Work ability, musculoskeletal symptoms and quality of life among community health workers in Uberaba, Minas Gerais, Brazil

Capacidade para o trabalho, sintomas osteomusculares e qualidade de vida entre agentes comunitários de saúde em Uberaba, Minas Gerais

Ítalo Ribeiro Paula

Federal University of Triângulo Mineiro. Uberaba, MG, Brazil. E-mail: italouftm&hotmail.com

Patricia Ribeiro Marcacine

Federal University of Triângulo Mineiro. Uberaba, MG, Brazil. E-mail: patriciaribeiromarcacine@yahoo.com.br

Shamyr Sulyvan de Castro

Federal University of Triângulo Mineiro. Health Science Institute. Applied Physiotherapy Department. Uberaba, MG, Brazil. E-mail: shamyr@fisioterapia.uftm.edu.br

Isabel Aparecida Porcatti de Walsh

Federal University of Triângulo Mineiro. Health Science Institute.
Applied Physiotherapy Department. Uberaba, MG, Brazil.
E-mail: ewalsh@terra.com.br

Abstract

This study aimed to assess work ability (WA), socioeconomic aspects, quality of life (QoL), and musculoskeletal symptoms, as well as the associations between them in community health workers (CHW) in the town of Uberaba, Minas Gerais, Brazil. A total of 47 CHW participated in the survey (42 women and 5 men), with an average age of 37.26 12.74 years, who answered a sociodemographic questionnaire, the Nordic Questionnaire of Musculoskeletal Symptoms, the Questionnaire on Quality of Life SF-36, and the Work Ability Index. Inferential analysis was performed using the Mann-Whitney test, Kruskal-Wallis test, and Spearman's correlation test, with a 5% significance level. Of the CHW interviewed, 82.98% had had musculoskeletal symptoms within the last 7 days and 93.62% within the last 12 months. The most compromised QoL domain was pain, followed by vitality, social aspects, mental health, general health status, emotional aspects, physical appearance, and functional capacity. The mean value for WA was 36.51 7.95. The comparison between gender and WA indicated that a greater number of women had an inadequate capacity. A higher incidence of symptoms implied an inadequate capacity. The lower the QoL scores, the lower WA.

Keywords: Community Health Worker; Work Ability; Quality of Life.

Correspondence

Isabel Aparecida Porcatti de Walsh Rua Capitão Domingos, 309. CEP 38025-010. Uberaba, MG, Brazil.

Resumo

O objetivo deste estudo foi avaliar a capacidade para o trabalho (CT), aspectos socioeconômicos, qualidade de vida (QV) e sintomas osteomusculares, bem como as associações entre estes em agentes comunitários de saúde (ACS) da cidade de Uberaba, Minas Gerais. Participaram da pesquisa 47 ACS (42 mulheres e 5 homens), com idade média de 37,26 12,74 anos, que responderam um questionário sociodemográfico, o Questionário Nórdico de Sintomas Osteomusculares, o Questionário de Qualidade de Vida SF-36 e o Índice de Capacidade para o Trabalho. A análise inferencial foi realizada com a utilização do teste de Mann-Whitney, teste de Kruskall Wallis e teste de correlação de Spearmann, com significância de 5%. Dos ACS entrevistados, 82,98% apresentaram sintomas osteomusculares nos últimos 7 dias e 93,62% nos últimos 12 meses. O domínio da QV mais comprometido foi a dor, seguido pela vitalidade, aspectos sociais, saúde mental, estado geral de saúde, aspectos emocionais, aspecto físico e capacidade funcional. A média da CT foi de 36,51 7,95. A comparação entre sexo e CT indicou que maior número de mulheres apresentou capacidade inadequada. Maior incidência de sintomas implicou capacidade inadequada. Quanto mais baixos os escores da QV, menor a CT.

Palavras-chave: Agente Comunitário de Saúde; Capacidade de Trabalho; Qualidade de Vida.

Introduction

The state of health is composed of biological, social, cultural and environmental factors (Minayo; Assis; Oliveira, 2011). Work can be viewed in different ways and can have positive and negative repercussions on health. Positive in the sense of highlighting the subject's activity with regards creating and recreating both things and themselves, producing a sensation of physical and emotional well-being, as well as exploring human potential. However, depending on conditions, it can also present dissatisfaction and suffering, feelings of undervalue, overwork and emotional stress (Minayo; Assis; Oliveira, 2011; Seligmann-Silva; Neves, 2006).

Since the early 1990s, issues concerning work ability have been approached in studies of workers' health, in terms of individual, social and economic implications (Martinez; Latorre, 2006; Martinez; Latorre; Fischer, 2009).

The concept of work ability (WA) is emphasized as a condition resulting from the combination of human resources in relation to the physical, mental and social demands of work, management, the culture of the organization and community and atmosphere in the workplace (Ilmarinen et al., 1991), expressed as "the better a worker currently is, or will be in the near future, the more capable they will be of carrying out their work according to their state of health and mental and physical capacities" (Tuomi et al., 2005).

The World Health Organization (WHO) has defined quality of life (QoL) as "the individual's perception of their position in life in the context of the culture and value system in which they live and in relation to their objectives, expectations, standards and concerns" (The WHOQOL Group, 1995).

As well as the demands inherent to providing comprehensive health care and humanizing practices, health care workers are also exposed to situations resulting from poverty and social inequality, as well as with the deficiencies in other levels of the health care system, together with the changes underway in the world of work, from which the health care sector is not exempt, making it more precarious, leading to fear and isolation and submission on the part of the workers (Braga; Carvalho; Binder, 2010).

