

Andean cosmovision: ethical principles in acculturated, endoculturated and transculturalized people

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Abstract

The political changes that have taken place in Bolivia in the last fifty years have led to modifications in the participation of subalternized groups and changes in the ethical appreciation of life. This study aims to establish the bioethical behaviors of the Andean cosmovision in acculturated, endoculturated and transculturalized people in La Paz, Bolivia. It is a mixed, exploratory, ethnographic, cross-sectional, comparative, synchronic, diachronic and systematic research, in which a questionnaire validated by experts (Cronbach's alpha 0.932) was applied to 399 people (5.3% acculturated; 73.9%, endoculturated and 20.8%, transculturalized). The results contrasted by hermeneutics obtained five categories, of which the category relationality was independent of acculturation ($p=0.262$); while the categories ecological awareness, complementarity, reciprocity, concept of health, social model and community depended on each other ($p=0.000$). It was found that the acculturated subjects from the rural area presented greater knowledge of ancestral ethics. The promotion of educational policies related to ethics is recommended.

Keywords: Culture. Bioethics. Acculturation. Worldview. Cultural diffusion.

Resumo

Cosmovisão andina: princípios éticos em povos aculturados, endoculturados e transculturalizados
As mudanças políticas que ocorreram na Bolívia nos últimos 50 anos levaram a mudanças na participação de grupos subalternizados e na apreciação ética da vida. Este estudo tem como objetivo estabelecer os comportamentos bioéticos da cosmovisão andina em pessoas aculturadas, endoculturadas e transculturalizadas em La Paz, Bolívia. Trata-se de uma pesquisa mista, exploratória, etnográfica, transversal, comparativa, sincrônica, diacrônica e sistemática, na qual um questionário validado por especialistas (alfa de Cronbach de 0,932) foi aplicado a 399 pessoas (5,3% aculturadas, 73,9% endoculturadas e 20,8% transculturalizadas). Os resultados contrastados pela hermenêutica produziram cinco categorias, das quais a categoria relacionalidade era independente da aculturação ($p=0,262$), enquanto as categorias consciência ecológica, complementaridade, reciprocidade, conceito de saúde, modelo social e comunidade dependiam umas das outras ($p=0,000$). Constatou-se que os indivíduos aculturados de áreas rurais tinham maior conhecimento da ética ancestral. Recomenda-se a promoção de políticas educacionais relacionadas à ética.

Palavras-chave: Cultura. Bioética. Aculturação. Cosmovisão. Transculturação.

Resumen

Cosmovisión andina: principios éticos en aculturados, endoculturados y transculturalizados

Los cambios políticos sucedidos en Bolivia en los últimos 50 años llevaron a modificaciones en la participación de grupos subalternizados y en la apreciación ética de la vida. Este estudio pretende establecer las conductas bioéticas de la cosmovisión andina en aculturados, endoculturados y transculturalizados en La Paz, Bolivia. Se trata de una investigación mixta, exploratoria, etnográfica, transversal, comparativa sincrónica, diacrónica y sistemática, en la cual se aplicó un cuestionario validado por expertos (alfa de Cronbach de 0,932) a 399 personas (5,3% aculturadas; 73,9%, endoculturadas y 20,8%, transculturalizadas). Los resultados contrastados por hermenéutica obtuvieron cinco categorías, de las cuales la categoría relacionalidad era independiente a la culturación ($p=0,262$); mientras que las categorías conciencia ecológica, complementariedad, reciprocidad, concepto de salud, modelo social y comunitario dependían entre sí ($p=0,000$). Se constató que los sujetos aculturados del área rural presentaban mayor conocimiento de la ética ancestral. Se recomienda la promoción de políticas educativas relacionadas a ética.

Palabras clave: Cultura. Bioética. Aculturación. Cosmovisión. Transculturación.

The authors declare no conflict of interest.

