

Organisational Health and Resilience of Community Health Insurance Schemes in Bukavu Eastern DRC

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Abstract

This study aims to analyse the health status and transformative potential of community health mutualism (Musaco) to ensure support for inclusive access to healthcare. In dealing with this, it analyses the psychological, physiological, behavioural, systemic and absorptive factors of the mutual health organisations in question. On the basis of the untypicalities, deficits, gaps and disturbances in operation, it diagnoses the organisational structure, in towns compared to the countryside; describes the structure and functionality, the evolution of membership, penetration and the recovery of contributions and care. The data collected provided the necessary inputs. The Integrated Organisation Model (IOM) was used as an organisational diagnostic tool. Data processing was carried out using Stata and Excel software. Qualitative analysis of the reports and the results of the interviews enriched the quantitative data. Discussion of the results generally reveals obstacles, with or without significant differences between towns and villages. The differences appear in the “Inputs-Processing-Outputs” process and the reuse of outputs. Similarly, the strong influence of the technostructure and the lack of managerial compassion somewhat delay the weaning and emergence of Musaco. However, assets such as the commitment and optimism of the managers and the attachment of the members, as well as opportunities such as the support and backing of the local authorities, are all essential to the success of Musaco.

Keywords

Health, Organisational Health, Psychological and Physiological State of Health, Living Organisation-Organism, Community Health Mutuality (Musaco), Organisational Therapy

1. Introduction

The World Health Organisation (WHO) refers to six components of psychological well-being in the workplace: autonomy, control over one's environment, opportunities for personal growth, positive relationships with others, the existence of life goals to achieve and self-acceptance (Anderbrand, 2018: pp. 80-81). The holistic mental, psychological, physiological and physical well-being of a living organism is a complex process that is built in a fluctuating ecosystem, from inputs to outputs via a whole process of transformation in the organism. Like human beings, living organisms aspire to a "state of complete mental, physical and social well-being". It reduces sources of discomfort by ensuring diversity, equality and inclusion (Kuptsch & Charest, 2021). This is built up over time, in an organisational culture that countries and their organisations build, refine and consolidate. As they strive to achieve well-being, mutual societies are faced with a host of problems, such as a steady decline in performance, a gradual drop in membership numbers, low rates of collection of contributions and health care costs, members dropping out, lack of state support, insufficient solvency among members, declining credibility, low capacity to honour partner invoices, insufficient and underpaid staff, few profit-making self-employment activities, and low household purchasing power. Overall, our study considers it useful to shed light on these concerns. Specifically, it aims to determine the overall state of health in terms of functionality, structure, changes in membership by area of activity, memberships and withdrawals, penetration and collections of contributions/care. Hence the hypothesis that "the SO of the Mutuelles de santé communautaires (Musaco) is dependent on multiple factors, in particular, the degree of commitment of the operators, the age and size of the organisation; the rates of membership and withdrawal, penetration and collection of contributions/care...". The following key factors would influence SO.

Figure 1 shows the basis of the study process. We assume that: "the organisational health (OH) of the Musaco community health mutualism depends on multiple factors, the most influential of which are the individual and collective commitment of the agents, the age and size of the mutual, membership/disaffiliation, penetration, and the collection of contributions and care".

The industrialised countries of the Western bloc (USA, CANADA, EU, UK and AUSTRALIA) are constantly improving the health of their organisations/companies. Since the end of the Second World War, these countries have learned lessons from the use of traditional management models. They are now

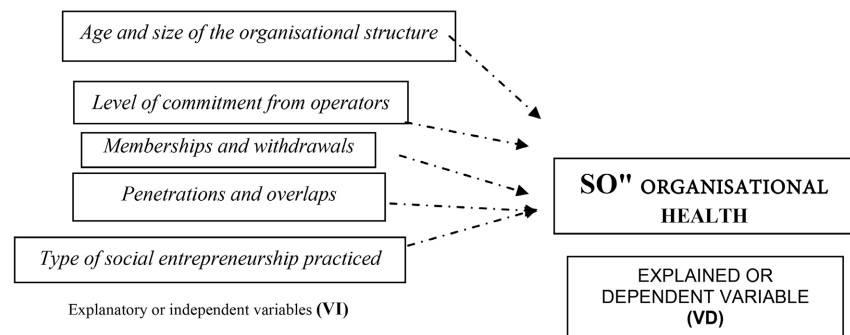


Figure 1. Factors influencing the SO of Musaco.

digitalising and teleworking. Research, interventions and developments in occupational health take into account four levels: psychological, physiological and behavioural health at work, the organisational entity, the environment and integration (integrative or collaborative level). The health of an organisation therefore covers the complete state of well-being and not just the state of freedom from disability/illness and infirmity of its human components (Djokic et al., 2019; Duane et al., 2020). Like a human organism, organisations are therefore subject to regular check-ups of their state of functioning. The state of mental health of operators, individually and as a team, influences their being at work. The same applies to the structure and extent of the psychological, physiological and behavioural demands of the tasks. In turn, the overall balanced state of functioning, exuberant and bouncing back from disturbances, simultaneously expresses the organisation's good health and resilience (Grenier et al., 2022: pp. 179-195; Anderbrand, 2018: p. 80; Moulin, 2021: p. 63; Dagenais-Desmarais et al., 2013: pp. 661-681). The individual, alone and as part of a work team, is therefore the key player in Psychological Wellbeing at Work (PWW) and Psychological Distress at Work (PDW) (Gilbert, 2019). Other Western research points to the organisational system and leadership as the factors responsible for organisational health. Citing the Canadian and French experiences, they show that organisational behaviour and that of managers are real sources of risk of mental disorders at work, counter-performance, adjustment deficits and organisational non-adaptation (Anderbrand, 2018: p. 81; Moulin, 2021: pp. 34-63). This research recommends combining subjective and objective approaches, and comparing the symptoms observed at psychological and behavioural levels with the physiological and physical changes in individuals. Their results show that the perception of individual success, combined with organisational success, contributes to an overall positive perception of well-being at work. These results also show that mental health at work is associated with variables such as emotional exhaustion, burn-up, inadequate use of skills, job insecurity, and weak or absent leadership (Luckstead et al., 2019). According to these results, individual and collective perceptions of the distributive, procedural, interpersonal and informational dimensions of organisational justice play a role in the health of the system. Operators refer to these dimensions to assess the extent to which the best performance is linked to the most positive possible institutional response. In this

way, human resource management improves SO by creating a balance between achieving optimum organisational productivity, organisational development and positive responses to employees' individual and collective needs for fulfilment (Moulin, 2021: p. 34). Canada and France, for example, are spending enormous sums to reduce both personal risk factors for mental disorders in the workplace and other risk factors linked to working conditions; their companies are creating institutional health systems such as the Caisse Primaire d'Assurance Maladie, "CPAM", and the National Institute for Occupational Safety and Health, "NIOSH", (Dubreuil et al., 2019: pp. 1-8). Furthermore, it seems somewhat enigmatic in mental health to refer to Organisational Health as "OH", as in Canada, or to Health and Quality of Life at Work as "QWL", as in France. Some people see SO and SQVT more as a natural extension of advances in the science of organisational behaviour management. They suggest a collaborative, multidisciplinary/integrative approach to conducting a more systemic and holistic organisational autopsy (Dagenais-Desmarais et al., 2013: p. 74). All in all, the close link between the issue of SO and well-being in employment exposes the gap once observed in the Western model. Its tendency was to ignore the non-employed working population and the long-term unemployed. Over time, different methods have been applied in different countries to include those marginalised from social protection. For example, the institutionalisation of "Obama Care" in the USA; notwithstanding criticism of its paternalistic nature, for more than five years it has facilitated the integration of more than 52.5% of the planned 40 million members.