Concerning community health workers (CHWs)

in particular, their tasks in the Family Health Strategy (FHS) are specified in subsection 8.14 of Annex I of Ordinance n. 1.886/1997 (Brasil, 1997), requiring physical and mental equilibrium in order to fulfill them. For Resende et al. (2011), this health care professional is susceptible to a variety of conditions that can negatively affect their well-being and harmony, leading to feelings of anxiety, fear, insecurity, low self-esteem and even to physiological situations such as hyperventilation and tense muscles, triggering pain, worry and hyperactivity of the autonomic nervous system. Moreover, these health care professionals are subject to a particular labor dynamic of living and working in the same community, which can produce additional pressures and overload.

The health of CHWs and the risks to which they are exposed have therefore been analyzed in studies (Cesar et al., 2002; Frazão; Marques, 2009; Levy; Matos; Tomita, 2004; Moreira; Zandonade; Maciel, 2010; Pupin; Cardoso, 2008) that show concern in characterizing them, as well as their respective functions, in order to evaluate the process and results of their work.

Camello and Angerami (2004), Custódio et al. (2006), Nunes et al. (2002), Pedrosa and Teles (2001) and Souza and Freitas (2011) report how the demands from both parties (health care and community) with whom these workers coexist cause health problems such as stress, anxiety and countless other diseases. Trindade et al. (2007) highlighted the existence of psychological loads and of the difficulties these workers had in finding measures to protect and care for themselves, and Silva and Menezes (2008), in a study with CHWs, stated that 24.1% of those interviewed presented burnout syndrome, and 43.3% had common mental disorders, highlighting the significance of mental suffering for the health of these workers.

Trindade et al. (2007) observed that these workers were also exposed to ergonomic risks at work, the main problems being the uncomfortable positions adopted whilst working, long walks on potholed, winding streets and the need to sit in incorrect positions during domestic visits, due to a lack of benches or chairs. These factors have been shown to be strongly related to work-related musculoskeletal

disorders, constituting a potential source of pain.

Thus, we investigated the CHWs' WA and QoL, whether they had musculoskeletal symptoms while working, the relationship between the presence of these symptoms and different QoL and WA domains.

The results of this study could support public health policies in implementing new strategies to improve the work of these professionals and could have a positive impact on health, both that of the workers and of those they care for.

In this context, the aim of this study is to evaluate WA, socio-economic aspects, QoL and musculoskeletal symptoms, as well as the associations between them in CHWs in Uberaba-MG.

Methodology

Study and sample

This study was a cross-sectional, descriptive piece of field research.

At the time the data were collected, the municipality of Uberaba-MG had 52 Family Health Strategy teams. The convenience sample was composed of 8 of these teams, in which the Universidade Federal do Triângulo Mineiro (UFTM) Health Worker Education Program was in action, totaling 47 CHWs.

Those who were off work or who were not in the health care units on the day data were collected were excluded. Data were collected between January and May 2011.

The study was approved by the UFTM Research Ethics Committee, Protocol n. 1,787 and the CHWs signed informed consent forms.

Data collection instruments

A semi-structured questionnaire, prepared especially for this study, was used, collecting self-reported information on: age; sex; schooling; household income; marital status; and length of time working as a CHW.

Musculoskeletal Symptoms were assessed using the Nordic Questionnaire of Musculoskeletal Symptoms (NGMS) (Kuorinka, 1987), which was developed to standardize measuring reports of musculoskeletal symptoms and thus facilitates comparison between studies. It consists of multiple choice or binary questions concerning the occurrence of symptoms in nine areas of the body, namely: neck/

cervical region; shoulders; arms; elbows; forearms; wrists/hands/fingers; dorsal; lumbar and hips/legs. The respondent has to report the occurrence of symptoms in the 12 months and the seven days preceding the interview (Pinheiro; Troccoli; Carvalho, 2002).

QoL was evaluated using the Questionnaire on Quality of Life SF-36, a self-applied instrument specifically designed to study overall QoL in health surveys, and has been validated for use in Brazil (Ciconelli et al., 1999). The instrument contains 36 items, of which 35 are grouped into eight dimensions (Functional Capacity, Physical aspect, Pain, Overall State of Health, Vitality, social Aspects, emotional aspects and Mental Health) and a final item evaluating changes in health over time. The items are codified, grouped and transformed into a scale from zero (worst state of health) to 100 (best state of health) for each dimension (Aranha et al., 2006).

WA was evaluated using the Work Ability Index (WAI), an instrument developed by Finnish researchers in the 1980s, the result of self-evaluations of WA in the workers' own perceptions (Renosto et al., 2009; Martinez; Latorre, 2006). The WAI has been translated into Portuguese and tested by researchers from the Universidade de São Paulo (USP) Faculty of Public Health, and professionals from other universities and institutions in Brazil (Tuomi et al., 2005). It enables work ability to be evaluated based on ten questions (60 items) synthesized into seven dimensions, the results of which give a measure of work ability between 7 and 49 points, with results classified as poor (7 to 27), moderate (28 to 36), good (37 to 43) and very good (44 to 49) (Tuomi et al., 2005). However, this form of calculating scores was based on results obtained for workers aged between 45 and 58, possible resulting in underestimating the work ability of younger workers. Therefore, Kujala et al. (2005), indicated another way of classifying the questionnaire results; as adequate or inadequate. According to the authors, for workers aged between 18 and 34, the result of the questionnaire is deemed inadequate when the score is < 40 and adequate when the score is 40; individuals aged 35 and upwards and with WAI < 37 are considered to have inadequate work ability, and those with scores of 37 to have adequate work ability.