Two social models emerged within the complex historical evolution of Bolivia. One of globalized spirit and liberal economy, and the other based on ancestral rituality and the recognition of one's own culture and identity, regarding ecological balance, nature and reciprocity of human beings¹, considering "the Andean" as a discovery of cultural manifestations in the multiple interaction and construction of worldview patterns, which presuppose that the totality of a complex society manifests multiplicities that remake and destroy themselves, then rebirthing in a constant and indefinite way.

The retrospective view of culture around the 1960s presents a reductionist perspective of Andean knowledge and culture, limited to a series of myths and legends transmitted from generation to generation in almost all the historically acculturated inhabitants and families since colonial times, in which the abundance of ethical values regarding individual and collective life, and their integration with the environment stood out in their community life²⁻⁷.

The historical changes in 1952 resulted in an agrarian reform, universal suffrage and the nationalization of the country's mines, also leading to groups that until then were excluded from political decision making now participating in it, allowing rituals and behaviors of indigenous groups to be maintained even with the insertion of a new culture in daily life⁸⁻¹².

Advances in communication—in radio and then television—and the development of literacy programs over the following years provided disadvantaged groups with knowledge about a reality that, until then, was unknown. However, the flourishing of universities and the migration and remigration of Bolivian citizens abroad would lead to the internalization of a new conception of "world" in different social groups, as well as the demonstration of their potential for local development¹³.

From the 1990s onwards, indigenous groups began to participate in discussions about culture and cultural values, establishing a different understanding from the current liberal Western paradigmatic model. This translates into an ancestral-Westernized symbiosis, in which some

principles of ethical social conduct survive under a mental structure internalized in Eurocentrism¹⁴⁻¹⁵. This change defined a symbolic culture¹ internalized in individual behavior—though not explicitly—through which individuals share experiences and beliefs and enter all spheres of society, economy, health, religion, etc., with an ancestral-westernized symbiosis under the influences of Eurocentrism.

This decade also put the globalization of information on the spotlight, in which the subalternization and denial of indigenous and endocultured societies has been maintained since the 1950s-1960s¹⁶, adopting an apparently civilizing cultural model that considers capitalist, meritocratic and scientific thought as a unique paradigm of knowledge and behavior, causing the next generations to devalue or not even know the Andean conceptions of ethics and respect for living beings^{17,18}.

Thus, while some societal sectors tried to rescue the cosmic character of the Andean vision and its complementarity with nature, endoculturation led to loss of knowledge of Andean ancestral values, promoting productive and mutilating visions of humans and the environment^{19,20}. In this way, the changes that occurred in Bolivian politics and economy reduced indigenous production within national development, also reducing the application of ancestral customs, which governed the behavior of communities and social groups in the country. Ethics and respect for life were dismissed as important elements in the daily lives of the inhabitants, focusing only on small groups of indigenous people who were far from the city centers.

This study thus observed three fundamental stages, in which historical changes could have influenced the perception of ancestral principles: the first stage began before 1952 and partially disappeared in 1952, during the Nationalist Revolution; the second stage began in 1952 and lasted until 1980, when access to information for the most disadvantaged classes began and, at the same time, a state of endoculturation was introduced from the appropriation of middle and upper class values and of those whose communication culture was dominant²¹; the third

stage begins with the globalization process, taking as reference the 1980s and after, in which the population acquires knowledge that would further modify original social behaviors.

Given this context, this study aims to identify which bioethical behaviors of a millenary cosmivision are practiced by Bolivians, who went through processes of acculturation before 1952 and endoculturation between 1952 and 1980.

Method

This is a mixed, exploratory, ethnographic, cross-sectional, comparative, synchronic, diachronic and systematic research, with participants of Aymara origin from the department of La Paz (Bolivia), specifically from the provinces of Murillo (4 municipalities) and Ingavi (6 municipalities). These regions were selected because the first is a metropolis and political-cultural center of the department and country, and the second because it covers a population with higher illiteracy rates (33%) and more limited access to the department's media^{22,23}.

