GRASSROOTS JOURNALS
ISSN 2564-212X
02(02) | December 2022

JOURNAL OF POLICY & GOVERNANCE
Published by The Grassroots Institute, Canada
In partnership with:
Lviv Polytechnic National University, Ukraine
Website: http://grassrootsjournals.org/jpg

M – 00322 | Analytical Article

Psychological Peculiarities of the Ukrainian People in Context of Globalization and Transformations

Alla Pecheniuk*[1], Andrii Pecheniuk[2], Hasrat Arjjumend[3]
[1]Department of Economy, Entrepreneurship, Trade & Exchange Activities, Podillia State University, st. Shevchenko, 13, Kamianets-Podilskyi, Ukraine. Email: dom.alla@meta.ua | ORCID: https://orcid.org/0000-0002-3582-9236
[2]Department of Finance, Banking, Insurance & Electronic Payment Systems, Podillia State University, st. Shevchenko, 13, Kamianets-Podilskyi, Ukraine. Email: anvaspe@meta.ua | ORCID: https://orcid.org/0000-0002-8348-5044
[3]The Grassroots Institute, 548 Jean Talon Ouest, Montreal, QC, Canada. Email: ceo@grassrootsinstitute.ca, harjjumend@gmail.com | ORCID: https://orcid.org/0000-0002-4419-2791
**Corresponding author*

ABSTRACT

This article analyzes multiple interpretations of the concept of "mentality" and its structure. The peculiarities of the psychology of the Ukrainian people are studied/analyzed, and the main features of it are highlighted. The factors influencing the identity of modern Ukrainians are the living environment, geopolitical influences, relations with other peoples, history and historical conditions of the nation's development, church, and the religion. The manifestations of the psychology of the Ukrainian people hinder the effective socio-economic development of the country when interfacing the globalization. This article analyzes the consequences of the destructive influence of the repressive Soviet regime on the national culture and social consciousness of the Ukrainian people. Attention is focused on the need to cultivate behavioural characteristics of the people aiming at the implementation of an effective complex solutions, which tend to contribute to increasing the competitiveness and success of the State. A conclusion is made about the negative impact on the national psyche of the long-term absence of their own State in global domains.

Keywords: Psychological characteristics; National character; National consciousness; Geopolitical influence; Ukrainian society; National idea

Received: 30 October 2022
Reviewed: 27 November 2022
Accepted: 29 November 2022
Published: 31 December 2022

Editor-in-Chief
Prof. Dr. Valeriy Tertychka
Deputy Editor-in-Chief
Prof. Dr. Larysa Klymanska
Prof. Dr. Santosh Kumar
Executive & Managing Editor
Dr. Hasrat Arjjumend

How to cite this paper: Pecheniuk, A., Pechniuk, A., & Arjjumend, H. (2022). Psychological Peculiarities of the Ukrainian People in Context of Globalization and Transformations. *Journal of Policy & Governance*, *02*(02), 18-25. https://doi.org/10.33002/jpg020202
Copyright © 2022 by author(s). This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).
http://creativecommons.org/licenses/by/4.0/

Open Access

1. INTRODUCTION

Each nation and every human have its own individuality and integrity. The main features of such individuality are embedded in the peculiarities of the psychological composition and thinking patterns. The history of the people is an interplay of the changing social environment and the stable composition of the spiritual world. The search for national development directions requires a deeper understanding of the fundamental reasons behind the successes of some nations and the failures of others. The ability to overcome negative external obstacles, to implement effective economic models, and to create new forms of social organization is based on positive mental characteristics nationwide and on the conscious minimization of the influence of negative environment.

The analysis of the Ukrainian mentality and its transformation in a specific historical period allows to understand the reasons behind the emergence of certain social phenomena, behavioral patterns, common stereotypes, etc. Thus, necessary tenets include a better understanding of society and its characteristics, potential, and needs. It will allow responding more effectively to social challenges, thereby, producing effective mechanisms to solve complex situations, and choosing strategic directions of the development.

2. DISCUSSIONS

Piren (1996) believes that "national character is a set of specific and relatively stable psychological traits of one or another nation, evolved under the influence of historical, economic, socio-cultural and natural conditions of its development. It manifests in the behavior of people, their habits, rites, customs, and traditions in everyday life, and, especially vividly in the national culture. The national character underlies the most important things encompassing creativity, actions, and behavior of people giving them a unique color".