Data collection procedures

The CHWs were invited to participate in the study, received information concerning its objectives, the instruments to be used and the data collection procedures. This took place at the work place during working hours, in a room reserved for the purpose, according to availability, so as not to negatively affect them in any way.

Two trained evaluators participated in the data collection. The participants answered the questionnaires, which had previously been read to them by the evaluator, who remained there to clarify any doubts.

The sequence in which the questionnaires were applied was as follows: the CHWs completed the socio-demographic questionnaire first; followed by the NGMS; the Quality of Life Questionnaire SF-36; and the WAI.

Data analysis

Descriptive analysis was shown in frequencies and percentages. Inferential analysis was conducted using the Mann Whitney, Kruskall Wallis and Spearman's correlation tests, with 5% significance. The *Statistical Package for the Social Sciences* (SPSS) program, version 19.0 was used.

Results

The sample contained 42 women (89%) and 5 men aged between 19 and 64 (M = 37.26 ± 12.74). It was found that 55.32% were married or living with their partner and 44.68% were single, widowed or separated; 65.9% reported a monthly household income of > 3 minimum wages and 68.09% had spent up to three years working as a CHW.

Regarding musculoskeletal symptoms, 82.98% had presented them in the preceding seven days, and 93.62% in the preceding 12 months.

The results indicate that the most implicated QoL domains were pain (M = 48 ± 22.67), followed by vitality (M = 52.23 ± 18.65), social aspects (M = 57.45 ± 24.82), mental health (M = 61 ± 21.27), overall state of health (M = 65.6 ± 18.46), emotional aspects (M = 68.43 ± 39.51), physical aspect (M = 72.07 ± 36.23) and functional capacity (M = 80.53 ± 22.27).

The WA classification showed a mean of 36.51

 \pm 7.95, with 26 (55.32%) presenting an inadequate ability to work, and 24 (44.68%) an adequate.

Tables 1, 2 and 3 show the inferential analyses between work ability and the other variables.

Table 1 - Comparisons between work ability and socio-economic variables in Community Health Workers from Family Health Strategy Teams, Uberaba, MG, 2011

Socio-economic variables	Work ability			
	Inadequate M (DP)*	Adequate M (DP)	Total M (DP)	
Age M(DP)	39.35 (13.39)	34. 67 (11.40)	37.26 (12.74)	r = - 0.17
	N (%)	N (%)	N (%)	р
Sex				0.00
Female	25 (59.52)	17 (40.48)	42 (100.00)	
Male	ı (20)	4 (80)	5 (100.00)	
Schooling				0.73
No response	1 (50.00)	1 (50.00)	2 (100.00)	
Fewer than 8 years	1 (100)	0(0)	1 (100.00)	
8 to 11 years	5 (45.45)	6 (54.54)	11 (100.00)	
More than 11 years	19 (57.57)	14 (42.42)	33 (100.00)	
Marital status				1.0
Single/widowed/separated	11 (52.38)	10 (47.61)	21 (100.00)	
Married/cohabiting	15 (57.69)	11 (42.30)	26 (100.00)	
Income				0.26
Less than 3 minimum wages	7 (42.30)	9 (57.69)	16 (100.00)	
More than 3 minimum wages	19 (59.37)	12(40.62)	31 (100.00)	
Length of time working				0.85
Fewer than 3 years	18 (56.25)	14 (43.75)	32 (100.00)	
More than 3 years	8 (53.33)	7 (46.66)	15 (100.00)	

 $^{^{*}}$ M(SD) mean and respective standard deviation

Table 2 - Associations between work ability and musculoskeletal symptoms in Community Health Workers from Family Health Strategy Teams, Uberaba, MG, 2011

Musculoskeletal symptoms	Work ability			
	Inadequate	Adequate N (%)	Total N (%)	р
	N (%)			
Preceding 12 months				0.00
Yes	26 (59.09)	18 (40.90)	44 (100.00)	
No	0 (0.00)	3(100.00)	3 (100.00)	
Preceding 7 days				0.00
Yes	25 (64.10)	14 (35.87)	39 (100.00)	
No	1 (12.50)	7 (87.50)	8 (100.00)	

Table 3 - Correlations between work ability and quality of life domains in Community Health Workers from Family Health Strategy Teams, Uberaba, MG, 2011

Quality of life Domains	Work ability			
	Inadequate	Adequate M (DP)	Total M (DP)	
	M (DP)			
Functional capacity	78.65 (19.62)	82.86 (24.86)	80.53 (22.27)	- 0.17
Physical aspects	60.10 (38.73)	86.90 (26.30)	72.07 (36.23)	- 0.40**
Pain	41.83 (18.89)	55.67 (24.39)	48 (22.67)	- 0.31*
Overall state of health	62.85 (15.57)	69.00 (20.90)	65.6 (18.46)	- 0.21
Vitality	48.08 (16.53)	57.39 (20.10)	52.23 (18.65)	- 0.31*
Social aspects	53.84 (21.73)	61.90 (27.24)	57.45 (24.82)	- 0.18
Emotional aspects	57.68 (42.99)	81.74 (30.83)	68.43 (39.51)	- 0.30*
Mental health	54.42 (17.91)	69.14 (22.12)	61 (21.27)	- 0.42**

^{*}p<0.05; ** p<0.001

Significant results were found when comparing sex and WA, indicating that a greater number of women had inadequate work ability.