In the **Asian bloc**, the rebounding health performance of organisations was particularly evident during the period of the Corona Virus health crisis. China and South Korea laid bare a whole range of capacities for transformative social innovation. Having involved as many players as possible in the fight against the virus, these countries demonstrated exceptional organisational resilience, which transformed them into a global hub for the supply of inputs for the prevention and reduction of COVID-19. For example, China has successfully mobilised civilian actors, Chinese NGOs and volunteers (Elda et al., 2022) but not only in China it is quite known that partners help increase human rights even in the increasing of children' wellbeing (Sindayigaya, 2020, 2022, 2023; Sindayigaya & Nyabenda, 2022). In South Korea and China, on the other hand, there was remarkable integrated management of the crisis and the post-pandemic period. The governments of these countries were able to combine public and private initiatives. The salutogenic strategies used in South Korea and China were so successful that they were able to manufacture huge volumes of healthcare products in record time. As a result, these countries successfully applied both policy measures for the widespread distribution of healthcare products and the system for controlling optimal access to these products (Nasho, 2022: p. 13). On the other hand, in the north of ViệtNâm, structural and institutional change in the district of BâtTràng, has revealed the failing organisational health of family businesses. Operating under the closed Soviet communitarian model, these

businesses were grouped together thanks to support from both the government and international bodies (UNDP, USAID, ILO, etc.). This multi-faceted support, which is complementary in political, legal, financial and structuring terms, has revitalised them. They have also improved their overall well-being, transforming themselves from a closed structure to one that is adapted, more dynamic, complex and open to a wider market. It therefore appears that the health of an organisation manifests itself through all its capacities for integration, adjustment, transformation, absorption and adaptation in the face of adversity. A healthy organisation will not necessarily be resilient: for it to be resilient, it must be able to bounce back from disruption without suffering (Cardim et al., 2019).

In **Africa**, recent studies based on direct observation of the behaviour of organisations and analysis of stakeholder perceptions reveal a general lack of innovation and an imperceptible level of rebound. In particular, organisations in the healthcare sector practice preventive, promotional and curative care on people on a daily basis. However, they do so much less, or not at all, for the enhanced performance of their own human resources, functionalities, systems and organisational cultures. They seem to be “fixed” at the stage of persistent organisational learning (Coulibaly et al., 2020; Filliettaz, 2022; Koeken et al., 2020). However, in the Maghreb countries, notably Algeria and Morocco, efforts are being made to digitalise health care and social security services and to enrich the individual culture with information technologies with a view to improving performance as perceived by employees. Other countries, such as Senegal, Cameroon and Mali, are working to improve the health status of their mutual health insurance schemes, and to consolidate the factors that encourage members to join and retain their loyalty. Their aim is to maximise universal health coverage and optimal, inclusive access to healthcare (Zinaoui et al., 2022: p. 144; Chiadmi, 2023: pp. 245-273; Diallo, 2023; Ridde et al., 2021). Rwanda is cited as one of the pioneering countries in terms of the organisational well-being of its inclusive health insurance system. 88% of Rwandans benefit from it via community health mutualism. No other country in sub-Saharan Africa has yet achieved this record. In Africa, therefore, the communitarianisation of healthcare provision and the digitalisation of community health services are, in some countries, current or future therapeutic approaches to the organisational deficits of inclusive access to healthcare.

Burundi, the DRC and many other African countries are still facing the general problems of insufficient funding and social and economic disparities (Nduwimana & Sindayigaya, 2023a, 2023b) especially in inclusive access to health coverage. For example, in the context of the right of minorities and vulnerable groups to healthcare, the WHO has been supporting Burundi since June 2022 in its efforts to raise awareness and include marginalised people excluded from health coverage (afro.who.int > countries > Burundi > news of 10 June 2022). Similarly, the ILO calls on nation-states, especially in Africa, to work on diversity, equality and inclusion (Kuptsch et al., 2021: pp. 1-13). In the DRC, on

the other hand, the government is preoccupied with filling structural gaps. They have transformed the Institut National de Sécurité Sociale (INSS) into the Caisse Nationale de Sécurité Sociale (CNSS). The Provincial Labour and Employment Division has been split into two divisions: the Social Welfare Division (DPPS) and the Labour Division. In addition, the national government has agreed to fund health cover for mutualised teachers from 2022¹.

The **particular contribution** of our study lies in its object, its methodology and the destination of its results. The purpose of the study is to determine the level of well-being of community mutual organisations in terms of their operability, leadership, membership development, loyalty and contribution collection. It differs from previous work in that the SO approach is directly linked to resilience. Previous work in this field has focused on assessments of psychological health at work (Gilbert, 2019); on the interactions between SO and corporate culture (de Araujo & Lucia, 2020) or with organisational justice (Moulin, 2021: p. 63). From a methodological point of view, we share with our predecessors the techniques of direct observation of behaviour, communications and sources of distress in organisations (Yanis et al., 2021). However, the use of the diagnostic tool “M.I.O” or Integrated Organisation Model, sets us apart. The results of our study could contribute to the development of science like others (Nogal et al., 2023; Ward et al., 2019), but also, in particular, these results would be useful in psychosociological analysis and psychotherapy of organisations.

2. Methods and Methodology

2.1. Data Collection and Quality Control

The secondary data collection instruments include a checklist of documents, correspondence and reports consulted in the umbrella institutions of the “Musaco” community health mutualism (See Table 1). The quality of the information documented was checked. The 2007 to 2022 statistics of 25 mutual organisations were checked. They include three from the Uvira “Rams” network, for 2009 to 2017, and nine from North Kivu, not yet structured as a network, for 2010 to 2020. After quality control, the figures deemed to be consistent and homogeneous fall within the intervals [2007-2022], [2009-2017] and [2010-2018-2022]. The statistics collected on changes in membership numbers in both towns and villages were processed in Excel spreadsheets to form the database and produce ad hoc graphs. Statistical software was used for the analysis of variance and the Student’s T, Kruskal Wallis and Chi-square tests.

2.2. Open Interviews

A single question was addressed to each of the subjects contacted: “*please give your opinion on the operation and governance of Musaco in terms of its struc-*

¹Interviews with the DPPS on 28 December 2022 and with the Students’ Mutual Association and the Executive Secretariat of the Community Health Mutual Association Network, “Remusaco”, on 9 January and 12 January 2023 respectively.

ture, credibility/legitimacy, leadership and overall management”. Respondents freely gave their opinions. Their anonymous identities are shown in **Table 3**. Seven members were contacted, including an administrator from the teachers’ Musaco and another from the students’ Musaco; an agent from Remusaco and two from the Public Administration/Provincial Social Protection Division (DPPS); and two facilitators.

The MIO organisational diagnostic *tool*

The Integrated Organisation Model (IOM) has been applied to describe the operating process, levels of regulation and structure of a Musaco. It is presented below:

Figure 2 shows that Musaco is a complex system to which the MIO is applied in order to understand how it can use its strengths to eliminate its weaknesses and threats. Inputs of the Musaco: Members-Contributions, Legislation, Mentality, Local cultures/traditions, Purchasing power, Staff, Equipment. Transformation or socio-technical Processing (PT): structure, Interactions between personnel, between “Agents-Equipment”, and Agents with other inputs in order to function. As outputs, these are Musaco’s services to Members, the support provided to them, the levels of Productivity-Satisfaction-Loyalty-Development achieved...

