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Quality of work life and health-related quality of life in women working in the informal economy in the commune 9 of Cali, Colombia

Calidad de vida en el trabajo y calidad de vida relacionada con la salud en trabajadoras del sector informal de la comuna 9 de Cali, Colombia

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Abstract

Introduction: Quality of work life (QWL) and health-related quality of life (HRQOL) determine health, social participation and productivity indices of women working in the informal economy. Objectives: To establish the relationship between QWL and HRQOL in women workers in informal economies from the commune 9 of Cali, Colombia.
Materials and methods: Analytical and correlational cross-sectional study conducted in 2019 in 48 in women working in the informal economy who were administered the Quality of Life at Work (CVT-GOHISALO)" and the Health-Related Quality of Life-HRQOL (SF-36) questionnaires. The correlation between the dimensions of both instruments was established using the Spearman's correlation coefficient (weak: *rho*=0.1-0.3; moderate: *rho*=0.31-0.6; strong: *rho*=0.61-0.9, and perfect: *rho*=0.9-1.0), considering a significance level of $p<0.05$.
Results: There is dissatisfaction in 5 dimensions of the CVT-GOHISALO questionnaire, with the highest levels of dissatisfaction found in personal development (97.91%) and well-being achieved through work (95.83%). In the SF-36 questionnaire, the mean score was low in both the physical and mental summary components (45.89.3 and 44.712.9, respectively). A moderate positive and statistically significant correlation was observed between the overall score of the CVT-GOHISALO scale and the physical summary component of the SF-36 questionnaire (*rho*=0.419; $p=0.004$) and the four dimensions of this component ($p<0.05$).
Conclusion: The lower the QWL, the lower the HRQOL. Therefore, it is necessary to implement comprehensive public health programs in Cali considering work-related and social aspects that impact the personal development and well-being of the people working in the informal economy.
Keywords: Quality of Life; Employment; Informal Sector; Working Women, occupational Health; Quality of Work Life (MeSH).

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Resumen

Introducción. La calidad de vida en el trabajo (CVT) y la calidad de vida relacionada con la salud (CVRS) determinan los índices de salud, participación social y productividad en trabajadoras del sector informal.
Objetivo. Establecer la relación entre CVT y CVRS en trabajadoras del sector informal de la comuna 9 de Cali, Colombia.
Materiales y métodos. Estudio transversal analítico y correlacional realizado en 2019 en 48 trabajadoras informales a las que se les aplicaron los cuestionarios CVT-GOHISALO y SF-36 para medir la CVT y la CVRT, respectivamente. La correlación entre las dimensiones de ambos instrumentos se estableció mediante el coeficiente de correlación de Spearman (débil: *rho*=0.1-0.3; moderada: *rho*=0.31-0.6; fuerte: *rho*=0.61-0.9, y perfecta: *rho*=0.9-1.0), considerando un nivel de significancia de $p<0.05$.
Resultados. Existe insatisfacción en 5 dimensiones del CVT-GOHISALO, con los niveles más altos de insatisfacción en desarrollo personal (97.91%) y bienestar logrado a través del trabajo (95.83%). En el cuestionario SF-36, según la combinación de las puntuaciones de cada dimensión, el promedio obtenido en los componentes físico y mental fue bajo (45.8±9.3 y 44.7±12.9, respectivamente). Se observó una correlación moderada positiva y estadísticamente significativa entre el puntaje global del cuestionario CVT-GOHISALO y el componente físico del cuestionario SF-36 (*rho*=0.419; $p=0.004$) y las cuatro dimensiones de este componente ($p<0.05$).
Conclusión. A menor CVT, menor CVRS. Por lo tanto, es necesario implementar programas integrales de salud pública en Cali que consideren aspectos laborales y sociales que impacten el desarrollo personal y el bienestar de la población trabajadora del sector informal.
Palabras clave: Calidad de vida; Empleo; Sector informal; Mujeres trabajadoras; Salud laboral (DeCS).

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Introduction

Quality of work life (QWL) refers to people's health as it is influenced by job satisfaction, productivity, balance in the performance of activities of daily living, and the fulfillment in different roles assumed by human beings in society. It is defined as a multidimensional concept that is integrated when workers, through employment and based on their own perception, meet their needs for institutional support, security, integration, and job satisfaction, while perceiving well-being achieved through work activity, personal development, and management of their free time.[1,2] QWL is also a concept that demonstrates the need for government support in social security aspects, which in turn are determinants of workers' health status.