Although the mean age of those CHWs with inadequate ability was higher, this comparison was not significant.

The results were significant in the comparison between work ability and the presence of symptoms in the preceding 12 months and the preceding 7 days, with a higher incidence of symptoms in CHWs with inadequate ability.

The correlations between WA and QoL indicate that the means for the QoL domains were lower for CHWs with inadequate work ability, with significant values found for mental health, physical aspect, vitality, pain and emotional aspects.

Discussion

The mean age of the CHWs in this study was 37.26 12.74. Studies by Silva and Menezes (2008), Ursine, Trelha and Nunes (2010) and Kluthcovsky et al. (2007) show similar means. Tuomi et al. (2005) indicate that work ability tends to decrease with age, especially if no preventative measures are taken to maintain it. Although this study shows a higher mean age for CHWs with inadequate ability, this correlation was not significant. This may be due to the fact that the population evaluated was young, minimizing the impact of decreases in ability.

The majority (89%) were female. The predominance of young females corroborates different studies on the universe of CHWs (Bezerra; Espirito Santo; Batista Filho, 2005; Cambuy, 2005; Ferraz; Aerts, 2005; Gessner, 2006; Kluthcovsky, 2005; Nogueira, 2006; Reis, 2005; Santos, 2005; Seabra, 2006; Silva; Dias; Ribeiro, 2011; Silva; Menezes, 2008; Vasconcellos; Costa-Val, 2008; Ursine; Trelha; Nunes, 2010). Daune-Richard (2003) states that there are many professions considered as belonging to a world of work in which the necessary skills are of an inherently female nature, a fact that could be closely linked to the role of carer in society being largely performed by women, they being the ones largely responsible for rearing and feeding children, as well as caring for the elderly in the family. This would explain the context of CHWs' work, involving care and dedication. Moreover, for many women, being a CHW presents an employment opportunity (Rosa; Cavicchioli; Brêtas, 2004), or a way into the labor market, increasing household income (Nogueira; Silva; Ramos, 2000; Vasconcellos; Costa-Val, 2008).

The results of the comparison between sex and work ability were significant, indicating that a higher number of women had inadequate ability, it is worth noting that 80% of the males showed adequate work ability, whereas for women this values was 46.5%. Among other reasons, these results may be linked to the number of diseases presented, as 4 (80%) of the males reported one or no diseases,

whereas this was only 22 (41.8%). The other 21 had at least three diseases. Thus, Souza and Santana (2011) highlight gender vulnerability on relation to disease, especially when dealing with musculoskeletal problems and the physical demand of work. It could also be that women have a greater chance of having a lower WAI than men due to the multiple roles they assume and the double working day, associated with child rearing and childcare, approached by Nogueira (2006) and Vasconcellos and Costa-Val (2008), as the above mentioned activities generally form part of the woman's routine, possibly leading to overload, with higher chances of falling ill.

The results show that the majority of CHWs had more than 11 years of schooling. In their study, Ferraz and Aerts (2005) also report that the majority of CHWs had completed Basic Education (9 years of schooling), highlighting the positive results stemming from this, as the higher the levels of schooling the better the worker's ability to incorporate new knowledge and guide families regarding their responsibilities. However, the comparison between schooling and work ability was not significant.

The relationship between marital status and WAI was not found to be significant, identifying that, for the population studied, the contribution of family, economic and social responsibilities of married CHWs, to reducing work ability, was not confirmed.

Studies indicate that for CHWs, both low salary and being overworked and undervalued demotivate them towards the profession and feeling undervalued, with this further exacerbated when comparisons are made with the salaries of other FHS members, and this situation influences job satisfaction and contributes negatively to suffering and falling ill (Ursine; Trelha; Nunes, 2010; Ferraz; Aerts, 2005; Gomes et al., 2009).

By contrast, in this study, the comparison between monthly household income and WA was not found to be significant, as many of the 65.96% with household income above three minimum wages had inadequate WA, indicating that income was not the main factor in the adequacy of this ability. However, it should be taken into account that 55.32% of the professionals studied were married or cohabiting and could therefore possibly rely on their partner's support in the household budget, sharing domestic

and family outgoings. In this case, a limitation of the study was evaluating household income rather than CHW salaries.

The results concerning the length of time serving as a CHW and WA were not significant, as distribution of adequate and inadequate WA was homogeneous, with approximately three years of service. This factor could be due to the short period of time working, as the majority had been in the position for fewer than three years. Thus, Theisen (2004) observed that factors of suffering and falling ill were not visible at first, as the risks to which the CHWs are exposed have long-term, cumulative effects, such as: the work becoming precarious, living and working in the same place, direct contact with those with serious pathologies and/or difficulties. Longitudinal studies, therefore, could better evaluate these results over time.

It was observed that a large number of CHWs showed musculoskeletal symptoms (82.98% in the preceding seven days and 93.62% in the preceding 12 months). In spite of this, even these data may be an underestimate and should be analyzed with care because, as Kluthcovsky (2005) mentions, results concerning this parameter may have a bias inherent to cross-sections studies, as they provide a mere snapshot of the situation under investigation, selecting workers at work, excluding those who have symptoms and are off work for that very reason. This fact has been closely analyzed by Vasconcellos and Costa-Val (2008).