As a system and a “living organism”, Musaco is born, lives and grows from the inputs it receives from its environment. The environment influences Musaco through the inputs it draws from it. In turn, the environment is influenced by the outputs (goods and services) that meet individual and collective needs. Over time, Musaco transforms resources in order to produce.

3. Analysis Results

The results relate to socio-demographic characteristics and overall functioning.

Table 1. Musaco ages and membership numbers at birth and in 2022.

Musaco ages	Rural areas				Urban environment		
	Number	At the start and in 2022	Members	Differences	Number	Members	Differences
20 to 26 years old	4	At the beginning	13.124	+2.974	00	00	00
		In 2022	16.098			00	
15 to 19 years old	2	At the beginning	3.450	+11.352	4	13.727	-4.440
		In 2022	14.802			9.287	
10 to 14 years	6	At the beginning	8.259	+90.373	2	10.357	-6.742
		In 2022	98.632			3.615	
5 to 9 years	6	At the beginning	17.628	-11.604	00	00	00
		In 2022	6024			00	
Less than 5 years	00	00	00	00	1	1975	-1.008
		00				967	
TOTAL (N = 25)	n1 = 18 (0.72)	At the beginning	42.461	+89.095	n2 = 7 (0.28)	26.059	-12.190
		In 2022	131.556			13.869	
GAP (%)				+309.8%			-53.2%

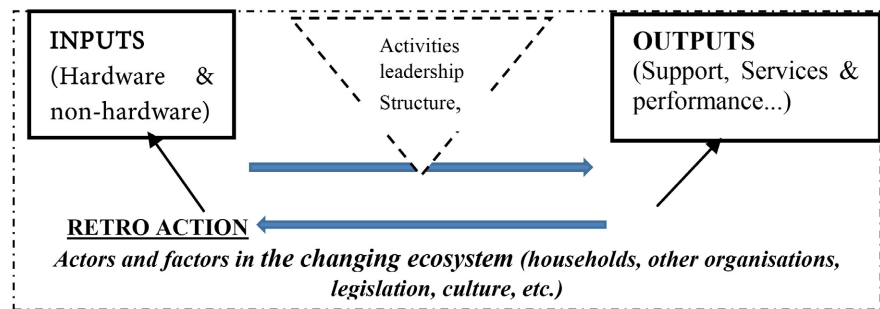


Figure 2. Integrated Organisation Model (IOM). Source: Bonami, M., *Management des systèmes complexes*, p. 67.

3.1. Socio-Demographic, Structural and Institutional Characteristics of Musaco

The following table shows the ages of Musaco members and the number of members.

Table 1 shows that of the 25 Musaco members, more than seven-tenths operate in rural areas and have a positive gap of 309.8% in 2022 compared with 2002, i.e. an increase of 209.8% in membership over twenty years. The average annual increase is therefore almost 21 members. In urban areas, on the other hand, there will be a decline in membership of 53%, or 47%. The city lost an average of 5 members a year in 2022, compared with 2002. The question remains as to why these disparities exist. Some of them are certainly due to data imbalances. Quality control of the figures revealed incomplete and missing statistics for many Musaco companies. Eight of the 25, or 0.32, have complete, regular and extrapolable data for the period 2002 to 2022. They are presented in **Table 2** below.

As it can be seen from **Table 2**, membership has fallen over the past three years in all the areas studied. The exceptions are the Musaco of Kalehe and Ibanda, where membership rose from 3351 to 4867 and from 1970 to 2570 respectively between 2020 and 2022. Using the MIO integrated organisational model, we can identify the deficits observed on the basis of actors and external factors, inputs, outputs and the socio-technical transformation process. This process includes structure and leadership, the analysis of which also enables us to shed light on pathologies of structural and management origin. Two (unofficial) organisation charts below, drawn up on the basis of the report, provide photographs of the links observed. We will come back to them in the discussion of the results.

Representation of the Musaco Boards of Directors at Remusaco General Meetings

Figure 3 shows that the network of Musaco has an Executive Secretariat and a Board of Directors to achieve its objective of improving access to healthcare and supporting the development and consolidation of its member health mutualism. The supreme decision-making body is the General Assembly, which comprises all the Boards of Directors of the 25 Musaco members. It is chaired by the Archbishop.

Table 2. Musaco with complete and regular data (2020 to 2022).

Name of Musaco	Members Rural areas			Members Urban environment		
	2020	2021	2022	2020	2021	2022
1- Musa d’IDJWI-Sud	6.401	6361	5653	-	-	-
2- Musa d’IDJWI-Nord	1.895	2122	1589	-	-	-
3- Musa de KALEHE	3.351	3187	4867	-	-	-
4- Musa NYANTENDE	4.356	4564	3989	-	-	-
TOTAL RURAL AREA	16.003	15.234	16.098			
5- Musa CHAHI	-	-	-	918	1303	1045
6- Musa CIRIRI	-	-	-	5302	4882	4466
7- Musa STUDENTS	-	-	-	2360	2418	1348
8- Musa IBANDA	-	-	-	1970	1669	2570
TOTAL URBAN AREA				10.550	10.272	9.429

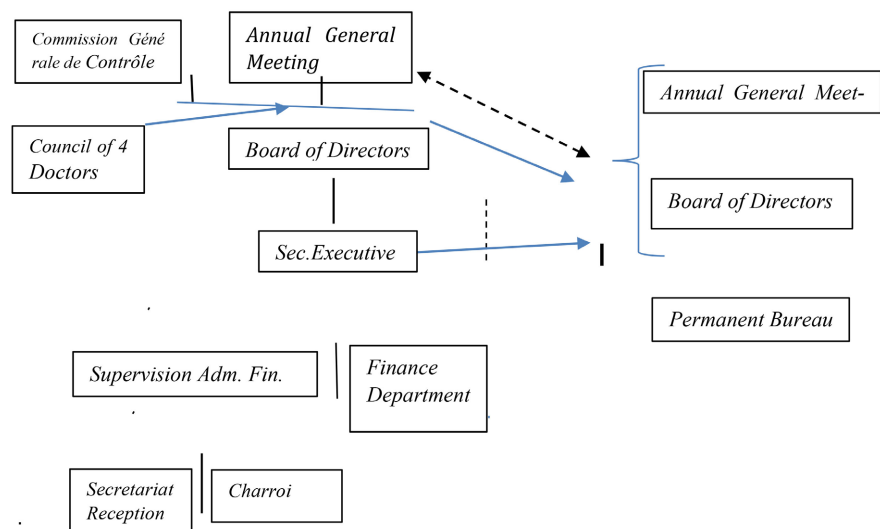


Figure 3. Structure of a Musaco. Legend: Controls and monitoring-evaluations.

At the institutional level, the Réseau des Mutuelles de Santé Communautaires “Remusaco”, operates in accordance with organic law N°17/002 of 08.02.2017 determining the fundamental principles relating to mutual health insurance. Since 2016, Remusaco has replaced the former structure known as the Cellule d’Appui aux Mutuelles de Santé (CAMPS). The organisational charts in Figure 1 and Figure 2 have thus been strengthened. However, the organisational/institutional well-being is still not very perceptible. The challenge of Musaco’s individual self-management remains unresolved. The environmental situation is changing without any adjustment or adaptation mechanisms being put in place. Routine takes hold. It seems to inhibit innovation and dynamism.

