthy and safe environment and to be protected against environmental pollution and ecological imbalance.

Then we studied about a healthy and safe environment and how to be protected against environmental pollution and ecological imbalance.

THEORETICAL AND CONCEPTUAL FRAMEWORKS

Eistan Swenhardt (2020) defined The field of social science recognizes the intricate relationship between health, safety, and the environment, examining how social, cultural, and economic factors impact individuals and communities in these domains. Social science research investigates the social determinants of health and safety, exploring how social structures, inequalities, and social norms influence access to healthcare, exposure to hazards, and the adoption of safety practices. Scholars who are Roach and Behling (2014) in social science analyze the social construction of environmental risks and hazards, examining how perceptions, values, and social processes shape the understanding and response to environmental challenges. Richards and Engle (2016) social science research also delve into the impact of social policies, interventions, and community engagement on improving health outcomes, enhancing safety measures, and promoting environmentally sustainable practices. Through interdisciplinary approaches, social science contributes to evidence-based strategies that address health disparities, social inequalities, and environmental justice, aiming to create healthier, safer, and more sustainable societies for all.

The state policy and health, safety environment

The state of Mongolia places a high priority on the well-being of its citizens and has established a comprehensive state policy on health, safety, and the environment. The government recognizes the fundamental right of every individual to live in a healthy and safe environment and is committed to ensuring the protection and promotion of public health. Northouse (2010) argued that the state policy emphasizes the prevention of diseases, accidents, and environmental hazards through proactive measures such as health education, vaccination campaigns, workplace safety regulations, and environmental conservation efforts. The government collaborates with relevant stakeholders, including healthcare professionals, environmental experts, and community organizations, to develop and implement strategies that address health disparities, mitigate environmental risks, and improve overall well-being. Through its state policy, Mongolia aims to create sustainable and resilient communities, where individuals can lead healthy lives, work in safe conditions, and enjoy a clean and sustainable environment for present and future generations.

The law rules and health, safety environment

There are lots of general overviews of laws and regulations related to health, safety, and the environment that may exist in various jurisdictions in the law area. It's important to consult official legal sources or seek professional legal advice for accurate and up-to-date information on specific laws in your jurisdiction Politis Argues (2019).

- Occupational Health and Safety Laws: These laws establish standards and regulations aimed at protecting the health and safety of workers in various industries. They typically cover areas such as workplace hazards, safety equipment, training requirements, and reporting of accidents or incidents.
- Environmental Protection Laws: These laws aim to safeguard the environment and natural resources by regulating activities that may have an impact on them. They may cover areas such as air and water pollution control, waste management, hazardous substance handling, and conservation of natural habitats.

- Public Health Laws: These laws focus on promoting and protecting public health. They may include regulations on food safety, sanitation, disease control, vaccination requirements, tobacco control, and other measures aimed at preventing and controlling public health risks.
- Building and Construction Codes: These codes establish safety standards for the design, construction, and maintenance of buildings and structures. They may cover areas such as fire safety, structural integrity, accessibility, and electrical and plumbing systems Bejan DavidCrawford (2015).

The environmental issues and health, safety environment

Tang Chun (2018) Environmental issues have a direct impact on health and safety, as exposure to pollutants and hazards in the environment can lead to adverse health effects and jeopardize the well-being of individuals and communities. WallaphaJoanne (2012) identified that poor air quality resulting from pollution can contribute to respiratory problems, allergies, and other respiratory illnesses, posing significant health risks to vulnerable populations, including children, the elderly, and those with pre-existing conditions.

Contamination of water sources with hazardous substances can pose serious health risks, including waterborne diseases and long-term health complications. Kouzes and Posner (2017) argued that degradation of ecosystems and loss of biodiversity can disrupt ecological balances, affecting natural resources, food security, and the overall resilience of communities to environmental and health challenges. Addressing environmental issues, such as climate change and pollution, requires proactive measures to mitigate risks, promote sustainable practices, and raise awareness about the importance of protecting the environment for the health and safety of current and future generations.

The citizen law and health, safety environment

Fred Alferd Fiedler (2019) studied based on the Citizen Law recognizes the fundamental right of every citizen to live in a healthy and safe environment, ensuring their well-being and protecting their health. The law establishes regulations and standards to promote and safeguard public health, safety, and environmental conservation, aiming to create a conducive living environment for citizens.