The presence of symptoms in the preceding 12 months and the preceding 7 days, as well as the pain domain of the QoL, which evaluated limitations due to pain (Ware et al., 2000), were significantly associated with inadequate work ability.

Henríquez, Rivera and Eyzaguirre (2010) report that pain is the main symptom of musculoskeletal disorders. It can have diverse origins, depending on the characteristics of the work and in the case of CHWs, the following should be observed: biomechanical conditions, lifting heavy objects, prolonged maintenance of posture and undue force. Barbosa, Assunção and Araújo (2012) believe that repeated movements of the upper limbs or postures performed in static contraction are associated with the pain these professionals feel in the neck and shoulders.

Moreover, Ursine, Trelha and Nunes (2010) agree that good locomotion is fundamental to adequately fulfilling CHW duties. However, if they also complain of pain, their conditions for locomotion, walking, could be negatively affected. In this context, in the study by Reis (2005), transport can lead to great dissatisfaction with their in CHWs. Another worrying fact concerning physical burnout could be related to the working conditions cited by Ferraz and Aerts (2005), such as the lack of openings offered for the post of CHW, together with the large number families for whom they are responsible, as indicated by Ursine, Trelha and Nunes (2010) in their study.

There may be other factors that contribute to these associations. CHWs are exposed to diverse factors of overload in their work, negatively affecting the quality with which their activities are carried out and, consequently their QoL. Problems concerning workload, targets to be met, lack of privacy and liberty, location of residence, interaction with other professionals and with other members of the community are some factors that constitute difficulties in these professionals' work (Wai, 2007).

Moreover, in the literature, emotional issues, especially situations that produce anxiety, frustration, sadness and psychological stress are also described as factors that worsen or trigger pain. Further studies are recommended to seek to clarify the association of emotional and physical variables in this context.

These factors may also explain the significant associations between the physical aspect domain that investigates whether physical problems interfere in work or other daily activities (Ware et al., 2000) and inability to work.

The vitality domain in QoL, which analyzes the level of energy available (Ware et al., 2000), can be related to the CHWs' working conditions, that is to say, living and working in the same community. This method of work organization means that the CHW is never totally free of carrying out their function, even outside of working hours, as the residents are in contact with them in their community and may require information on services and care in the health care unit. Thus, Huibers et al. (2003) and Sluiter et al. (2003) explain how the process of fatigue occurs

when the work day effort expended is not sufficiently recovered. If this happens, fatigue can accumulate and lead to chronic symptoms. When a period of rest does not affect improvement, the condition is deemed to be that of chronic fatigue, in which sleep disturbances, psychosomatic complaints and mental overload are frequent.

There are, moreover, various studies seeing to identify the functions, actions and concepts of the CHWs' day-to-day work. Results show that they have met with difficulties completing their tasks, due both to the wide range of demands as well as to the limited socio-economic conditions of the families they care for (Nunes et al., 2002; Silva; Dalmaso, 2002; Levy; Matos; Tomita, 2004; Ferraz; Aerts, 2005; Zanchetta et al., 2005; Buchabqui; Capp; Petuco, 2006; Duarte; Silva Junior; Cardoso, 2007; Bornstein; Stotz, 2008).

Fatigue and possible symptoms of fatigue may also form part of the CHWS' emotional state. Thus, lower scores for the emotional aspect, which evaluates how emotional problems affect work or other day-to-day activities (Ware et al., 2000) and for mental health, which evaluates how the individual feels most of the time in relation to feeling nervy, depression, happiness and tranquility (Ware et al., 2000) were also shown to be significantly associated with the CHWs' WA.

Workers with appropriate mental health states are often those who are at peace with themselves and is as close as possible to psychological balance. Resende et al. (2011) discuss how this condition, among other aspects, contributes to the worker's wellbeing, the balance between professional activity expectations and how they are realized, this being a contributing factor to QoL. This satisfaction includes various conditions, including: income, employment, standard of housing, safety, privacy, affection, motivation, self-esteem, support and social recognition.

According to Nunes et al. (2002), Jardim (2007) and Martines and Chaves (2007), CHWs are placed in the position of agents of change within the community. Silva and Dalmaso (2002) emphasize how CHWs have to continually adapt to the different situations that arise, as being an agent of change carries with it the anguish of seeing no or little change taking

place, often at a slow pace, bringing with it doubts concerning performing the function.

Suffering establishes itself to the extent that the professional realizes that, despite being the transforming agent, they do not have the necessary tools, the knowledge nor all of the attributes that theoretically go with this function. Being a professional in the community, then, places them on the pendulum between the reality of the place in which they live and what can, in fact, be done to improve it, even with the theory of what a community health worker is (Nunes et al., 2002; Jardim, 2007; Martines; Chaves, 2007).

It is worth returning to the idea that the function of the health worker is to serve as a link between the health care unit and the community. Several agents complain that there is little they can do for the community, as they cannot diagnose, medicate nor arrange appointments, i.e. they do not do the same things as other health care professionals (Mendes; Ceotto, 2011).

The social aspects domain, investigating to what extent physical and/or emotional problems interfere with normal social activities, including those related to the family, neighbors, friends or in group (Ware et al., 2000) was the third most affected. However, there was no correlation with work ability, despite low scores in this aspect. This could be explained, at least partly, by the fact that their tasks involve building relationships with the community and the Family Health Strategy team, as in the case of receiving and creating links (Ursine; Trelha; Nunes, 2010), as the essence of their function is in the relationships established both with the community and within the team, and their activity depends on having good relationships. Thus, although this may be a conflictive aspect of QoL, it is deemed inherent to the profession, minimizing its reflection in WA

Conclusion

Conducting research on QoL, musculoskeletal symptoms and WA in CHWs enabled results to be obtained showing that these aspects were affected due to the physical, emotional and mental demands to which these workers are constantly exposed.