Furthermore, the structural analysis and the relational flows that take place show that we are in the presence of a structural configuration dominated by the techno-structure. This is because, in addition to training activities, three types of technical support from the administrative head office to Musaco are perceptible: support in monitoring and evaluating the execution of activities and the level of achievement of performance indicators; general control of administration and finances; and verification of relations with partner health institutions responsible for providing health care to members. A reading of the organisation charts using structural configuration theory reveals a Remusaco structure dominated by the techno-structure (Mintzberg, 2019; Pichault et al., 2020). **Figure 3** above shows that the Musaco is subject to checks by the techno-structure and the executive.

3.2. Indicators of Overall Operating Condition

Figure 4 indicates that from 10 functional health mutualism in 2007, the number has increased year by year, rising from 10 to 25 Musaco in 2016. However, the number of members has fluctuated up and down over the same period, as shown below (See **Figure 5**).

As can be seen from **Figure 5** below, Musaco's membership trends have fluctuated considerably. Over the period from 2006 to 2013, membership showed an upward trend: from 29,648 members in 2006 to 118,105 members in 2013, an increase of more than 450% in 2013 compared to 2007. This upward trend has been reversed, from 118,105 members in 2013 to 46,880 in 2022, a drop of almost 60% in 2022 compared with 2013 (in 10 years). On the other hand, the number of Musaco members rose from 23 in 2013 to 25 in 2022, a two-year increase of almost 9%. We therefore need to shed some light on the factors that explain the contrast between the fall in membership numbers and the rise in the number of Musaco members. The trend lines below show the differences between rural and urban areas.

The illustration from **Figure 6** demonstrates that over the entire period from 2007 to 2022, the average annual membership was 43,973 in rural areas compared with 27,587 in urban areas. The student's t test (p -value = 0.012) shows that there is a significant statistical difference between rural and urban areas in terms of average membership. There is an imbalance in the data observed in these graphs.

Over the past fourteen years, membership has fluctuated considerably. In most years there have been withdrawals. As **Figure 7** shows, from 2008 to 2013, membership rose in both towns and villages, peaking in 2012. Since then, there have been withdrawals, with membership plummeting to 26,727 in 2014 and 21,690 in 2017. The slight increase in membership observed in 2019 has not reached previous levels. In general, membership trends are the same in rural and urban areas. However, rural areas record much higher membership than urban areas. At a closer look, the drop-out rate is more pronounced in the city than in

the village. **Figure 8** below shows this following figure.

This **Figure 8** shows that the average withdrawal rate has generally varied from 51.40% in 2016 to a peak of 74.18% in 2021. The trend has remained relatively the same in rural and urban areas. The highest drop-out rates were observed in 2021, with 85.62% in urban areas and 72.54% in rural areas. This raises questions about the future of Musaco. All in all, the maximum withdrawal rate is 87.3%, compared with a minimum of 43.7% in 2021. The ANOVA test shows that the rate of variability of drop-outs between the Musaco programmes studied does not differ significantly (p -value = 0.8527), just as it is balanced between rural and urban areas (p -value = 0.6200). What then of the penetration rates among the target populations? **Figure 9** below shows the trends.

The level of attrition worsens with low penetration or reach. **Figure 9** below shows that the overall penetration rate has been falling steadily since 2018. The average penetration rate among target populations has fallen from 2.52% in 2018 to 1.57% in 2021. Urban areas show the lowest average penetration rate, relatively equal to 0.35%, from 2018 to 2021, compared with 1.73% in rural areas in 2021. The Kruskal Wallis test confirms this significant difference between penetration rates in the two areas (p -value = 0.0067). The penetration rates of the target population also vary significantly between different Musaco areas (p -value = 0.0008).

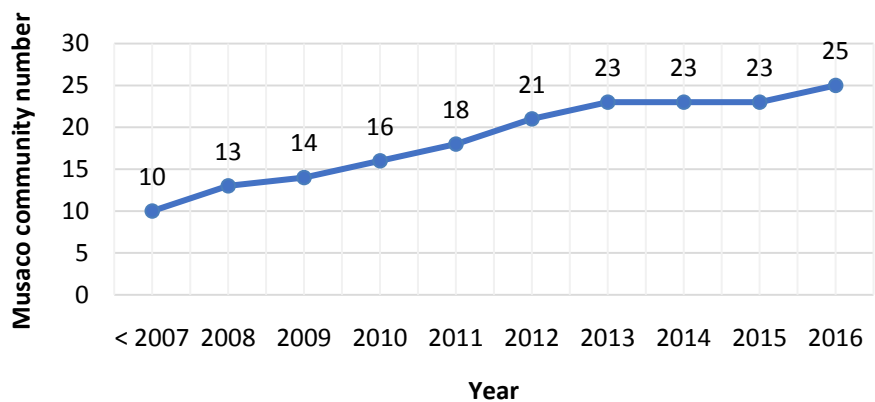


Figure 4. Growth in the number of Musaco (community health mutualism).

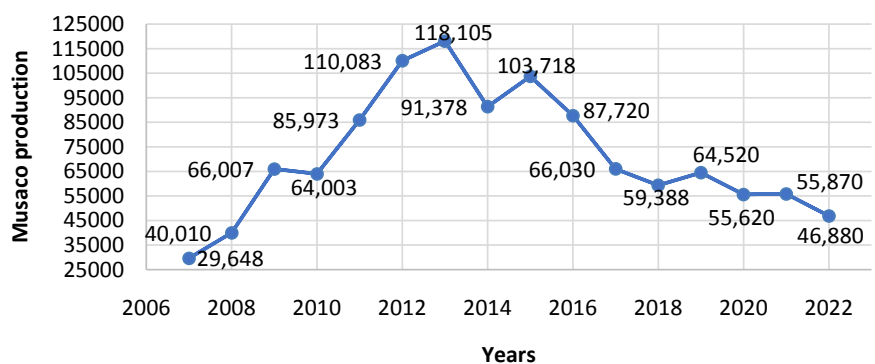


Figure 5. Musaco membership growth 2007 to 2022.

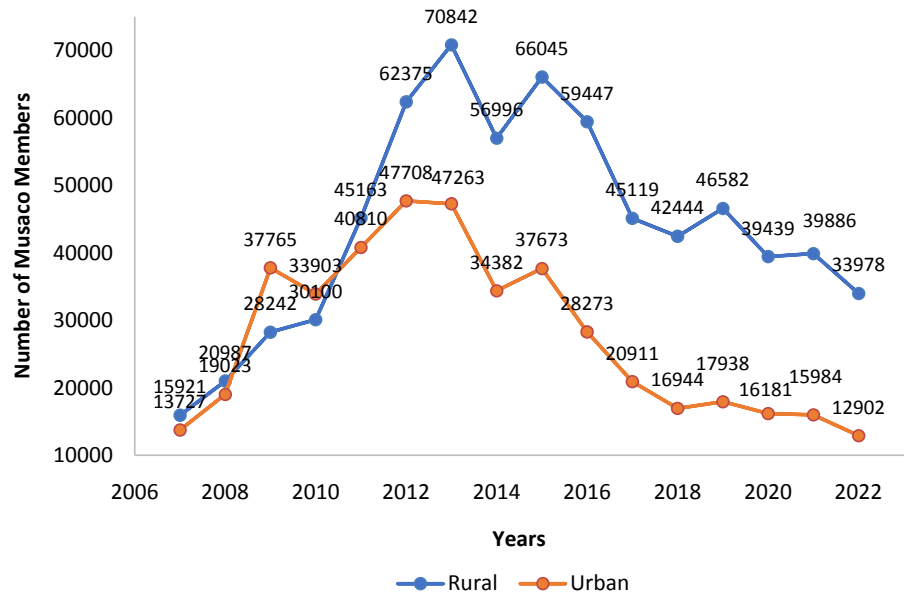


Figure 6. Members in rural areas compared with urban areas.