In modern political discourse, the mentality is usually understood as a concept manifested through the synthesis of logical-conceptual and sensory-emotional components. It is portrayed as an integrated indicator in which the consciousness, mind, worldview, nature of thoughts and thinking of the nation, its psychology and spiritual interests are organically combined. Strazhnyi (2022) interprets mentality as a system of relevant psychological algorithms that shape a person's view of the surrounding reality and, accordingly, determine his/her behavior. Regardless of nationality, people living in the same territory for a long time develop certain psychological algorithms. The national mentality is formed not even over decades, but over millennia. According to Kirichuk (1994), mentality is "a certain integral characteristic of people living in a specific culture, which makes it possible to describe the peculiarity of people's vision of the surrounding world and to explain the specifics of their response to it. This is a complex hierarchical system that determines the orientation of a person, individual social groups, notions in society, their goals and motives of life".

Likewise, Yuri (2007) points out that mentality in its structure "includes primarily something collective, with certain elements of a national character that act spontaneously, similar to a certain emotional and psychological code. This collective subconsciousness is a set of worldview and psychological instructions that have turned into principles and habits and, without a doubt, are manifested in traits, ingrained ways, forms and norms of life, that is, in a number of the most deeply rooted traditions, stereotype of behavior. Speaking about the mentality of a particular nation, people or citizens, we touch on a complex mechanism closely related to the centuries-old culture of the people, the established ways of responses to changes in the outside world, which determine the behavior of the nation or its citizens.

The mentality is a spiritual phenomenon that characterizes national culture and social consciousness. It reflects a set of established norms, principles, life orientations, and reproduction of the cumulative experience of previous generations (Tereshchenko, 2013). Mentality can be interpreted as an established way of specific world perception, inherent in ethnic groups, and nations, which determines their reaction to certain social processes and unites them into social and historical groups (Yushkevich, 2012).

Ukrainian economist, Mykhailo Baranovsky, drew attention to the fact that the economic organization of society depends on the psychological state of people, labor traditions, religious beliefs, national consciousness, and the spiritual composition of the individuals, that is, on the mental

phenomenon (Bondarenko, 2009). The mentality of the Ukrainian people has developed under the influence of complex historical circumstances. In the process of living in groups, individual signs of mentality are transferred to the general content, and this, in turn, presents the Ukrainian mentality expressing at the national level.

In general, it is possible to single out such features of the mentality of Ukrainians as concentration on the facts and problems of the inner, personal-individual world, psychological flexibility, sentimentalism, sensitivity, empathy, love for nature, etc. The famous modern Ukrainian philosopher, Popovych (2014), believed that condescension and respect for others are special Ukrainian national traits. According to Kolodny & Filipovych (1996), the Ukrainian people are characterized by such traits such as introversion, a sense of forgiveness, tolerance, a desire for spiritual solitude, asceticism in life, and unpretentiousness. The Ukrainian is also characterized by the dominance of the sentimental over the intellectual and strong-willed. Other scholars, Berezina & Pomaz (2022), believe that Ukrainians are adaptable, flexible, hospitable, and sociable. They have pragmatism, inherent intuition, hardworking temperament, mastery, versatility, broad outlook, and creativity. These are necessary prerequisites for innovative activities.

Demyanyuk (2016) believes that the sense of dignity and freedom is "embedded" in the national character of Ukrainians. They are able to rise quickly, actively react to injustice, and activities organized and selflessly. However, later Ukrainians often allow themselves to be disoriented, and buy into "simple solutions". Prokhasko (2022) is also convinced that one of the main components of the Ukrainian mentality is the desire for unconditional freedom. Yes, this freedom can be limited, and someone can encroach on it. There are times when it is taken away from Ukrainians, or they try to take it away. There are times when it is to be protected, or submitted for a while. But Ukrainians always strive to win back their freedom.

Among the main factors affecting the identity of modern Ukrainians, the following should be highlighted:

1. The environment of the life: Landscape, weather, soil features, territory area, flora and fauna, water bodies, etc., create a unique environment along with cognitive processes, a culture of communication, and associations. Nature has always occupied a significant place in the life of Ukrainians, and is reflected in the numerous images of nature in the folklore.
2. Geopolitical influences: The geopolitical position of Ukraine is advantageous, but difficult. It is located approximately equidistant from the non-European centers (Washington and Beijing) of world politics and economics. Ukraine is relatively close to the capitals of the largest European States - Berlin, London, Paris, Rome, as well as Brussels and Strasbourg, the so-called "capitals of Europe", and quite close to the capitals of neighboring States. Ukraine has wide access to the seas, and a considerable length of borders – 6,993.63 km, including land borders of 5,638.63 km. Ukraine has the longest border with Russia (2,295.04 km), Moldova (1,222), and Belarus (1,084.2 km). According to its geopolitical position, Ukraine is, as it were, on the "border of two worlds" - Europe and Asia, which certainly have affected the psychology of the people. As a result, a peculiar dualism of the mentality of the Ukrainian ethnic groups was formed consisting of the presence of traits of both Western European people (individualism) and Eastern cultures (sensuality, emotionality). The famous writer Mykola Gogol was quoted in an article on the history of Ukraine, having described the national character of the Ukrainian people, writes: "in it, two opposite parts of the world and two different elements collided amazingly: European caution and Asian carelessness, naivety and cunning, a strong active principle and excessive laziness, a train to development and improvement and, meanwhile, trying to appear as someone who despises perfection" (Voropai, 1991).
3. Relations with other nations: The diverse ethnic composition of Ukraine's population, and constant interaction with other peoples, have led to an atmosphere of tolerance and the absence of national arrogance. Ukrainians themselves had no reason to seek and conquer foreign lands. This produced a gentle disposition and an almost complete lack of expansion. However, in defending their land, they showed bravery, sometimes even cruelty. Ukrainians have such valuable qualities as tolerance, and respect for other peoples and their cultures.
4. History and historical conditions of development of the people: Ukrainian life should be seen from a historical perspective. The difficult historical trials that the Ukrainian nation has

undergone, especially over the last one hundred years, could not help but affect its mental makeup. The system of unprecedented repressions and famines, collectivization, wars, urbanization, and aggressive imposition of atheism by the Soviet authorities had the greatest influence.

5. Church and religion: Today, religiosity in Ukraine is manifested not so much at the worldview level in explaining the picture of the world, but at the level of satisfying the spiritual and moral needs of a person, in observing family and domestic traditions, religious communication, moving away from life's conflicts and everyday needs, explaining the meaning and value of life. There are more than 70 different denominations operating in the country, and each of them relies on a certain believers, an extensive network of monasteries, spiritual educational institutions for staffing the church's activities, and religious education of believers. The missionary and preaching activity of the clergy has become widespread; it has free access to mass media. In Ukraine, various foreign religious missions also carry out preaching activities.

As Zemlyuk (2018) notes, among the defining psychological features of Ukrainians, which determine the structure of their life and behavior, the following should be highlighted:

- a developed personal principle, manifested in a high sense of self-worth, independence and individualism;
- moderation of higher mental functions in the perception of reality, which is manifested in a person's concentration on the facts and problems of the internal, personal world;
- emotionality – emotional-sensual factors that dominate over rational factors;
- love of God (religiousness);
- the cult of the "house" (house, estate residence, apartment).

According to Artemenko (2005), for Ukrainians, respect for work as a source of material well-being, understanding of the value of human life, respect for property rights, and mercantile perception of wealth are fundamental. It should be noted that certain manifestations of mentality do not always have a positive effect on the development of the country. In particular, a number of researchers interpret the features of Ukrainian society to a large extent as an obstacle to the effective socio-economic development of the country in the conditions of globalization. Some of those features are illustrated as follows:

- conservatism of individual and public social consciousness;
- paternalism of a significant part of the population of Ukraine, a tendency to dependence, inability to be independent in decision-making, passiveness regarding the course of economic reforms;
- social and political conformism, unwillingness to defend one's own interests (Karpenko & Ilyina, 2017);
- anarchic individualism manifested in various forms of centrifugal desire for personal freedom;
- an inferiority complex, which is associated with the recognition of the inadequacy of one's national characteristics in comparison with other peoples and nations (Novikova, 2015).
- lack of a clear national idea;
- lack of own national mental model of success (Ilyina, 2013).

To a large extent, the national mentality was negatively affected by the long-term absence of its own State (Pidkova and Shast, 2001). The mentality of large part of the citizens, mostly of older age, bears the imprint of the Soviet mentality. The main features are resistance to change, passiveness, lack of initiative, the desire to see an authoritarian leader as the head of the State, inflated expectations from oneself, an inferiority complex, and infantilism. Organized by the Soviet regime in the 20th century, the process of collectivization, the elimination of the institution of private property throughout the country, and repression led to the formation of a deformed and distorted society. The destruction of the institutions of spirituality and moral traditions of the people led to the terrible degradation of the Ukrainian nation (Ivanyshyn et al., 2018).