MalouLuttikhuis Oude (2020) outlines the responsibilities of citizens to adhere to health and safety regulations, such as complying with workplace safety measures and actively participating in efforts to maintain a clean and sustainable environment. The law encourages citizens to report any health, safety, or environmental concerns to the appropriate authorities, facilitating prompt action to address potential risks or violations. Additionally, the law may provide provisions for the government to disseminate health information, conduct public health campaigns, and enforce penalties or sanctions against individuals or entities that violate health, safety, or environmental regulations, ensuring accountability and compliance.

The ecological education and health, safety environment

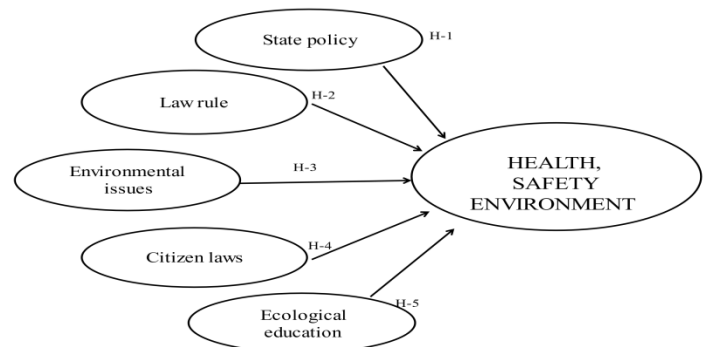
Hemphill Bennis (2018) argued Ecological education plays a crucial role in promoting health, safety, and the environment by raising awareness and fostering a sense of responsibility towards the natural world. Through ecological education, individuals gain knowledge about the interconnectedness of ecosystems, the impact of human activities on the environment, and the importance of sustainable practices for maintaining their own well-being and that of future generations.

Hidayet Tiftik (2015), Ecological education equips individuals with the skills and attitudes necessary to make informed decisions and take actions that prioritize health and safety while minimizing negative environmental impacts. Roach and Behling (1984) argued that health, safety, and environmental perspectives, ecological education emphasizes the importance of creating healthy and safe environments that support both human and ecological well-being. Through experiential learning, ecological education encourages individuals to engage with nature, understand the inherent value of biodiversity, and recognize the interdependencies between ecological integrity, human health, and a sustainable future.

According above of the literature review, in our study, it was hypothesized as:

- Hypothesis 1. The state policy will positively impact on health, safety environment.
- Hypothesis 2. The law rule will positively impact on health, safety environment.
- Hypothesis 3. The environmental issues will positively impact on health, safety environment.
- Hypothesis 4. The citizen laws will positively impact on health, safety environment.
- Hypothesis 5. The ecological education will positively impact on health, safety environment.

Figure 1. Conceptual model of impact on health, safety environment



SELECTION OF SPSS AND SMART-PLS SOFTWARE PROGRAM

The purpose of our study is to find out the variables of results on leadership. Our study includes two kinds of problems in terms of theoretical and practical frameworks. The first, in theoretical frameworks, previous researchers dem attention on health, safety environment in many public and private sectors. Second, from the practical frameworks deemed attention in a fiscal year in 2023.

In our study, Likert scales were easy to use and analyze. Bass and O'Conner (1974) defined that although larger Likert scales make it possible to discriminate opinions more finely, they can also confuse the respondents in general, seven-point scales are found to reduce inaccuracy. In our study, SPSS and SmartPLS-3.0 were chosen for their simplicity and completeness. SPSS and Smart PLS were used to test the relationships between variables. This is followed by the examination and presentation of the demographic profile of respondents using Descriptive Statistic (Bayasgalan Tsogtsuren, 2021). Wallapha Ariratana (2018) There are many software programs used to process data analysis, including Statistical Package for the Social Sciences (SPSS), Smart PLS etc. Our study was preferred to check the consistency of all related factors in the study based on path

analysis and Cronbach's Alpha value, Composite Reliability (CR). The internal reliability of each factor was assessed using Cronbach's alpha coefficient.

Firstly, according to descriptive analysis refers to the transformation of the raw data into a form that will make it easy to understand and interpret (Bayasgalan Tsogtsuren *et al.*, 2021).

Secondly, Cronbach (1946) identified that reliability analysis 0.00- 1.0, the higher the internal consistency reliability as a less than 0.6 considered poor, in the range 0.7 is acceptable, more than 0.8 are considered to be good in social science.