In turn, health-related quality of life (HRQOL) involves multiple dimensions:[3] on the one hand, it refers to health and functional status and, on the other hand, to subjective perception and health assessment by individuals.[4] Furthermore, this concept covers several areas of the life cycle and is closely related to mental, spiritual and physical well-being, as well as social ties, basic aspects for the comprehensive development of an individual that are not given the required importance in the context of the informal economy.[5,6]

Any type of work that generates income and is not regulated by a legal framework is considered informal economy. This type of work does not involve a contract and therefore does not guarantee social security or job stability for the worker, which is why it is associated with precarious working conditions;[7-11] however, it allows people to maintain a productive role in order to deal with unemployment and meeting expenses and needs.[12]

There are companies that enter into labor agreements and pay employees a percentage of their sales, thereby creating an employment relationship (albeit informal), based on the establishment of goals, in which the employer is committed to providing employees with supplies, such as uniforms, and training them to make those sales. Consequently, this work relationship implies that companies must guarantee a good QWL.[13]

At present, approximately half of the productive population in Latin America has an informal job, so this is an issue that must be addressed, as this practice also brings consequences such as social vulnerability, lack of opportunities for academic training, health problems among workers, etc., which goes against what should be offered in a healthy work environment.[14-16]

In Colombia, according to Quejada-Pérez *et al.*,[12] informal workers are primarily of low educational attainment and of the female sex; the latter is explained by the fact that women must play a dual role: being housewives and economically supporting the household, so they require flexible work schedules that are not usually found in the formal sector.

In Colombia, informal work predominates in the sector of the sale of games of chance, and the majority of workers are women heads of household who move from one location to the next to perform their job and are employed under a piecework modality, in which they are paid per unit of work or task, and the remuneration is based on productivity. Thus, the position of vendor of games of chance (a person who sells lottery tickets informally in stalls or small stores, or on the streets while moving around the city) is not included in the company's organizational hierarchy, and these workers only receive institutional support to perform their productive activity while adhering to quality goals and standards.[17] So, despite being classified as informal workers because of their piecework, these women vendors have an employment relationship as they are part of the organizational chart, receive orders from superiors, meet goals and receive transportation subsidies, uniforms, a daily payment, and training.

Considering this scenario, the present research aimed to establish the relationship between QWL and HRQOL in a group of informal sector workers (sale of games of chance) in commune 9 of Cali, Colombia.

Materials and methods

Type of study and study population

Cross-sectional analytical and correlational study conducted in 2019. The study population consisted of all informal female workers who carried out their activities in the game of chance business in the communes of Cali and met the following inclusion criteria: being between 18 and 57 years of age; belonging to socioeconomic strata 1, 2 and 3 (Table 1), and not having social security (N=750).

Table 1. Socio-economic strata in Colombia according to the Administrative Department of Statistics.

Stratum	Description
1	Low-Low. Beneficiaries of home utility subsidies.
2	Low. Beneficiaries of home utility subsidies.
3	Low-Middle. Beneficiaries of home utility subsidies.
4	Middle. They are not beneficiaries of subsidies, nor do they pay surcharges; they pay exactly the amount that the company defines as the cost for providing home utilities.
5	Middle-High. They pay surcharges (contribution) on the value of home utilities.
6	High. They pay surcharges (contribution) on the value of home utilities.

Source: Own elaboration based on DANE reports.[18]

Considering the total study population, the sample size was estimated taking into account a 95% confidence interval and a 5% error using the count data statistical method, which yielded a lower limit of 28 and an upper limit of 48 participants, the upper value being the sample size selected for the study. Participants were recruited by random sampling. Workers without a sales schedule, i.e., those who sold lottery tickets on the streets without an established schedule but with a daily goal, people with disabilities, those who did not work in commune 9, and those that did not fully answer either of the two instruments were excluded.

Instrument and procedures

The CVT-GOHISALO[1] and the SF-36 questionnaires were used to assess QWL and HRQOL, respectively.[19]

The CVT-GOHISALO questionnaire, which has content, criterion and construct validation and a reliability of 0.9527 according to Cronbach's Alpha, has already been used in the Colombian context.[20] It consists of 74 items that assess 7 dimensions: 1) institutional support for work (ISW), 2) safety at work (SW), 3) integration into the workplace (IWP), 4) job satisfaction (JS), 5) well-being achieved through work (WBW), 6) personal development (PD), and 7) free time management (FTM).[1]

For its part, the reliability of the SF-36 questionnaire ranges from 0.70 to 0.80 and identifies the status of 9 dimensions: 1) physical functioning, 2) physical role functioning, 3) bodily pain, 4) general health perceptions, 5) vitality, 6) social role functioning, 7) emotional role functioning, 8) mental health, and 9) changes in health status;[19] the latter item was not assessed in this study because it was not used to calculate the total score of the instrument.