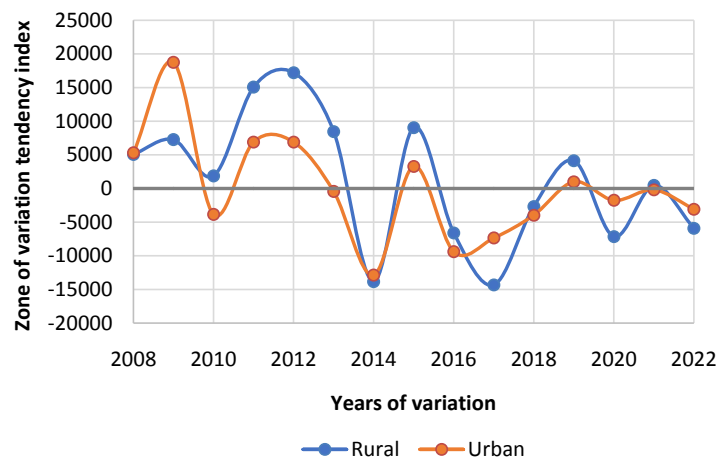


Figure 7. Membership trend curves (2008-2022).

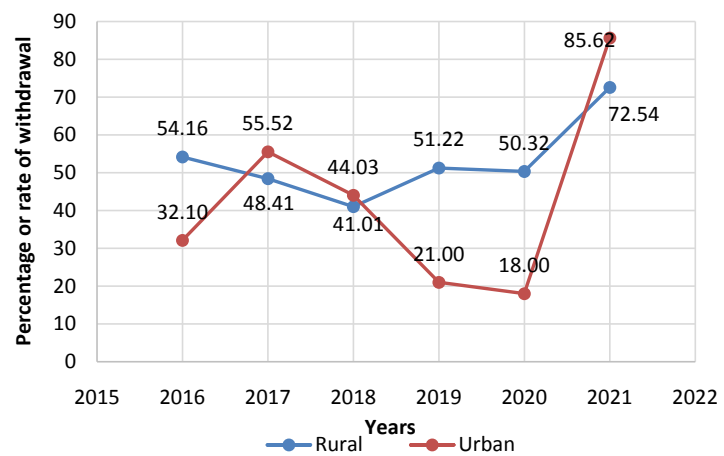


Figure 8. Withdrawal rate for members.

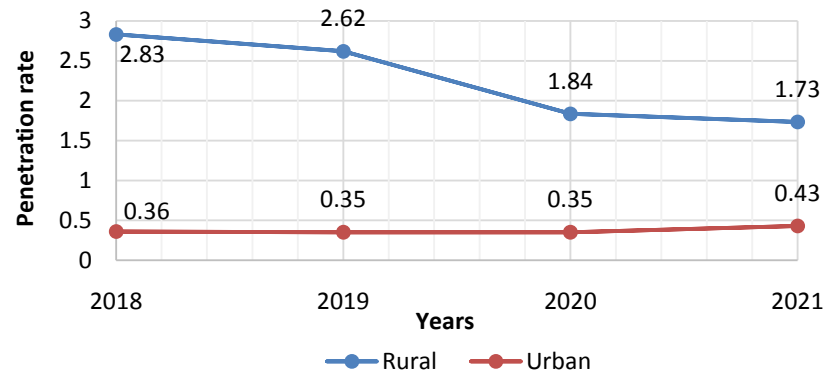


Figure 9. Penetration rate among target populations.

Figure 10 below shows that despite the high drop-out rate and low penetration level, the level of collection has remained high overall (78.01% and above) from 2016 to 2021. The year 2019 recorded the highest average collection rate of 98.77% for both urban and rural areas. The lowest average rate was 88% in 2020 for both environments. It can also be seen that the rate of collection of contributions remained relatively stable in the urban environment from 2016 to 2019, falling from 2020 to 2021. For the rural environment, the lowest average collection rate was 87% in 2018. Using the Kruskal Wallis test, we conclude that there is no statistically significant difference between rural and urban recovery rates (p -value = 0.8368). The same is true for Musaco (p -value = 0.3383).

The care recovery rate has tended to fall; from an average annual rate of 94.18% in 2018, it has dropped to 39.37% in 2021 (See **Figure 11**). On the other hand, the retention rate has changed little: from 70.66% in 2019, it has fallen slightly to 68.91% in 2021. Despite the insufficient number of positive responses received, members generally remain loyal to their Musaco.

3.3. Summary of the Main Analysis Results

In quantitative terms, the indicators in **Table 3** below show a fairly worrying overall state of health, given the shortfalls in the recovery of healthcare costs and the number of members in towns and cities.

According to **Table 3**, at the qualitative level, analysis based on the MIO and individual perceptions reveal instructive psychosocial and managerial realities. Obviously, personal perceptions are not binding in their entirety. However, even if, according to *Gestalt theory, the whole is different from the sum of its parts, it remains clear that it is these parts that hold the whole together and act upon it, thus reifying the organisation*. In summary, the proportions of the opinions expressed are shown in **Table 4** below.

Table 4 shows the divergences and convergences by category. The divergences are based on analyses of the content of the reports and structured interviews with seven resource persons in the mutualism area studied. The results are given in proportions.

Table 3. Values of organisational health indicators.

Indicators	Wording, Tests and Values	(p-Value)	Findings and decisions
1- Membership 2022/2002	Rural: 131,556/42,461 = 310%.	-	210% increase in 21 years
	City: 13,869/26,059 = 53.2%.	-	Down 46.8% in 21 years
2- Average annual membership	Rural vs Urban: T.calc > T.tab ?	(0.012)	Rejection of Ho at 0.05
	Between 8 Musaco; A.calc ≤ A.tab?	(0.006)	Rejection of Ho at 0.05
3- Rate of withdrawals Members	Rural vs Urban: T.calc > T.tab	(0.8527)	Ho acceptance at 0.05
	Between 8 Musaco; A.calc > A.tab	(0.6200)	Ho acceptance at 0.05
4- Penetration rate	Rural vs Urban: KWcal < KWtab	(0.0067)	Rejection Ho at 0.05
	Between 8 Musaco; KWcal < KWtab	(0.0008)	Rejection Ho at 0.05
5- Contribution recovery rate	Rural vs Urban: KWcal > KWtab	(0.8368)	Ho acceptance at 0.05
	Between 8 Musaco; KWcal > KWtab	(0.3323)	Rejection Ho at 0.05
6- Healthcare recovery and member retention rates	Rural & Urban: in sharp decline	-	94.2% to 39.4% in 4 years
	Loyalty: down slightly	-	70.7% to 68.9% in 4 years

Table 4. Proportion of convergent and divergent perceptions by MIO-related category.