Three specialists, selected for their knowledge of Andean cosmivision and indigenous Altiplanic culture, answered a questionnaire with three open questions based on five sensitizing categories related to: 1) complementarity; 2) reciprocity; ecological awareness; 3) social and community model; 4) relationality; and 5) concept of health. The answers were analyzed using the Atlas.ti 8 software. After codifying the answers, the data were triangulated and resulted in categories that were presented in another questionnaire, then applied to the population²³.

This semi-structured questionnaire consisted of 54 items resulting from questions guided by the categories raised from each of the sensitizing topics, using a Likert scale. Weighting was created for each item based on the nominal weight of each category, according to the importance determined for each ethical principle in the qualitative analysis. The questionnaire was validated with a pilot test applied to 30 residents of urban, peri-urban and rural

areas, aged between 15 and 89 years, resulting in a 0.932 Cronbach's alpha, showing internal consistency validity.

The validated instrument was applied to 521 individuals, selected by intentional sampling in the municipalities of El Alto, Mecapaca, Achocalla and Palca in the province of Murillo; and Viacha, Guaqui, Tiwanaco, Desaguadero and San Andrés de Machaca in the province of Ingavi. In total, 122 questionnaires were excluded due to duplicate responses. Thus, 399 cases were analyzed, taking into account variables resulting from the sensitizing categories in the qualitative analysis. Each of the categories were scored on the weighting resulting from the rooting and density of the emerging categories, classified in: poor (scored 0-27), regular (28-55), good (56-85) and excellent (86-121).

In the quantitative analysis, the variable acculturation was classified based on exclusive rural housing, illiteracy, exclusive use of native language and absence or limited access to: television, radio and press. Endocultured individuals were classified considering living in the urban or peri-urban area, literacy, native language and Spanish, and moderate access to: television, radio, press and books. Transcultured individuals were categorized according to housing in the peri-urban or urban area, literacy, Spanish language and foreign language, and wide access to: television, radio, press, internet and libraries.

The findings were evaluated independently in a table of relative frequencies, accumulated frequencies and contrasts of the chi-square test in the categories of interest, acculturation, endoculturation and transculturation in each of the ethical principle categories. The data were then contrasted in contingency tables to apply the ANOVA analysis in the SPSS v.23 software.

The scoring items were later incorporated into two large groups. The first group included those with scores >55 points, being classified as subjects who do not know the principles of bioethics and of Andean cosmivision. The second includes those with scores <56 points, being categorized as subjects who knew the bioethical principles of interest.

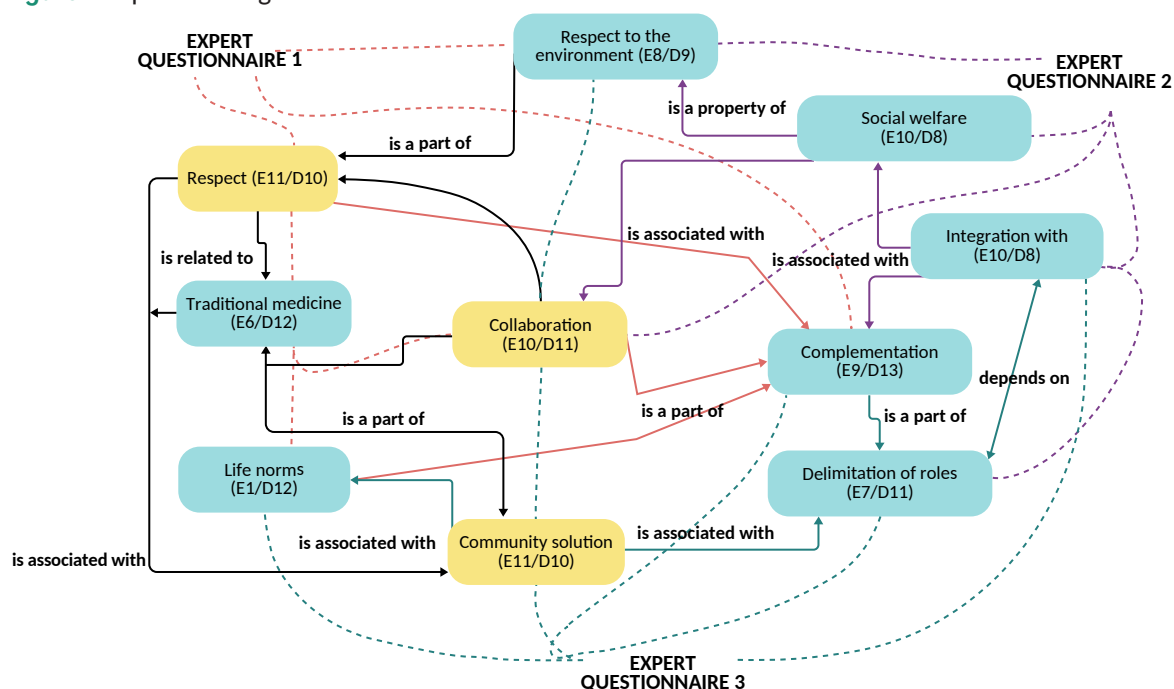
The relationship between the cultural degree and the knowledge of ethical principles was analyzed using the chi-square test and the multiple linear regression of dependent categories.