This study identified that a larger number of

women had inadequate WA and musculoskeletal symptoms. The components of the domains related to physical and mental capacity of QoL compromised the CHWs' work ability, indicating that the lower the QoL scores, the lower the WAI, showing how important work is in the process of personal and professional self-actualization.

References

ARANHA, L. L. M. et al. Qualidade de vida relacionada à saúde em espanholas com osteoporose. *Revista de Saúde Pública*, São Paulo, v. 40, n. 2, p. 298-303, 2006.

BARBOSA, R. E. C.; ASSUNÇÃO, A. A.; ARAÚJO, T. M. Distúrbios musculoesqueléticos em trabalhadores do setor saúde de Belo Horizonte, Minas Gerais, Brasil. *Cadernos de Saúde Pública*, Rio de Janeiro, v. 28, n. 8, p. 1569-1580, 2012.

BEZERRA, A. F. B.; ESPIRITO SANTO, A. C. G.; BATISTA FILHO, M. Concepções e práticas do agente comunitário na atenção à saúde do idoso. *Revista de Saúde Pública*, São Paulo, v. 39, n. 5, p. 809-815, 2005.

BORNSTEIN, V. J.; STOTZ, E. M. Concepções que integram a formação e o processo de trabalho dos agentes comunitários de saúde: uma revisão de literatura. *Ciência & Saúde Coletiva*, Rio de Janeiro, v. 13, n. 1, p. 259-268, 2008.

BRAGA, L. C.; CARVALHO, L. Q.; BINDER, M. C. P. Condições de trabalho e transtornos mentais comuns em trabalhadores da rede básica de saúde de Botucatu (SP). *Ciência & Saúde Coletiva*, Rio de Janeiro, v. 15, p. 1585-1596, 2010. Suplemento 1.

BRASIL. Ministério da Saúde. Portaria GM/MS nº 1.866, de dezembro de 1997. Dispõe sobre o perfil de competências do Agente Comunitário de Saúde. *Diário Oficial da União*, Brasília, DF, 18 dez. 1997. Seção 8, p. 5.

BUCHABQUI, J. A.; CAPP, E.; PETUCO, D. R. S. Convivendo com agentes de transformação: a interdisciplinaridade no processo de ensino/aprendizado em saúde. *Revista Brasileira de Educação Médica*, Rio de Janeiro, v. 30, n. 1, p. 32-38, 2006.

CAMBUY, K. *Vivências de trabalho de agentes comunitários de saúde de Campinas*. 2005. Dissertação (Mestrado em Psicologia Clínica) - Pontifícia Universidade Católica de Campinas, Campinas, 2005.

CAMELLO, S. H. H.; ANGERAMI, E. L. S. Sintomas de estresse nos trabalhadores atuantes em cinco núcleos de saúde da família. *Revista Latino-Americana de Enfermagem*, Ribeirão Preto, v. 12, n. 1, p. 14-21, 2004.

CESAR, J. A. et al. Mudanças em indicadores de saúde infantil em um município com agentes comunitários: o caso de Itapirapuã Paulista, Vale do Ribeira, São Paulo, Brasil. *Cadernos de Saúde Pública*, Rio de Janeiro, v. 18, n. 6, p. 1647-1654, 2002.

CICONELLI, R. M. et al. Tradução para a língua portuguesa e validação do questionário genérico de avaliação de qualidade de vida SF-36 (Brasil SF-36). *Revista Brasileira de Reumatologia*, São Paulo, v. 39, n. 3, p. 143-150, 1999.

CUSTÓDIO, L. C. et al. Avaliação do estresse ocupacional em agentes comunitários de saúde da região metropolitana de Belo Horizonte - MG. *Cadernos de Saúde Coletiva*, Rio de Janeiro, v. 14, n. 3, p. 549-553, 2006.

DAUNE-RICHARD, A. M. Qualificações e representações sociais. In: MARUANI, M.; HIRATA, H. (Org.). *As novas fronteiras da desigualdade*: homens e mulheres no mercado de trabalho. São Paulo: Senac, 2003. p. 65-76.

DUARTE, R. L.; SILVA JUNIOR, D. S.; CARDOSO, S. H. Construindo um programa de educação com agentes comunitários de saúde. *Interface: Comunicação, Saúde, Educação*, Botucatu, v. 11, n. 23, p. 439-447, 2007.

FERRAZ, L.; AERTS, D. R. G. C. O cotidiano de trabalho do agente comunitário de saúde no PSF em Porto Alegre. *Ciência & Saúde Coletiva*, Rio de Janeiro, v. 10, n. 2, p. 347-355, 2005.

FRAZÃO, P.; MARQUES, D. Efetividade de programa de agentes comunitários na promoção da saúde bucal. *Revista de Saúde Pública*, São Paulo, v. 43, n. 3, p. 463-471, 2009.

GESSNER, C. L. S. Qualidade de vida das equipes de Saúde da Família do município de Timbó/SC. 2006. Dissertação (Mestrado Profissionalizante em Saúde e Gestão do Trabalho) - Universidade Vale do Itajaí, Itajaí, 2006.