Finally, we tried to determine whether there are significant relationships among the independent variables and dependent variable. The scale model suggested by Davies (1971) used to describe the relationship between the independent variables and the dependent variable, or as shown that: 0.7 and above, very strong relationship, 0.50 to 0.69, strong relationship, 0.30 to 0.49, moderate relationship, 0.10 to 0.2, low relationship, to 0.09, very low relationship (Bayasgalan Tsogtsuren *et al.*, 2021). In our study, we checked for the completeness of the questionnaire and eligibility of the respondents.

Figure 2. Results of Structure Analysis of respondents (algorithm)

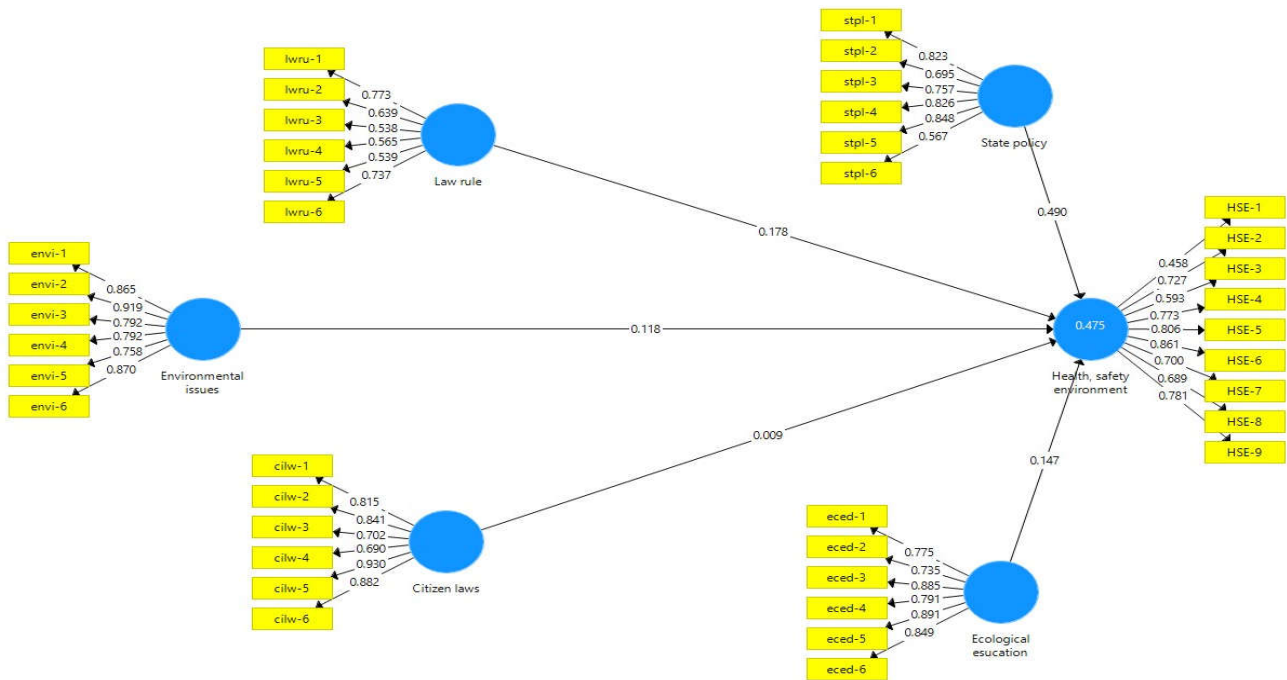


Table 1. List of Items for each Construct of respondents

Factors	items	results of items	Cronbach's alpha	CR	AVE
State policy	stpl-1	0.823	0.851	0.889	0.576
	stpl-2	0.695			
	stpl-3	0.757			
	stpl-4	0.826			
	stpl-5	0.848			
	stpl-6	0.567			
Law rules	lwru-1	0.773	0.709	0.802	0.408
	lwru-2	0.639			
	lwru-3	0.538			
	lwru-4	0.565			
	lwru-5	0.539			
	lwru-6	0.737			
Environmental issues	envi-1	0.865	0.914	0.932	0.697
	envi-2	0.919			
	envi-3	0.792			
	envi-4	0.792			
	envi-5	0.758			
	envi-6	0.870			
Citizen laws	cilw-1	0.815	0.946	0.921	0.664
	cilw-2	0.841			
	cilw-3	0.702			
	cilw-4	0.690			
	cilw-5	0.930			
	cilw-6	0.882			