Data were collected by one of the researchers during January and February 2019. For this procedure, a visit to each participant's place of work, in this case the street where they performed their job, was scheduled. The research was then explained in detail to the participants, an informed consent was obtained, and both questionnaires were administered during the same session.

Statistical analysis

Quantitative variables were described using means and standard deviations or medians and interquartile ranges, according to the normality of the data (Shapiro–Wilk test), and categorical variables, which correspond to the categories of both instruments, were described through relative and absolute frequency tables.

The CVT-GOHISALO questionnaire groups items by dimension and rates them at three levels: high, medium, and low. For the purposes of this study, the analysis was performed with the low and high scores. For the SF-36 questionnaire, population means for Colombia were used;[6] in this sense, each dimension of this instrument was transformed to a scale from 0 to 100. The Spearman correlation coefficient (Spearman's *rho*)[21] was used to establish the correlation between the dimensions of both scales, considering a correlation weak with scores between 0.1 and 0.3, moderate with scores between 0.31 and 0.6, strong with scores between 0.61 and 0.9, and perfect with scores between 0.9 and 1.0.[22] Moreover, according to the table of critical values, a $p<0.05$ was considered statistically significant. All analyzes were carried out in Stata 14.0.

Ethical considerations

The study took into account the ethical principles for medical research involving human beings established by the Declaration of Helsinki[23] and the technical, administrative and scientific standards for health research set forth in Resolution 8430 of 1993 of the Colombian Ministry of Health of Colombia.[24] Identification codes were used for the protection of personal data, as set out in Decree 1377 of 2013;[25] likewise, the Committee on Human and Animal Ethics of the Universidad del Valle endorsed the study in accordance with Minutes No. 001-019 of February 15, 2019. Finally, informed consent was obtained from all participants.

Results

The average age of the participants was 46.3±12.7 years, the average time of experience as vendors of games of chance was 11 years, 50% reported being single, 20.83% were high school graduates, and 66.66% reported living in a rented house with 1 to 3 people, mainly children or parents. Regarding working conditions, it was found that 93.75% had incomes below the current legal minimum wage, 66.66% worked less than 30 hours a week in a part-time work schedule, and 41.66% reported some health problems in the last three months, mostly respiratory diseases, musculoskeletal disorders, and metabolic disorders.

Quality of work life

The CVT-GOHISALO questionnaire revealed that satisfaction was low for 83.33% of the participants in the ISW dimension; for 89.58% in IWP; 77.08% in JS; 95.83% in WBW; and 97.91% in PD. An average level of satisfaction was reported in 54.16% of cases for the SW dimension and in 39.58% for FTM. No dimension had a high level of satisfaction (Table 2).

Table 2. Description of quality of work life according to the CVT-GOHISALO questionnaire in informal workers at commune 9 in Cali, Colombia. 2019.

Dimension n = 48	Low Score (%)	Average Score (%)	High Score (%)
ISW	40 (83.33)	2 (4.16)	6 (12.5)
SW	15 (31.25)	26 (54.16)	7 (14.9)
IWP	43 (89.58)	5 (10.41)	0 (0.0)
JS	37 (77.08)	5 (10.41)	6 (12.5)
WBW	46 (95.83)	1 (2.08)	1 (2.08)
PD	47 (97.91)	0 (0.0)	1 (2.08)
FTM	19 (39.58)	19 (39.58)	10 (20.83)

ISW: institutional support for work; SW: safety at work; IWP: integration into the workplace; JS: job satisfaction; WBW: well-being achieved through work; PD: personal development; FTM: free time management.
Source: Own elaboration.

Among the factors affecting the low or high assessment, a high degree of dissatisfaction was found with the type of housing that their work allows them to have (91.66%); with personal care —physical, mental, and social— (89.58%); with the level of personal satisfaction

achieved through their work (87.5%); and with commitment to the company's objectives (87.5%). However, 66.66% said they receive positive recognition from customers. Women workers were also satisfied with their ability to engage in activities outside working hours (72.91%), the opportunity to spend time with their relatives (75%), and the possibility to carry out domestic activities (70.83%).

Health-related quality of life

Based on the combination of the scores for each dimension, the average obtained for the physical and mental components of the SF-36 scale was low: 45.8±9.3 and 44.7±12.9, respectively, without differences between components. 43.75% of the workers reported scores below the cut-off point[26] (score<50) in both components. Table 3 summarizes the ratings of the SF-36 dimensions.