MIO categories and sub-categories		Convergences-Divergences	Proportions
INPUTS	Musaco staff	Assignment by skill vs No skill concerns	0.5 Versus 0.5
	Employee profit-sharing	High participation Versus (or vs) Low participation	0.2 Versus 0.8
	Workspace	Well-equipped/convenient office vs Poorly equipped/inconvenient office	0.6 Versus 0.4
TREATMENT	Organic structure	High hierarchical weight vs Low hierarchical weight	0.8 Versus 0.2
	Standards, procedures	Standards and procedures very much applied vs little applied	0.7 Versus 0.3
	Local health leadership	Local health leader acting vs Not acting	0.2 Versus 0.8
	Organizational information	Effective information network vs Not very effective	0.3 Versus 0.7
OUTPUTS	Hired agents and managers	Reinforced motivation/capabilities vs Unmotivated/N-capabilities	0.6 Versus 0.4
	Optimized finances	Contributions recovered in full versus in part	0.7 versus 0.3
	Loyal/attached members	High satisfaction Low satisfaction	0.3 Versus 0.7
	Effectiveness/efficiency achieved	Objectives/results achieved at reduced cost vs Not achieved	0.4 Versus 0.6
REGULATION	In advance	Forecasts met vs Not met	0.8 Versus 0.2
	By alert	Complaints tensions and conflicts resolved vs Unresolved	0.4 Versus 0.6
	Feedback (By mistake)	Member complaints honoured vs not honoured	0.3 Versus 0.7
	Reuse of outputs	Musaco products well used vs poorly used (+Neutral)	0.2 Versus 0.8
REUSE OF OUTPUTS	To support Nosomu Empowering Musaco	Entrepreneurship support provided vs Not provided	0.1 Versus 0.9
		Musaco in the process of becoming autonomous vs Non outstanding	0.2 Versus 0.8
	Information System Relationship with the environment	Computerisation of services in progress vs Not in progress Musaco more influential on the environment vs Less influential	0.4 Versus 0.6 0.5 Versus 0.5

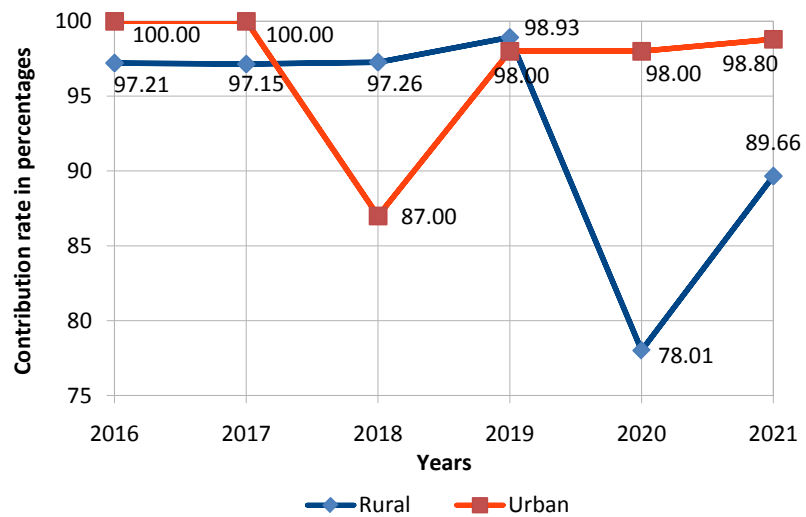


Figure 10. Contribution recovery rate.

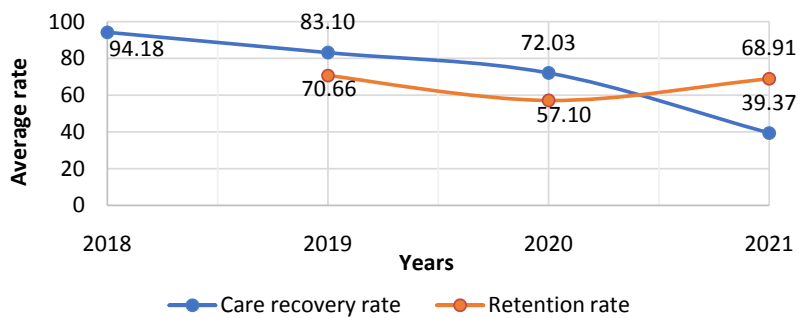


Figure 11. Proportion of care recoveries compared to loyalty recoveries.

4. Discussion of the Results

The results were discussed from the angle of the integrated organisational model, considering the Remusaco network and each of the member Musaco as complex systems. The focus is on the key factors influencing the health and resilience of the targeted mutual. The first factor taken into account is the individual, his or her participation and work space. Cross-checking the data shows that perceptions are controversial when it comes to allocating staff according to the requirements of each post and the profile/skill of the occupant. In addition to the affinity criterion based on involvement in Catholic diocesan works, the criteria of diploma, morality and docility are cited for recruiting and assigning staff. From this point of view, the individual malaise that emerges when looking at the organisational structure is that of the isolation of the Musaco leader. Most of the time, they work alone in the office, whether in town or country, and do not belong to any union. There is no clear job description. In this case, according to many authors, confusion and ambiguity become common phenomena, especially when positions are not clearly defined, authority relationships obscure and information lines unorganised (Aubert et al., 2022; Chhabra et al., 2019). The distraught and isolated worker thus finds himself in a situation where his desires

are inhibited. The psychoanalytical explanation based on the three Freudian principles of consciousness “Constancy-Pleasure-Displeasure-Reality” shows that the conscious subject makes a conscious choice between fulfilling his desire, postponing it, prohibiting it or trying to sublimate it (Chhabra et al., 2019). This shows the difference between the way psychoanalysis views the individual and the way it views Human Resources Management (HRM). The psychoanalytical approach is comprehensive and integrates the unconscious (Guénette & Chouinard, 2020; Nduwimana & Sindayigaya, 2023b; Sindayigaya, 2020; Sindayigaya & Nyabenda, 2022). The HRM approach, on the other hand, sees the subject as a resource person who submits to the principles of instrumental rationality and strategic rationality. From these points of view, the reluctance to join (Index 100 in 2000 compared with 53 in 2022) and the continual withdrawals in certain Musaco (p -value 0.8527 and 0.6200) are directly linked to the low recovery rates, both for contributions and for health care for members. These members, like the employees, are rational. Faced with the perceived issue of whether or not to remain an employee/member, whether or not to join, whether or not to pay contributions, each member and each worker makes his or her own decision. With their personal interests and expectations in mind, members decide whether or not to contribute, depending on what they gain or lose by supporting their Musaco and ipso facto safeguarding their harmonious relationship with it. So there is no question here of a mechanical attachment. Rather, we are dealing with the calculation of the players involved.