GOMES, K. O. G. et al. A práxis do agente comunitário de saúde no contexto do Programa Saúde da Família: reflexões estratégicas. *Saúde e Sociedade*, São Paulo, v. 18, n. 4, p. 744-755, 2009.

HENRÍQUEZ, M. G.; RIVERA, C. F.; EYZAGUIRRE, J. M. Prevalencia de transtornos músculoesqueléticos de columna lumbar en trabajadoras y límites biomecánicos en el manejo de carga y pacientes. *Ciencia & Trabajo*, Santiago de Chile, v. 12, n. 37, p. 380-385, 2010.

HUIBERS, M. J. H. et al. Fatigue, burnout and chronic fatigue syndrome among employees on sick leave: do attributions make the difference? *Occupational and Environmental Medicine*, Londres v. 60, p. 26-31, June 2003.

ILMARINEN, J. et al. Summary and recommendations of a project involving cross-sectional and follow-up studies on the aging worker in Finnish municipal occupations (1981-1985). Scandinavian Journal of Work, Environment&Health, Helsinki, v. 17, p. 135-141, 1991. Supplement 1.

JARDIM, T. A. Morar e trabalhar na comunidade: a realidade dos agentes comunitários de saúde. 2007. Dissertação (Mestrado em Ciências) - Faculdade de Medicina da Universidade de São Paulo, São Paulo, 2007.

KLUTHCOVSKY, A. C. G. C. Qualidade de vida dos agentes comunitários de saúde de um município do interior do Paraná. 2005. Dissertação (Mestrado de Enfermagem em Saúde Pública) - Escola de Enfermagem de Universidade de São Paulo, Ribeirão Preto, 2005.

KLUTHCOVSKY, A. C. et al. Avaliação da qualidade de vida geral de agentes comunitários de saúde: a contribuição relativa das variáveis sociodemográficas e dos domínios da qualidade de vida. *Revista de Psiquiatria do Rio Grande do Sul*, Porto Alegre, v. 29, n. 2, p. 176-183, 2007.

KUJALA, V. et al. Classification of Work Ability Index among young employees. *Occupational Medicine*, London, v. 55, n. 5 p. 399-401, 2005.

KUORINKA, I. et al. Standardised Nordic questionnaires for the analysis of musculoskeletal symptoms. *Applied Ergonomics*, Oxford, v. 18, n. 3, p. 233-237, 1987.

LEVY, F. M.; MATOS, P. E. S.; TOMITA, N. E. Programa de agentes comunitários de saúde: a percepção de usuários e trabalhadores da saúde. *Cadernos de Saúde Pública*, Rio de Janeiro, v. 20, n. 1, p. 197-203, 2004.

MARTINES, W. R. V.; CHAVES, E. C. Vulnerabilidade e sofrimento no trabalho do agente comunitário de saúde no Programa de Saúde da Família. *Revista da Escola de Enfermagem da USP*, São Paulo, v. 41, n. 3, p. 426-433, 2007.

MARTINEZ, M. C.; LATORRE, M. R. D. O. Saúde e capacidade para o trabalho em trabalhadores de área administrativa. *Revista de Saúde Pública*, São Paulo, v. 40, n. 5, p. 851-858, 2006.

MARTINEZ, M. C.; LATORRE, M. R. D. O.; FISCHER, F. M. Validade e confiabilidade da versão brasileira do Índice de Capacidade para o Trabalho. *Revista de Saúde Pública*, São Paulo, v. 43, n. 3, p. 525-532, 2009.

MENDES, F. M. S.; CEOTTO, E. C. Relato de Intervenção em Psicologia: identidade social do agente comunitário de saúde. *Saúde e Sociedade*, São Paulo, v. 20, n. 2, p. 496-506, 2011.

MINAYO, M. C. de S.; ASSIS, S. G.; OLIVEIRA, R. V. C. Impacto das atividades profissionais na saúde física e mental dos policiais civis e militares do Rio de Janeiro. *Ciência & Saúde Coletiva*, Rio de Janeiro, v. 16, n. 4, p. 2199-2209, 2011.

MOREIRA, T. R.; ZANDONADE, E.; MACIEL, E. L. N. Risco de infecção tuberculosa em agentes comunitários de saúde. *Revista de Saúde Pública*, São Paulo, v. 44, n. 2, p. 332-338, 2010.

NOGUEIRA, C. M. O trabalho duplicado: a divisão sexual no trabalho e na reprodução: um estudo das trabalhadoras do telemarketing. *Expressão Popular*, São Paulo, v. 31, n. 114, p. 173-175, 2006.

NOGUEIRA, R.; SILVA, F. B. da; RAMOS, Z. V. O. *A vinculação institucional de um trabalhador sui generis*: o agente comunitário de saúde. Brasília, DF: IPEA, 2000. Disponível em: http://www.dominiopublico.gov.br/download/texto/td_0735. pdf>. Acesso em: 4 jun. 2011.

NUNES, M. O. et al. O agente comunitário de saúde: construção da identidade desse personagem híbrido e polifônico. *Cadernos de Saúde Pública*, Rio de Janeiro, v. 18, n. 6, p. 1639-1646, 2002.

PEDROSA, J. I. S.; TELES, J. B. M. Consenso e diferenças em equipes do Programa Saúde da Família. *Revista de Saúde Pública*, São Paulo, v. 35, n. 3, p. 303-311, 2001.