Table 3. Summary of the score obtained for the SF-36 dimensions in informal workers at commune 9 in Cali, Colombia. 2019.

Dimension	n=48 Median (IQR)
Physical functioning	75.0 (56.2-93.7)
Physical role functioning	75.0 (0.0-100.0)
Bodily pain	67.5 (45.0-89.4)
General health perceptions	50.0 (40.0-75.0)
Vitality	52.5 (35.0-80.0)
Social role functioning	75.0 (62.5-87.5)
Emotional role functioning	66.7 (0.0-100.0)
Mental health	52.0 (44-72)

IQR: interquartile range.
Source: Own elaboration.

In the physical component, the lowest ranked variables were bodily pain and general health perceptions, whereas in the mental component, the lowest rated variables were vitality and mental health (67.5%, 50%, 52.5%, and 52%, respectively). Similarly, a moderate positive linear correlation was found between the overall score of the CVT-GOHISALO questionnaire and the physical component of the SF-36 (*rho:* 0.419, which represents a *p*=0.004 according to the critical values table).

Furthermore, a moderate and statistically significant correlation between the four dimensions of the physical component of the SF-36 questionnaire and the overall score of the CVT-GOHISALO questionnaire was established; this relationship was stronger with in the physical functioning dimension of the SF-36 (*rho:* 0.464).

The physical component of the SF-36 questionnaire correlated positively with the ISW, SW and WBW dimensions of the CVT-GOHISALO questionnaire; however, the correlation was weaker compared to the overall score of the scale, finding that it was not statistically significant for ISW and WBW.

In addition, the SW and WBW dimensions were significantly correlated to the scores of most of the SF-36 scale dimensions. Table 4 shows the correlation between the CVT-GOHISALO and SF-36 dimensions.

Table 4. Correlation between the CVT-GOHISALO and SF-36 questionnaire dimensions in informal workers at Commune 9 in Cali, Colombia. 2019.

Questionnaire SF-36	CVT-GOHISALO questionnaire							
	Total	Institutional support for work	Safety at work	Integration into the workplace	Job satisfaction	Well-being achieved through work	Personal development	Free time management
Physical Component	0.419 *	0.268	0.311 *	0.205	0.205	0.282	0.196	0.034
Physical functioning	0.464 *	0.345 *	0.470 *	0.267	0.267	0.402 *	0.172	0.019
Physical role functioning	0.319 *	0.165	0.381 *	0.089	0.089	0.424 *	0.160	0.039
Bodily pain	0.401 *	0.099	0.289	0.113	0.113	0.270	0.214	0.124
General health perceptions	0.352 *	0.256	0.336 *	0.264	0.264	0.264	0.170	0.046
Mental Component	0.233	0.069	0.399 *	0.101	0.101	0.398 *	0.171	0.015
Vitality	0.249	0.139	0.289	0.151	0.151	0.307 *	0.321 *	-0.034
Social role functioning	0.214	0.052	0.196	0.024	0.024	0.336 *	0.230	0.068
Emotional role functioning	0.345 *	0.129	0.516 *	0.175	0.175	0.436 *	0.128	0.010
Mental health	0.204	0.064	0.336 *	0.007	0.007	0.441 *	0.172	0.122

* Spearman's *rho* : moderate correlation (0.31 and 0.6).
Source: Own elaboration.

Discussion

In the present study, a statistically significant association was found between the low score in the physical component obtained in the SF-36 questionnaire and the low perception of satisfaction found in the SW dimension of the CVT-GOHISALO questionnaire. This agrees with the reports made by Burin *et al.*[27] and Lopez-Camargo,[28] who also established in their studies a statistically significant correlation between informal employment and mental health deterioration. The dysfunctionality of these dimensions is caused by the precariousness of informal work, which has a direct impact on mental health with the appearance of conditions such as anxiety, depression, fear, and suffering.