Analysis of the transformation process reveals a structure dominated by the techno-structure. Technocrats, controllers and assessors from Remusaco’s head office have greater authority over the Musaco office, whose Board of Directors has direct authority. The standards and procedures required to be applied by agents outside Musaco are thus brought to the fore, and managerial compassion is increasingly minimised. In the extreme, they become sources of stress. On the one hand, the results of our research concur with those of previous studies which have established that managerial compassion constitutes the lever of SO through the identification of mediating mechanisms and a mediating condition specific to the psychological state of the managers themselves (Grenier et al., 2022: p. 182). The analyses show that managers favour forecasts in terms of periodic performance standards; this is the opinion of 8 out of ten people (0.8). This means that in these days, the focus is more on anticipatory regulation than on human relations. On the other hand, little attention is paid to regulation through alerts and errors (according to 0.7 and 0.6 respondents); management is generally less attentive to staff complaints and demands. On the other hand, the relatively moderate management does manage to give hope to the staff, who are paid a strict minimum and evaluated by Remusaco headquarters. This reveals that in its current configuration, Musaco’s organic structure is merely a representation of Remusaco. Its scope for initiative, innovation and entrepreneurship remains infinitesimal. This is borne out by the continuing fall in indicators of

healthcare coverage by members (down from 94% to 39% over the last four years in rural and urban areas combined). Similarly, the penetration indicators are not significant, at 0.0067 and 0.0008 respectively in rural and urban areas. Our analyses show that 8 out of 25 Musaco, or 3 to 4 out of 10 mutualism, in both urban and rural areas, have operating indicators reflecting fairly good organisational health. The high level of significance observed in the collection of contributions (0.8368) is due to external financial support for poor members and the state's financial contribution for members who are primary and secondary school teachers. This does not reflect the monetary capacity of members in general. A new style of global management of the Remusaco network therefore seems to be needed to improve the state of organisational health. As many researchers have argued, this will involve reducing technocratic practices and getting the Musaco members of the Remusaco network more involved in the process of gradually weaning themselves off drugs. This will reduce extra-organisational stressors and improve workers' psychological health indicators. They could develop positive emotions, reduce depressive symptoms and burnout, and be predisposed to job satisfaction, absenteeism and emotional exhaustion (Grenier et al., 2022: pp. 183-186).

The outputs and their reuse show a feverishness expressed by 8/10^{ème} interviewees. The latter presumed that Musaco products were not used rationally. Nine out of 10 complained that Musaco provided little or no support for income-generating activities (IGAs) initiated by members. In their opinion, some of the Musaco's products should be reused to strengthen their solidarity nuclei, "Nosomu". These nuclei suffer from insufficient support in terms of structuring and organisational capacity building. Yet it is through the latter that the Musaco could support the social entrepreneurship of their members and strengthen their ability to pay contributions. In the absence of managers who use managerial compassion, members and staff lack a body that can listen attentively and sympathetically to their grievances, needs and complaints; they also lack an incentive framework to be present alongside each other to promote compassion at work and in the "Nosomu", just as managers at different levels fail to act as models of compassion. Managers should be able to reconcile the best possible performance with the individual and collective fulfilment of their staff, and with the organisational and institutional development of Musaco/Remusaco. The overall periodic results appear mixed. Particularly in urban areas, there is still a weak chain reaction and little discernible dynamism in terms of inclusive access to care and support for development.

5. Conclusion

All in all, this work on the organisational health of community health mutualism aims to verify the hypothesis that the health of the organisation depends on factors such as the age and size of the structure, the commitment of the components, the levels of penetration and membership, the operating environment, the

rates of recovery of care and contributions and the extent to which Musaco manages to support the social entrepreneurship of its members. In order to verify the interplay between the factors at play and Musaco's health, we used the MIO as a systemic analysis tool, statistical methods and content analysis of the opinions of seven people of varying qualities in the Musaco area. The results show that, in general, Musaco and its Remusaco network are unwaveringly committed to the quest for organisational well-being, as evidenced by major achievements such as the continued growth in membership in rural areas: from index 100 to 310, a 210% increase over the past 21 years (2002 to 2022); the effort to apply and execute forecasts, standards and procedures; regular checks and evaluations; and the high level of commitment to establishing authority and respect for hierarchy. However, many challenges remain. Membership rates in urban areas are gradually falling, from an index of 100 in 2002 to 53.2% in 2022, an overall drop of 46.8% in twenty years, while there is no significant difference between the drop-out rate in urban and rural areas (p -value = 0.8527), or between Musaco in the city and Musaco in the countryside (p -value = 0.6200). There has also been a worrying decline in the healthcare recovery services provided by Musaco to urban members. Of the 94% who benefited from these services in 2018, only 39% did so in 2022. Musaco products are also perceived by eight out of 10 people as being poorly used, as is the lack of support for the empowerment of Musaco and local health leadership (0.8 opinion).

At the end of the analyses, our study establishes that the current overall good health of Remusaco with its Musaco members is exposed to multiple challenges such as weaning and social entrepreneurship. It suggests that the network should support the structuring of its members into more entrepreneurial Musaco and Nosomu, more committed to reasonable weaning. That local health leadership should be able to encourage peers to transform their "Knowledge-Attitudes-and-Practices" linked to Musaco; that member should direct their perceptions towards a more responsible pooling of social protection and towards the practice of "IGAs", with a view to entrepreneurship. Further research could shed more light on the leadership of mutual organisations in the health insurance sector, on social entrepreneurship as a factor in the organisational health and resilience of Musaco in the face of ever-increasing disruption, and on members' perceptions of the managerial compassion of the managers of their Musaco.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Anderbrand, L. K. (2018). *Responsible Management: An Axiological Approach*. Laval University, Canada.
- Aubert, I., Kletz, F., & Sardas, J.-C. (2022). La coordination: D'une fonction à un métier? Le cas des coordonnateurs dédiés en santé. *Politiques & Management Public*, 3, 317-339.

<https://doi.org/10.3166/pmp.39.2022.0015>

- Cardim, N., Dalen, H., Voigt, J.-U., Ionescu, A., Price, S., Neskovic, A. N., Edvardsen, T., Galderisi, M., Sicari, R., Donal, E., Stefanidis, A., Delgado, V., Zamorano, J., & Popescu, B. A. (2019). The Use of Handheld Ultrasound Devices: A Position Statement of the European Association of Cardiovascular Imaging (2018 Update). *European Heart Journal—Cardiovascular Imaging*, *20*, 245-252. <https://doi.org/10.1093/ehjci/je145>
- Chhabra, H. S., Sarda, K., Jotwani, G., Gourie-Devi, M., Kaptanoglu, E., Charlifue, S., Yadav, S. L., Mohapatra, B., Srivastava, A., & Phadke, K. (2019). Stem Cell/Cellular Interventions in Human Spinal Cord Injury: Is It Time to Move from Guidelines to Regulations and Legislations? Literature Review and Spinal Cord Society Position Statement. *European Spine Journal*, *28*, 1837-1845. <https://doi.org/10.1007/s00586-019-06003-3>
- Chiadmi, M. (2023). Analyse du lien et de l'interaction entre performance sociale et financière des entreprises; une synthèse de la littérature. *Revue française d'Economie et de Gestion*, *4*, 245-273.
- Coulibaly, A., Gautier, L., Touré, L., & Ridde, V. (2020). Le financement basé sur les résultats (FBR) au Mali: Peut-on parler d'émergence d'une politique publique de santé? *International Development Policy*, Article 12.1. <https://doi.org/10.4000/poldev.3242>
- Dagenais-Desmarais, V. et al. (2013). Organizational Health: Where Do We Stand and Where Are We Heading in Quebec? *Industrial Relations*, *68*, 661-681.
- de Araujo, M., & Lucia, R. (2020). *Culture organisationnelle et santé au travail: Prévention de la santé mentale au travail et prise en compte de l'affectivité institutionnelle par les managers*. These de Doctorat, Université Lumière. <https://www.theses.fr/2020LYSE2091>
- Diallo, M. A. (2023). La couverture maladie universelle au Sénégal; quand les facteurs socioéconomiques expliquent l'adhésion et le recours aux mutuelles de santé à Ziguinchor. *Revue Africaine des Sciences Sociales et de la Santé Publique*, *5*, 85-113.
- Djokic, J., Bowen, A., Singh Dooa, J., Kahatab, R., Kumagai, T., McKee, K., Tan, C., Fitzgerald, K., Duane, B., & Sagheri, D. (2019). Knowledge, Attitudes and Behaviour Regarding the Infant Oral Health Visit: Are Dentists in Ireland Aware of the Recommendation for a First Visit to the Dentist by Age 1 Year? *European Archives of Paediatric Dentistry*, *20*, 65-72. <https://doi.org/10.1007/s40368-018-0386-0>
- Duane, A., Stancliffe, R., Miller, F. A., Sherman, J., & Pasdeki-Clewer, E. (2020). Sustainability in Dentistry: A Multifaceted Approach Needed. *Journal of Dental Research*, *99*, 998-1003. <https://doi.org/10.1177/0022034520919391>
- Dubreuil, Ph. et al. (2019). Organizational Health: What Challenges Await Tomorrow's Researchers? *Humain et Organisation, Université du Québec à Trois rivières*, *5*.
- Elda, E., Apriliaswati, R., & Rezeki, Y. S. (2022). Improving Students' Reading Comprehension of Descriptive Text by Using Teacher's Scaffolding. *Journal of English Education Program*, *3*, 35-45. <https://doi.org/10.26418/jeep.v3i1.48620>
- Filliettaz, L. (2022). La plasticité des rapports aux terrains en formation professionnelle. *Éducation Permanente*, *230*, 109-121. <https://doi.org/10.3917/edpe.230.0109>
- Gilbert, P. (2019). Psychotherapy for the 21st Century: An Integrative, Evolutionary, Contextual, Biopsychosocial Approach. *Psychology and Psychotherapy: Theory, Research and Practice*, *92*, 164-189. <https://doi.org/10.1111/papt.12226>
- Grenier, S. et al. (2022). Managerial Compassion as a Propellant of Organizational Health in Times of Disruption. *Machina*, *6*, 179-195.
- Guénette, M., & Chouinard, I. (2020). Le déplacement en contexte de protection de