This study was carried out according to the guidelines of the *Declaration of Helsinki II* on the recommendations that guide the means of biomedical research involving human beings, and had ethical approval from the National Bioethics Commission and authorization of indigenous peoples through the National Council of Ayllus and Markas del Qullasuyu (Conamaq).

Results

The questionnaire applied to three specialists were qualitatively analyzed in the Atlas.ti 8 software, and the data were organized into sensitizing categories related to Andean ethics and cosmovision, and coded into 17 emerging categories. A triangulation analysis of these categories was made by the experts and, after consideration of the internal relationships, those whose rooting value and density was higher than the overall mean were selected (Figure 1).

Figure 1. Expert’s triangulation



The integration, collaboration, social well-being, complementation, social respect, respect for the environment, function delimitations, community solution, living standards and traditional medicine categories presented higher rooting and density values, thus being considered emerging categories required for the elaboration of the questionnaire that would be applied to the population, separating the elements of the questions in each item for quantitative evaluation.

After the application of the validated questionnaire, a descriptive statistical analysis

was applied to the social variables frequency tables, finding that 31.02% of participants were aged less than 14 years; 62.86% between 15 and 64 years; and 6% 65 or older. Regarding access to information through new information and communication technologies (ICTs), 82.37% of the participants used radio, 66.5% television, 23.56% computer, 73.49% landline or mobile phone and 7.96% internet.

Of the total number of respondents, 4% were both over 55 years of age and acculturated, whereas the mid age of life predominated in endoculturalized and transculturalized individuals

(47% and 11%, respectively). Transculturalized individuals between the ages of 15 and 23 accounted for 9%.

In all cultural groups, a higher participation of females (56%) was observed, especially in peri-urban and rural areas; 19.5% were from the urban area, 20% from the peri-urban area and 59.8% from the rural area.

After organizing the groups according to cultural degree, the level of knowledge about the principles was evaluated separately, so that the group aged between 24 and 55 years presented greater knowledge of relationality (73%), whereas ecological awareness was higher in the group of acculturated 55-year-olds (62%), as well as the principles of complementarity (40%) and reciprocity (28%). The general evaluation of the social and community model category found that endoculturated individuals over 67 years of age are more familiar with this model (67%).

The scoring items were then incorporated into two large groups. The first included those who scored >55 points, being classified as subjects who do not know the principles of Andean bioethics and cosmovision. The second group included those who scored <56 points, showing that 81% of acculturated people over 55 years of age know the ethical principles of the Andean cosmovision within their cultural group, compared with 52% of endoculturated and 45% of transculturalized individuals between 24 and 55 years of age. Moreover, 35% of transculturalized people under the age of 23 are aware of this topic.