The WBW dimension of the QWL relates directly to the mental component of the HRQOL; it is worth mentioning that this dimension involves the subdimensions of basic household services, nutrition, clothing, interaction with clients, and achievement of work objectives. This relationship is therefore based on the fact that quality of life, in its broadest conception, is influenced by factors such as employment, housing, access to public services, among others, which have an impact on people's mental health.[29]

Similarly, the present study found a directly proportional significant correlation between the ISW, SW, and WBW dimensions and the physical component of HRQOL, which, according to the literature, may indicate a lack of basic coverage of the needs of women workers in terms of nutrition and personal growth, as well as the protection that the employer should provide them.[22]

Informal work is associated with poverty and lack of access to a formal job on a competitive scale, among other causes, because of their low educational attainment,[30] characteristics that were evident in the population studied considering that 43.75% of the participants did not complete their basic secondary studies. This is an aspect which, without doubt, limits access to better employment conditions and is one of the reasons that favor the phenomenon of informality.[27]

Since the majority (66.66%) of participants do not own their own house, most of their income is spent on rent (74.14% per year),[13] which exposes this group of workers to precariousness and limits their access to other services such as transportation and leisure activities. This is highly relevant because such limitations, together with other quality of life indicators, have been included in the definition of multidimensional poverty.[31]

Informal workers are not eligible for social security benefits, resulting in low satisfaction with institutional support for future projections and retirement plans, as well as uncertainty due to the lack of health care and services.[32]

Although participants are hired under piecework agreements, they have a subordinate relationship in which they comply with company schedules and goals without any type of protection. This is part of the informal employment trend known as structuralism, in which workers are seen as independent economic units that make it possible to reduce labor costs and increase the competitiveness of companies with capitalist models.[8]

In the labor market, women are at a disadvantage, as they tend to receive lower economic remuneration and often have to take on a dual role —as housewives and as workers—, which ultimately generates less income.[33] This was evident in the present study since 93.75% of the participants reported that they receive less than a minimum wage and that they must use it to support their family nucleus, bearing in mind that all the workers are heads of household and have between 1 and 3 dependents. This condition can lead to negative psychological consequences and impoverishment of self-concept,[28] as observed in the present study, in which low scores were obtained for health perception in the mental health component according to the SF-36 questionnaire.[28]

Job supervision and feedback are variables that have an important influence on the degree of motivation and satisfaction at work;[34] in the case of this research, although workers had to meet goals and were governed by company guidelines, 83.33% reported not having any type of supervision and 60.41% indicated that they did not receive sufficient support from superiors to carry out their work. According to the literature, these aspects in turn affect the psychological growth and performance of employees,[12,35] which was evident in the present study.

In Colombia, since companies that hire personnel through informal employment modalities are not properly monitored by government authorities, there are major deficiencies in the protection and safety of these workers.[36] In this sense, the present study found a high level of dissatisfaction with the labor rights perceived by women workers (60.41%) and a high level of non-conformity with the type of contract they had (72.91%).[20] This situation differs from the high levels of satisfaction with quality of life among formal workers who are bound by stable and well-defined employment contracts that do provide job stability.[11]

Participants indicated that being able to have their time at their disposal and manage it at their convenience to perform both labor and domestic activities is the main benefit of informal work. This was demonstrated by the fact that 72.91% of them were satisfied with the fulfillment of activities outside working hours (75% with the opportunity to share family time and 70.83% with the ability to comply with domestic activities), which is consistent with the informality model, where workers value flexibility in time management and choose this option as a means of livelihood despite the high risk of poverty.[8]

The nature and quality of employment should allow for the development of healthy psychosocial conditions, job satisfaction and the visualization of a stable future for workers and their families, and should fulfill the minimum requirements of nutrition, housing and access to public services, so that employees have optimal emotional health and can build a life project according to personal expectations.[37] These requirements are not usually met in informal jobs because employers do not provide their workers with any benefits besides their daily payment. The above was evident in the present study since the PD dimension had the lowest scores (97.91%) in the CVT-GOHISALO questionnaire.

Some of the most prevalent health conditions of informal workers are related to the risks to which they are

exposed during their working hours, including postural load and long working hours (factors that predispose to the presence of pain),[38] as reported in this study, where the physical pain and general health dimensions were the worst evaluated in the SF-36 questionnaire.

The main limitation of the present research was that the study population consisted only of workers from the commune 9 and, therefore, did not represent the total number of informal workers in the city. However, this possible bias was reduced as the commune 9 is a place where informal economy predominates, and the population is clearly described.

Conclusions

The relationship between QWL and HRQOL is directly proportional; in other words, the deterioration of health depends on the employment (type of contract) and working (comprehensive conditions) conditions of the individuals. In this study, participants had low scores on the SF-36 questionnaire that evaluated their HRQOL, indicating that this population is dissatisfied with their physical and mental dimensions, which are fundamental for participating in activities of daily living and obtaining resources to meet their minimum vital needs. In this regard, it is necessary to implement comprehensive public health programs in Cali that consider labor and social aspects that impact the personal development and well-being of the population working in informal economies.

Conflicts of interest

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