Factors	items	results of items	Cronbach's alpha	CR	AVE
Ecological education	eced-1	0.775	0.907	0.926	0.677
	eced-2	0.735			
	eced-3	0.885			
	eced-4	0.791			
	eced-5	0.891			
	eced-6	0.849			
Health safety environment	HSE-1	0.458	0.879	0.904	0.517
	HSE-2	0.727			
	HSE-3	0.593			
	HSE-4	0.773			
	HSE-5	0.806			
	HSE-6	0.861			
	HSE-7	0.700			
	HSE-8	0.689			
	HSE-9	0.781			

Noted by:stpl-State policy, lwru-law rules, envi-environmental issues, cilw-citizen laws, eced-ecological, education, HSE-health safety environment

We are explained the results of our study as below that:

In the table 1, in the items for each construct of state policy of 6 items measuring ranged from **0.567-0.848**, Cronbach's alpha of **0.851**, Composite reliability /CR/ of **0.889** and Average Variance Extracted /AVE/ was **0.576**. In conclusion, the result indicates that the state policy construct was measured effectively using a range of 6 items, which demonstrated high internal consistency with a Cronbach's alpha of 0.851. The composite reliability (CR) further supports the reliability of the construct, with a value of 0.889. Additionally, the average variance extracted (AVE) of 0.576 suggests a satisfactory level of convergent validity. Law rules of 6 items measuring ranged from **0.538-0.773**, Cronbach's alpha of **0.709**, Composite reliability /CR/ of **0.802** and Average Variance Extracted /AVE/ was **0.408**. In conclusion, the measurement of the law rules constructed using a set of 6 items yielded a range of scores between 0.538 and 0.773, suggesting a moderate level of consistency. The Cronbach's alpha coefficient of 0.709 indicates an acceptable level of internal reliability for the construct. The composite reliability (CR) value of 0.802 further supports the overall reliability of the measurement. However, the average variance extracted (AVE) of 0.408 indicates a lower level of convergent validity for the construct. Environmental issues of 6 items measuring ranged from **0.792-0.919**, Cronbach's alpha of **0.914**, Composite reliability /CR/ of **0.932** and Average Variance Extracted /AVE/ was **0.697**. In conclusion, the measurement of the environmental issues constructed using a set of 6 items demonstrated high consistency, with scores ranging from 0.792 to 0.919. The construct exhibited excellent internal reliability, as indicated by a Cronbach's alpha coefficient of 0.914. Furthermore, the composite reliability (CR) value of 0.932 confirms the overall reliability of the measurement. Additionally, the average variance extracted (AVE) of 0.697 suggests a satisfactory level of convergent validity for the construct.

Citizen laws of 6 items measuring ranged from **0.690-0.930**, Cronbach's alpha of **0.946**, Composite reliability /CR/ of **0.921** and Average Variance Extracted /AVE/ was **0.664**. In conclusion, the measurement of citizen laws constructed using a set of 6 items demonstrated a wide range of scores, from 0.690 to 0.930, indicating variability in responses. The construct exhibited excellent internal consistency, with a Cronbach's alpha coefficient of 0.946, suggesting high reliability. Moreover, the composite reliability (CR) value of 0.921 further supports the overall reliability of the measurement. However,

items measuring ranged from **0.735-0.891**, Cronbach's alpha of **0.907**, Composite reliability /CR/ of **0.926** and Average Variance Extracted /AVE/ was **0.677**. In conclusion, the measurement of ecological education construct using a set of 6 items demonstrated a range of scores between 0.735 and 0.891, indicating variability in responses. The construct exhibited high internal consistency, as reflected by a Cronbach's alpha coefficient of 0.907, indicating strong reliability. Furthermore, the composite reliability (CR) value of 0.926 confirms the overall reliability of the measurement. Additionally, the average variance extracted (AVE) of 0.677 suggests a moderate level of convergent validity for the construct. Health safety environment 9 6 items measuring ranged from **0.458-0.861**, Cronbach's alpha of **0.879**, Composite reliability /CR/ of **0.904** and Average Variance Extracted /AVE/ was **0.517**.