The chi-square test modified by Fisher were performed to evaluate the relationship between the degree of culture and the knowledge of ethical principles. The results show that both categories are independent ($p=0.139$), though the principle of ecological awareness presents cultural dependence, as well as the complementarity, reciprocity, concept of health and social and community health model categories ($p=0.000$ in each case).

The multiple regression analysis was applied to the dependent categories to find correlations between each one, comparing the means of a general population, preserving the similar mean values in the three comparison groups. Significant correlations ($p<0.5$) can be observed, with a validated instrument between the categories, grades, social and community model, ecological awareness and reciprocity.

A positive correlation was observed between the culture category and the predictor variables demonstrated in the summary of Snedecor's F model, with $p=0.000$. The results between the groups and within these variables are independent, based on the quadratic means of the result and the standard deviation of the means that present values close to each other (Table 1).

A contingency table was elaborated to evaluate the level of knowledge about the principles of Andean cosmovision according to the level of culture with numerical evaluation, age and origin (Table 2).

Table 1. Snedecor's F Model

	Model	Sum of squares	gl	Mean square	F	Significance
1	Regression	22.265	8	2.783	15.054	0.000
	Residual	72.101	390	0.185		
	Total	94.366	398			

Asymptotic significance test of 0, compatible with a positive correlation between the culture variable and predictor variable

Table 2. Knowledge of ethical principles according to age and culture

Culture		Knowledge of ethical principles									
		Poor			Good			Excellent			
		Age			Age			Age			
		≤23	24-55	56-94	≤23	24-55	56-94	≤23	24-55	56-94	Total
Acculturated	Urban	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.25
	Periurban	0.00	0.00	0.00	0.50	0.00	0.25	0.00	0.00	0.25	1.00
	Rural	0.00	0.25	0.00	0.00	0.00	1.75	0.00	0.00	2.01	4.01
Endoculturated	Urban	0.75	0.50	0.25	0.75	4.76	1.50	0.00	0.00	0.25	8.77
	Periurban	0.25	2.76	0.00	1.00	6.02	1.00	0.00	0.50	0.00	11.53
	Rural	1.25	5.26	2.76	6.27	25.31	8.02	0.50	2.26	2.01	53.63
Transculturated	Urban	0.25	1.00	0.00	3.51	4.76	0.50	0.25	0.00	0.25	10.53
	Periurban	1.25	1.00	0.00	2.26	3.26	0.00	0.00	0.25	0.00	8.02
	Rural	0.00	0.00	0.00	1.25	1.00	0.00	0.00	0.00	0.00	2.26
Total		3.75	10.78	3.01	15.54	45.36	13.03	0.75	3.01	4.76	100.00

Inhabitants of the rural area have more knowledge about the bioethical principles in their peer group compared to the inhabitants of urban and peri-urban areas. On the other hand, a relationship between greater access to information and less knowledge of global ethical principles and the Andean worldview exists ($p=0.035$).

This result may be related to the fact that the information and communication flow has both grown significantly since the 1980s and become more accessible. This situation, added to the growing process of globalization, leads to the transculturalization of younger people. The advancement of technology impacts and modifies the thinking of this population, leading them to behaviors unrelated to native ones. The influence of communication processes and globalization on the distortion of the ethical principles of our original culture thus becomes evident.

Final considerations

We conclude that the ethical principles of the Andean cosmovision guide the criteria of relationality, complementarity, ecological

awareness and the social and community model, in which respect and integrality of being are the basis of social relations, as well as ecological awareness.

The level of knowledge about the bioethical principles of Andean culture is higher in acculturated inhabitants from the rural area, over 55 years of age. Endoculturated subjects aged between 24 and 55 years, residents of the peri-urban and rural areas, also presented good knowledge about these principles, whereas transculturated ones of urban areas know little about the subject.