In the second half of the 20th century, intensive processes of urbanization and growth of the specific industry were observed in Ukraine. At the same time, the influence of the traditional Ukrainian villages with a patriarchal spirit, which were supported by positive folk traditions, morals, and ethics, which were a reliable foundation, first of all, for the younger generations, decreased. The urban

population differed from the rural population in terms of lifestyle and behavior, age, and demographic structure. One of the negative mental characteristics manifested in Ukraine today is that a significant part of the society has practically come to terms with the fact that the internal politics of the State is formed from the outside. Even if Ukrainians shape the agenda, they are not always able to defend it.

A famous Ukrainian economist, philanthropist, and public figure, Havrylyshyn (2009) saw the main reasons for the inefficiency of Ukrainian society as the incompetence and corruption of the government and bureaucracy. There are a number of competent, decent, and patriotic people in the legislative and executive bodies. However, there is no critical mass of such people. Therefore, they are unable to carry out a real transformation of society. The majority of Ukrainians recognize the authority of a statesman not on the basis of real abilities and moral qualities but guided by emotions, and temporary admiration. That is why, phenomena such as cheap populism, vanity, slander, etc. flourish in Ukrainian politics.

Due to the historical circumstances in Ukraine, total resistance to changes has formed in many spheres; there is a lack of acceptance of the necessary reforms (Karpenko & Ilyina, 2017). Demyanenko (2022) emphasizes such a feature of the Ukrainians, like patience. This helps make informed decisions; however, this feature is harmful in the conditions of corruption and incompetence of power structures. World practice shows that one of the most effective methods of preventing corruption in the State is the strengthening of measures of financial and other control of persons authorized to perform State and other equivalent functions. Experts had high hopes that in the future such control would change the logic of people who enter politics only for their own enrichment. In Ukraine, an electronic declaration mechanism has been introduced since 2016 to implement such control. However, so far this has not brought any real results, although the discrepancy between the income and expenditure levels of the vast majority of parliamentarians and top level officials has become obvious.

In addition, the problem of forming an all-Ukrainian national identity remains relevant. Issues of State's language policy and inter-ethnic relations are acute. Such phenomena as denationalization and Russification of broad sections of Ukrainian society create significant difficulties on the way to national and political consolidation (Novikova, 2015). Unfortunately, the process of forming a national idea, which should become the basis of spiritual and political life, has not yet been completed in Ukraine. The stereotype about the obsolescence of the "national State" as the main form of statehood is quite actively spread in the mass media. Such conclusions are devastating for the national security of the country in general (Vlasyuk & Mokii, 2013).

The lack of citizens' solidarity, low level of trust in State institutions, underdeveloped horizontal ties, weak sense of common values, practical absence of an effective trade union movement, etc. do not contribute to the development of Ukrainian civil society. In addition, increased attention at the State level requires ensuring the spiritual and cultural needs of the Ukrainian nation and maintaining values as an important regulator of social relations. Ukraine can become either a prosperous State or find itself in a dead end, in the deep periphery of European civilization. Today we have a chance to make the right choice and rise to a completely different level of development (Popovych, 2014). Havrylyshyn (2009) noted that the building an effective society in modern conditions is impossible without the implementation of political freedom, and an economic well-being for the entire population, ensuring social justice and symbiosis with the biosphere. Unfortunately, the ecological culture of entrepreneurs and the majority of the population in Ukraine remains quite low. This leads to the deterioration of the natural environment and slows down the dynamics of introducing technologies saving energy and resources in production process. Therefore, essential for building an effective Ukrainian society is a harmonious combination of economic, social and ecological components of development, the popularization of "green" entrepreneurship, which will contribute to increasing the ecological, material and spiritual well-being of Ukrainian citizens (Pecheniuk, 2013).

According to Bendukidze (2016), Ukraine "must take decisive steps to transform the economy, which is burdened by huge government expenditures and corruption". He suggested reforming the tax system, reducing the State apparatus, and starting an uncompromising fight against corruption. A number of psychologists believe that, in order to implement the idea of building a successful State in Ukraine, it is necessary to develop and implement an effective model of success. People should feel the effectiveness of the reforms through the improvement of their quality of life (Ilyina, 2013). A psychologist, Khrushch (2021) In her article, "Globalization, Greed and Glocal Ecology: A Psychological Perspective", has described the process and nature of corruption in illicit forest curring

in the Carpathian mountains of Ukraine (p.8). Further, Khrushch and Karpiuk (2021) strongly argued that the changes happening in life depend on a person's level of development, orientation (towards the good or evil, improvement or destruction, augmentation or wastage), morality, spirituality and environmental consciousness (see also Khrushch, 2013, p.5). They quoted Hutsul ethnic groups having keen sense of dignity and industriousness, believing that a healthy or able-bodied person must attribute to morality and spirituality. In modern conditions, the Ukrainian people have an internal need to identify themselves as a nation of the European model.