In conclusion, the measurement of the health safety environment construct using a set of 9 items demonstrated a wide range of scores, ranging from 0.458 to 0.861, indicating diverse responses. The construct displayed good internal consistency, with a Cronbach's alpha coefficient of 0.879, indicating satisfactory reliability. Moreover, the composite reliability (CR) value of 0.904 further supports the overall reliability of the measurement. However, the average variance extracted (AVE) of 0.517 suggests a relatively lower level of convergent validity for the construct.

Table 2. Estimated Path Coefficients of impact on health, safety environment

Hypothesis	standard deviation	T statistic	P value	Results
Hypothesis 1. The state policy will positively impact on health, safety environment.	0.467	0.104	4.712	0.000
Hypothesis 2. The law rule will positively impact on health, safety environment.	0.203	0.136	1.309	0.191
Hypothesis 3. The environmental issues will positively impact on health, safety environment.	0.156	0.104	0.809	0.416
Hypothesis 4. The citizen laws will positively impact on health, safety environment.	-0.076	0.154	0.058	0.954
Hypothesis 5. The ecological education will positively impact on health, safety environment.	0.165	0.112	1.316	0.189

The results of study.

In the table 2 as result, there were 5 hypotheses in our study, for instance state policy positive relates to the health, safety environment means 0.467, standard deviation 0.104, T statistic 4.712, P value 0.000. The law rule negative relates to the health, safety environment mean 0.203, standard deviation 0.136, T statistic 1.309, P value 0.191. The environmental issues negative relates to the health, safety environment mean 0.156, standard deviation 0.104, T statistic 0.809, P value 0.416. The citizen law negative relates to the health, safety environment mean -0.076, standard deviation 0.154, T statistic 0.058, P value 0.954. The ecological education negative relates to the health, safety environment mean 0.165, standard deviation 0.112, T statistic 1.316, P value 0.189.

CONCLUSION

State policy positive relates to health, safety, and environment: The mean of 0.467 suggests a positive relationship between state policy and health, safety, and environment. The standard deviation of 0.104 indicates the variability of responses around the mean. The T statistic of 4.712 indicates a significant difference between the sample mean and the null hypothesis. The P value of 0.000 suggests strong evidence to reject the null hypothesis and support the hypothesis that state policy positively relates to health, safety, and environment.

Law rule negative relates to health, safety, and environment: The mean of 0.203 suggests a negative relationship between law rules and health, safety, and environment. The standard deviation of 0.136 represents the variability of responses around the mean. The T statistic of 1.309 indicates a difference between the sample mean and the null hypothesis but is not highly significant. The P value of 0.191 suggests that the observed difference could have occurred due to random chance, failing to provide strong evidence against the null hypothesis. Environmental issues negative relates to health, safety, and environment: The mean of 0.156 suggests a negative relationship between environmental issues and health, safety, and environment. The standard deviation of 0.104 represents the variability of responses around the mean. The T statistic of 0.809 indicates a small difference between the sample mean and the null hypothesis. The P value of 0.416 suggests that the observed difference is not statistically significant, providing weak evidence against the null hypothesis. Citizen law negative relates to health, safety, and environment: The mean of -0.076 suggests a negative relationship between citizen laws and health, safety, and environment. The standard deviation of 0.154 represents the variability of responses around the mean. The T statistic of 0.058 indicates an extremely small difference between the sample mean and the null hypothesis. The high P value of 0.954 suggests that the observed difference is not statistically significant, providing no evidence against the null hypothesis. Ecological education negative relates to health, safety, and environment: The mean of 0.165 suggests a negative relationship between ecological education and health, safety, and environment. The standard deviation of 0.112 represents the variability of responses around the mean. The T statistic of 1.316 indicates a difference between the sample mean and the null hypothesis, but it is not highly significant. The P value of 0.189 suggests that the observed difference could have occurred due to random chance, failing to provide strong evidence against the null hypothesis. Finally, the results indicate that state policy shows a significant positive relationship with health, safety, and environment, while law rules, environmental issues, citizen laws, and ecological education do not show statistically significant relationships.

In conclusion, this study examined the impacts of state policy, law rules, environmental issues, citizen laws, and ecological education on health, safety, and the environment. The data collected from 1235

participants working in various sectors in Mongolia contribute to both theoretical and practical aspects. The findings highlight the significance of leadership factors among employees surveyed. Furthermore, this study discusses the implications for theory and practice, identifies research limitations, and suggests avenues for future research in this field.

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