The global appreciation of the principles denotes that relationality is better known in the endoculturated group, whereas ecological awareness and complementarity are greater among the acculturated. The separation of bioethical principles by the type of culture in relation to the number of interviewees per group shows that the group of acculturated people aged over 55 years have excellent knowledge of the principles of complementarity, reciprocity, solidarity, ecological awareness and community health.

The results found may stimulate more reflections on bioethical and ethical education in young people of the department of La Paz (Bolivia), especially in urban regions, where

transculturalization is related to the decline of universal ethical principles and of the native cosmovision, which reduces their individual perceptions, leading to depreciation of morality and of integration with nature, which the ancestors honored in their philosophical life view.

While equitable access to education is an undeniable value of people's rights, the type of

information accessed by young people under the age of 24 needs to be re-examined.

The results described in the statistical analysis allow us to observe that the greater the information, the lower the knowledge and practice of ethical values. This leads to the need to reduce the process of transculturalization to which our descendants are subjected.

We thank the Academia Boliviana de Medicina for its collaboration in the information gathering in the different municipalities.

References

1. Meza R. Cosmovisión andina: simbolismo y semiótica-Carlos Cantero. Nuevo Poder [Internet]. 2019 [acceso 17 abr 2023]. Disponible: <https://bit.ly/3XNYhAm>
2. Sánchez Arjona R. Apuntes sobre la cosmovisión Andina. Allpanchis [Internet]. 2010 [acceso 17 abr 2023];3(3):11-3. DOI: 10.36901/allpanchis.v3i3.325
3. Canqui E. El vivir bien, una propuesta de los pueblos indígenas a la discusión sobre desarrollo. Revista Obets [Internet]. 2011 [acceso 22 ago 2022];6(1):19-34. Disponible: <https://bit.ly/44Hjf6h>
4. Kadi Montiel OK, Acevedo Duque AEA. Liderazgo ético frente a la diversidad cultural dentro de las organizaciones con régimen disciplinario. Económicas CUC [Internet]. 2014 [acceso 17 abr 2023];35(2):75-88. Disponible: <https://bit.ly/43q6koi>
5. Huanacuni Mamami F. Vivir bien/buen vivir: filosofía, políticas, estrategias y experiencias regionales [Internet]. 4ª ed. La Paz: Coordinadora Andina de Organizaciones Indígenas; 2010 [acceso 17 abr 2023]. Disponible: <https://bit.ly/3JVCgKk>
6. Herrera Pardo H. Transculturación narrativa: utopía programática modernizante. Acta Literaria [Internet]. 2016 [acceso 17 abr 2023];52:81-101. DOI: 10.4067/S0717-68482016000100005
7. Villar MF, Araya-Castillo LA, Yañez-Jara VM, Acevedo Duque AE. Impacto de estilos de liderar sobre la capacidad de aprendizaje organizativo. Revista Espacios [Internet]. 2019 [acceso 22 ago 2022];40(37). Disponible: <https://bit.ly/3XTsOg7>
8. Eyzaguirre Morales ME. Bertonio y el modelo de la estructura ideológica: Tunupa y el allu Pacha. Ciencia y Cultura [Internet]. 2012 [acceso 17 abr 2023];(28):153-73. Disponible: <https://bit.ly/3FRct3q>
9. Finol W, Hernández O, Ocando M. Consideraciones epistemológicas del saber ambiental. Revista de Ciencias Sociales [Internet]. 2019 [acceso 22 ago 2022];25(2):204-15. Disponible: <https://bit.ly/3pPYKp2>
10. Gisbert T. El cerro de Potosí y el dios Pachacámac. Chungará [Internet]. 2010 [acceso 17 abr 2023];42(1):169-80. DOI: 10.4067/S0717-73562010000100028
11. Mesa Gisbert CD. Historia de Bolivia [Internet]. [s.d.] [acceso 17 abr 2023]. Disponible: <https://bit.ly/3PSVzYo>
12. Zapata Ferruffino B. Acerca de la complementariedad de género para vivir bien. Fundación Xavier Albó Centro de Servicios Bibliográficos [Internet]. 2014 [acceso 17 abr 2023]. Disponible: <https://bit.ly/43pBMTq>
13. Gonzalez-Díaz RR, Becerra-Peréz LA, Acevedo-Duque ÁE. Narco-marketing as a strategy for local tourism development. Revista Ibérica de Sistemas e Tecnologias de Informação [Internet]. 2020 [acceso 17 abr 2023];36(E36):71-85. Disponible: <https://bit.ly/44lBNcl>
14. Pérez-Brignoli H. Aculturación, transculturación, mestizaje: metáforas y espejos en la historiografía latinoamericana. Cuadernos de Literatura [Internet]. 2017 [acceso 17 abr 2023];21(21):96-113. DOI: 10.11144/Javeriana.cl21-41.atmm
15. Stallaert C. Transculturación, transmodernidad y traducción: una mirada latinoamericana sobre la Europa del siglo XXI. Cuadernos de Literatura [Internet]. 2017 [acceso 17 abr 2023];21(41):131-52. DOI: 10.11144/Javeriana.cl21-41.tttm