In the coming years, the Ukrainian people will face the urgent task of cultivating mental characteristics aimed at implementing a set of effective solutions that will contribute to increasing the competitiveness and success of the State. The experience of the past decades shows that investors invest in countries where citizens have mental characteristics aimed at discipline, a responsible attitude to time and resources, and rejection of corruption. All these are elements of the investment climate, and, accordingly, the driver of economic growth. The entrepreneurial consciousness will give an impetus to creative adaptation, and assimilation of the best of what humanity has discovered for itself in the long history of the search for fundamental foundations, and not simply too passive adaptation and blind imitation of other peoples.

3. CONCLUSION

It should be understood that the standard of living of citizens, the level of economic development, the place of the country on the geopolitical map of the world, and its competitiveness directly depend on the mentality of the citizens. It is difficult for us to achieve changes in these directions due not only to political turbulence, total corruption, and external aggression, but also to deeper things. Understanding mental features allows understanding to a great extent the reasons for building the appropriate system of socio-economic relations in modern Ukraine. In the future, it will help overcome an oversimplified vision of social processes, and to understand the fundamental foundations of national rules of economic relations that exist in the minds of members of Ukrainian society.

REFERENCES

Artemenko, A.V. (2005). Global, economic and socio-cultural precondition for the establishment of the values of the world economy in the post-Soviet economy. VI All-Ukrainian Scientific and Practical Conference: Socio-economic transformations in the era of globalization. Poltava, pp. 222-229. [in Ukrainian].

Bendukidze, K. (2016). Maybe in Ukraine, the political class and the bureaucracy are fused together? Retrieved from: https://www.pravda.com.ua/articles/2016/11/13/7126674/ [accessed on 19 December 2022] (in Ukrainian).

Berezina, L.M., Pomaz, O.M. (2022). Socio-cultural factors of the formation of the modern socio-economic system of Ukraine. *Agroworld*, *1*, 13-19.

Bondarenko, O.V. (2009). Ukrainian national economic mentality and the "spirit of capitalism". *Humanitarian Bulletin of Zaporizhzhya State Engineering Academy*, *37*, 167-179.

Demyanenko, V. (2002). Mental characteristics of the political consciousness of Ukrainians. *Man and Politics*, *1*, 93-100.

Demyanyuk, V. (2016). Mentality as a driver of the economy. Mirror of the week. Retrieved from: https://zn.ua/ukr/internal/mentalnist-yak-drayver-ekonomiki-_.html [accessed on 11 December 2022] (in Ukrainian).

Havrylyshyn, B. (2009). *Towards Effective Societies: Report to the Club of Rome*. Kyiv: Pulsary, 246 p.

Ilyina, Y. (2013). Scientists offer a model of success. Does the state need it? Retrieved from: http://www.newlearning.org.ua/content/naukovci-proponuyut-model-uspihu-chi-potribno-ce-derzhavi [accessed on 22 December 2022] (in Ukrainian).

Ivanyshyn, V.V., Pecheniuk, A.V., & Pecheniuk, A.P. (2018). Formation of the entrepreneurial consciousness of the Ukrainian peasant. *Economy and Society*, *19*, 9-15. https://doi.org/10.32782/2524-0072/2018-19-2

Karpenko, A.V., & Ilyina, A.S. (2017). The influence of mentality on the economy. *Economy and Society, 9*, 231-236.

Khrushch, O. (2021). Globalization, Greed and Glocal Ecology: A Psychological Perspective. *Grassroots Journal of Natural Resources*, *4*(3), 1-12. https://doi.org/10.33002/nr2581.6853.040301

Khrushch, O., & Karpiuk, Y. (2021). Psychological Aspects of Building Environmental Consciousness. *Grassroots Journal of Natural Resources*, *4*(2): 120-135. https://doi.org/10.33002/nr2581.6853.040209

Khrushch, V. (2013). Hory yak osoblyve seredovyshche rozvytku osobystosti [Mountains as a Special Environment for the Development of Personality]. *Hirska shkola ukrainskykh Karpat* [*The Mountain School in the Ukrainian Carpathians*], 8-9: 3-8.