- l'enfance: Quels savoirs pratiques à l'œuvre chez les familles d'accueil québécoises? *Trabalho (En)Cena*, 5, e020005.
- Koeken, V. A. C. M., de Bree, L. C. J., Mourits, V. P., Moorlag, S. J. C. F. M., Walk, J., Cirovic, B., Arts, R. J. W., Jaeger, M., Dijkstra, H., Lemmers, H., Joosten, L. A. B., Benn, C. S., van Crevel, R., & Netea, M. G. (2020). BCG Vaccination in Humans Inhibits Systemic Inflammation in a Sex-Dependent Manner. *The Journal of Clinical Investigation*, 130, 5591-5602. <https://doi.org/10.1172/JCI133935>
- Kuptsch, C. et al. (2021). The Future of Diversity. In *Diversity, Equality and Inclusion, Discrimination and Exclusion* (pp. 1-13). ILO.
- Kuptsch, C., & Charest, É. (2021). *The Future of Diversity*. International Labour Office. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_831316.pdf
- Luckstead, J., Tsiboe, F., & Nalley, L. L. (2019). Estimating the Economic Incentives Necessary for Eliminating Child Labor in Ghanaian Cocoa Production. *PLOS ONE*, 14, e0217230. <https://doi.org/10.1371/journal.pone.0217230>
- Mintzberg, H. (2019). *Bedtime Stories for Managers: Farewell to Lofty Leadership*. *Welcome Engaging Management*. Berrett-Koehler Publishers.
- Moulin, S. (2021). *Perception de justice et santé au travail: L'organisation à l'épreuve*. Presse de l'Universitaires de Laval, "PUL", Canada.
- Nasho, E. (2022). Transformative Social Innovation and the Management of the First Wave of Covid-19: Lessons for Crisis and Post-Pandemic Management. *Innovation-Revue d'économie et de management de l'innovation*, 67, 163-194.
- Nduwimana, S., & Sindayigaya, I. (2023a). Entry and Mobility in Technical and Vocational Education in Burundi. *Open Journal of Social Sciences*, 11, 11-20. <https://doi.org/10.4236/jss.2023.117002>
- Nduwimana, S., & Sindayigaya, I. (2023b). Establishing Quality in Technical and Vocational Education in Burundi: Contribution of the National Education Forum, Edition 2022 and in Employability in Burundi. *Open Journal of Social Sciences*, 11, 142-153.
- Nogal, A., Asnicar, F., Vijay, A., Kouraki, A., Visconti, A., Louca, P., Wong, K., Baleanu, A.-F., Giordano, F., Wolf, J., Hadjigeorgiou, G., Davies, R., Michelotti, G. A., Franks, P. W., Berry, S. E., Falchi, M., Ikram, A., Ollivere, B. J., Zheng, A. et al. (2023). Genetic and Gut Microbiome Determinants of SCFA Circulating and Fecal Levels, Postprandial Responses and Links to Chronic and Acute Inflammation. *Gut Microbes*, 15, Article ID: 2240050. <https://www.tandfonline.com/doi/abs/10.1080/19490976.2023.2240050>
- Pichault, F., Fatien Diochon, P., & Nizet, J. (2020). Autonomy of Independent Professionals: A Political Process Perspective. *European Management Journal*, 38, 623-633. <https://doi.org/10.1016/j.emj.2019.12.007>
- Ridde, V. et al. (2021). *Towards Universal Health Coverage in 2030? Reforms in Sub-Saharan Africa*.
- Sindayigaya, I. (2020). *Du respect des droits du nourrisson pendant la vie carcérale de sa mère au Burundi: Cas des prisons centrales de Mpimba et Ngozi-femme*. <https://doi.org/10.13140/RG.2.2.23023.51361>
- Sindayigaya, I. (2022). Analysis of the Child's Right to Housing Implementation for Street Children in Burundi: Case of Kirundo City. *Applied Mathematical Sciences*, 16, 465-472. <https://doi.org/10.12988/ams.2022.916819>
- Sindayigaya, I. (2023). The Overview of Burundi in the Image of the African Charter on Rights and Welfare of the Child. *Beijing Law Review*, 14, 812-827. <https://doi.org/10.4236/blr.2023.142044>

- Sindayigaya, I., & Nyabenda, A. (2022). Infants Residing with Their Mothers at Mpimba Prison, Burundi: Do They Have Rights to Be Protected? *Applied Mathematical Sciences*, *16*, 555-563. <https://doi.org/10.12988/ams.2022.916865>
- Ward, M. M., Deodhar, A., Gensler, L. S., Dubreuil, M., Yu, D., Khan, M. A., Haroon, N., Borenstein, D., Wang, R.-S., Biehl, A., Fang, M. A., Louie, G., Majithia, V., Ng, B., Bigham, R., Pianin, M., Shah, A. A., Sullivan, N., Turgunbaev, M. et al. (2019). Recommendations for the Treatment of Ankylosing Spondylitis and Nonradiographic Axial Spondyloarthritis. *Arthritis Care & Research*, *71*, 1285-1299. <https://doi.org/10.1002/acr.24025>
- Yanis, R., Bergua, C., Christelle, B., Maillot, F., Bigot, A., Beurier, P., Ferreira-Maldent, N., Diot, E., & Gouilleux-Gruart, V. (2021). Neonatal Fc Receptor Expression in Lymphoid and Myeloid Cells in Systemic Lupus Erythematosus. *Lupus*, *30*, 1938-1945. <https://doi.org/10.1177/09612033211045049>
- Zinaoui, T. et al. (2022). Digitalisation of Public Administrations in the Era of the Pandemic. Le cas de la Caisse Nationale de Sécurité Sociale (CNSS) au Maroc. *Communication et Organisation*, *2*, 143-161.