16. Aguirre J. Globalización, internet y transculturación. Reflexiones desde el pensamiento de Fernando Ortiz. *Utopía y Praxis Latinoamericana* [Internet]. 2018 [acceso 17 abr 2023];23(81):129-35. DOI: 10.5281/zenodo.2253482
17. Ochoa Arboleda ML, González Díaz RR. El carácter axiológico del proceso educativo en Colombia. *Revista Científica Centros* [Internet]. 2017 [acceso 17 abr 2023];6(2):1-17. Disponible: <https://bit.ly/44mwyJH>
18. Noroño Sanchez JG, Nuñez VM, Gonzalez DRR. Ética sindical como mecanismo impulsor de competitividad en las pequeñas y medianas empresas. *Utopía y Praxis Latinoamericana* [Internet]. 2020 [acceso 17 abr 2023];25(1):154-73. Disponible: <https://bit.ly/3XR4xqX>
19. Achig-Balarezo D. Significados y sentidos de la cosmovisión andina. *Ateneo* [Internet]. 2017 [acceso 17 abr 2023];19(1):87-91. Disponible: <https://bit.ly/3ObNsF5>
20. Judd E. La inculturación en el contexto andino. *Allpanchis* [Internet]. 1989 [acceso 17 abr 2023];21(33):249-85. DOI: 10.36901/allpanchis.v21i33.947
21. González-Díaz RR, Flores Ledesma KN. Cultura organizacional y sustentabilidad empresarial en las pymes durante crisis periodos de confinamiento social. *CIID Journal* [Internet]. 2020 [acceso 17 abr 2023];(1):28-41. Disponible: <https://bit.ly/3NO3pzP>
22. González-Díaz RR, Polo EAS. Entrevistas Espontaneas Catorce (EEC) para la construcción de categorías orientadoras en la investigación cualitativa. *Journal of Latin American Science* [Internet]. 2018 [acceso 17 abr 2023];2(1):1-11. Disponible: <https://bit.ly/3D9YRPG>
23. Instituto Nacional de Estadística (BO). Hogares con acceso a tecnologías de información y comunicación (TIC), según área, 2012-2021 [Internet]. 2022 [acceso 1 jan 2022]. Disponible: <https://bit.ly/45kyRfM>


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Participation of the authors

Gladys Inés Bustamante participated in drawing up the study protocol, collecting information in the provinces, statistical analysis and conclusions. Rina María Álvarez-Becerra carried out the review and validation of the data collection instruments, statistical evaluation and conclusions. Claudia Pineda-Fernández contributed to the theoretical and conceptual framework and the collection of information. Zelma Diana Quisbert-Quinteros participated in the collection of information in the provinces.

Received: 5.30.2022

Revised: 7.19.2022

Approved: 4.13.2023