Kirichuk, O.V. (1994). Mentality: essence, functions, genesis. Mentality Spirituality. *Self-Development of Personality*, Kyiv-Lutsk, pp. 7-20.

Kolodny, A.M., & Filipovych, L.O. (1996). *Religious spirituality of Ukrainians: manifestations, figures, state*. Lviv: Logos, 182 p.

Novikova, N.E. (2015). Mentality as a determinant of the formation of political culture in Ukraine. *Scientific Notes of NaUKMA*, *Political Sciences*, *173*, 30-34.

Pecheniuk, A.V. (2013). Prospects for the development of ecological entrepreneurship in Ukraine. *Innovative Economy*, *3*(41), 172-175.

Pidkova, I. & Shast, R. (2001). *Handbook of Ukrainian History (A&Z)*. Kyiv: Geneza, 458 p.

Piren, M.I. (1996). *Basics of Ethnopsychology*. Kyiv: KVHI, 385 p.

Popovych, M. (2014). Tolerance is our national trait. *Bulletin of the Pension Fund of Ukraine*, *11*, 30-31.

Prokhasko, Y. (2022). Mentality of Ukrainians and historical traumas. Retrieved from: https://www.nas.gov.ua/UA/Messages/Pages/View.aspx?MessageID=9355 [accessed on 10 December 2022] (in Ukrainian).

Strazhnyi, O. (2022). Ukrainian mentality: why we look for "treason" everywhere, but in times of trouble we become strong. Social portal. Retrieved from: https://socportal.info/ua/news/ukrainskii-mentalitet-chomu-mi-vsiudi-shukaemo-zradu-a-pid-chas-bidi-staemo-silnimi/ [accessed on 16 December 2022] (in Ukrainian).

Tereshchenko, N.V. (2013). The mentality of the Ukrainian nation as a component of socio-economic behavior in the conditions of the development of neo-capitalism at the beginning of the 21st century. *Social and Labor Relations: Theory and Practice*, *1*, 119-124.

Vlasyuk, O.S., & Mokii, A.I. (2013). *Economic security of the state*. Lviv: Apriori, 836 p.

Voropai, O. (1991). *Customs of the Ukrainian people*. Kyiv: Oberig, 1,p. 449.

Yuri, M.T. (2007). *Ethnogenesis and mentality of the Ukrainian people*. Kyiv: Condor, 262 p.

Yushkevich, Y.S. (2012). Axiological component of Ukrainian mentality and mechanisms of its preservation. *Scientific Knowledge: Methodology and Technology*, *1*(28), 140-144.

Zemlyuk, V. (2018). Ethnopsychological and ethnopolitical features of the identity of Ukrainians. Retrieved from: https://ipiend.gov.ua/wp-content/uploads/2018/07/zemliuk_etnopsykhologichni.pdf [accessed on 14 December 2022] (in Ukrainian).

AUTHORS' DECLARATIONS AND ESSENTIAL ETHICAL COMPLIANCES

Authors' Contributions (in accordance with ICMJE criteria for authorship)

Contribution	Author 1	Author 2	Author 3
Conceived and designed the research or analysis	Yes	Yes	Yes
Collected the data	Yes	Yes	No
Contributed to data analysis & interpretation	Yes	Yes	Yes
Wrote the article/paper	Yes	Yes	Yes
Critical revision of the article/paper	Yes	Yes	Yes
Editing of the article/paper	No	No	Yes
Supervision	No	Yes	No
Project Administration	No	Yes	No
Funding Acquisition	No	No	No
Overall Contribution Proportion (%)	35	40	25

Funding
No funding was available for this study or publication.

Research involving human bodies (Helsinki Declaration)
Has this research used human subjects for experimentation? No

Research involving animals (ARRIVE Checklist)
Has this research involved animal subjects for experimentation? No

Research involving Plants
During the research, did the authors follow the principles of the Convention on Biological Diversity and the Convention on the Trade in Endangered Species of Wild Fauna and Flora? Not Applicable

Research on Indigenous Peoples and/or Traditional Knowledge
Has this research involved Indigenous Peoples as participants or respondents? No

(Optional) PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)
Have authors complies with PRISMA standards? Yes

Competing Interests/Conflict of Interest
Authors have no competing financial, professional, or personal interests from other parties or in publishing this manuscript.

Attribution and Representation
All opinions and mistakes are the authors' own and cannot be attributed to the institutions they represent.

RIGHTS AND PERMISSIONS

Open Access. This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third-party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit http://creativecommons.org/licenses/by/4.0/.