PINHEIRO, F. A.; TROCCOLI, B. T.; CARVALHO, C. V. Validação do Questionário Nórdico de Sintomas Osteomusculares como medida de morbidade. *Revista de Saúde Pública*, São Paulo, v. 36, n. 3, p. 307-312, 2002.

PUPIN, V. M.; CARDOSO, C. L. Agentes comunitários de saúde e os sentidos de "ser agente". *Estudos de Psicologia*, Natal, v. 13, n. 2, p. 157-163, 2008.

REIS, L. B. Uma análise de dimensão ético-política do trabalho de agentes comunitários de saúde do município de Vitória. 2005. Dissertação (Mestrado em Psicologia) - Universidade Federal do Espírito Santo, Vitória, 2005.

RENOSTO, A. et al. Confiabilidade teste-reteste do Índice de Capacidade para o Trabalho em trabalhadores metalúrgicos do sul do Brasil. *Revista Brasileira de Epidemiologia*, São Paulo, v. 12, n. 2, p. 217-225, 2009.

RESENDE, M. C. et al. Saúde mental e ansiedade em agentes comunitários que atuam em saúde da família em Uberlândia (MG, Brasil). *Ciência & Saúde Coletiva*, Rio de Janeiro, v. 16, n. 4, p. 2115-2122, 2011.

ROSA, A. S.; CAVICCHIOLI, M. G. S.; BRÊTAS, A. C. P. O significado que o agente comunitário de saúde atribui ao seu trabalho no processo de construção do Sistema Único de Saúde no Brasil. *Acta Paulista de Enfermagem*, São Paulo, v. 17, n. 3, p. 255-261, 2004.

SANTOS, L. P. G. S. A atuação do agente comunitário de saúde em São Bernardo do Campo: possibilidades e limites para a promoção da saúde. 2005. Dissertação (Mestrado em Saúde Coletiva) - Escola de Enfermagem da Universidade de São Paulo, São Paulo, 2005.

SEABRA, D. C. *O agente comunitário de saúde na visão da equipe multiprofissional.* 2006. Dissertação (Mestrado em Medicina Social) - Faculdade de Medicina da Universidade de São Paulo, Ribeirão Preto, 2006.

SELIGMANN-SILVA, E.; NEVES, M. Y. R. A dor e a delícia de ser (estar) professora: trabalho docente e saúde mental. *Estudos e Pesquisas em Psicologia*, Rio de Janeiro, v. 6, n. 1, p. 63-75, 2006.

SILVA, J. A.; DALMASO, A. S. W. Agente comunitário de saúde: o ser, o saber, o fazer. Rio de Janeiro: Fiocruz, 2002.

SILVA, T. L.; DIAS, E. C.; RIBEIRO, E. C. O. Saberes e práticas do agente comunitário de saúde na atenção à saúde do trabalhador. *Interface: Comunicação, Saúde, Educação*, Botucatu, v. 15, n. 38, p. 859-870, 2011.

SILVA, A. T. C.; MENEZES, P. R. Esgotamento profissional e transtornos mentais comuns em agentes comunitários de saúde. *Revista de Saúde Pública*, São Paulo, v. 42, n. 5, p. 921-929, 2008.

SLUITER, J. K. et al. Need for recovery from work related fatigue and its role in development and prediction of subjective health complaints. *Occupational and Environmental Medicine*, London, v. 60, p. 62-70, 2003. Supplement 1.

SOUZA, L. J. R.; FREITAS, M. S. C. O agente comunitário de saúde: violência e sofrimento no trabalho a céu aberto. *Revista Baiana de Saúde Pública*, Salvador, v. 35, n. 1, p. 96-109, 2011.

SOUZA, N. S. S.; SANTANA, V. S. Incidência cumulativa anual de doenças musculoesqueléticas incapacitantes relacionadas ao trabalho em uma área urbana do Brasil. *Cadernos de Saúde Pública*, Rio de Janeiro, v. 27, n. 11, p. 2124-2134, 2011.

TRINDADE, L. L. et al. Cargas de trabalho entre os agentes comunitários de saúde. *Revista Gaúcha de Enfermagem*, Porto Alegre, v. 28, n. 4, p. 473-479, 2007.

THEISEN, N. I. S. *Agentes comunitários de saúde (ACS)*: condições de trabalho e sofrimento psíquico. 2004. Dissertação (Mestrado em Desenvolvimento Social) - Universidade de Santa Cruz do Sul, Santa Cruz do Sul, 2004.

THE WHOQOL GROUP. The World Health Organization Quality of Life Assessment (WHOQOL): position paper from the World Health Organization. *Social Science and Medicine*, New York, v. 41, n. 10, p. 1403-1409, 1995.

TUOMI, K. et al. *Índice de capacidade para o trabalho*. São Carlos: EdUFSCar, 2005.

URSINE, B. L.; TRELHA, C. S.; NUNES, E. F. P. A. O agente comunitário de saúde na Estratégia de Saúde da Família: uma investigação das condições de trabalho e da qualidade de vida. *Revista Brasileira de Saúde Ocupacional*, São Paulo, v. 35, n. 122, p. 327-339, 2010.

VASCONCELLOS, N. P. C.; COSTA-VAL, R. Avaliação da qualidade de vida dos agentes comunitários de saúde de Lagoa Santa - MG. *Revista de Atenção Primária à Saúde*, Juiz de Fora, v. 11, n. 1, p. 17-28, 2008.

WAI, M. F. P. O trabalho do agente comunitário de saúde na Estratégia Saúde da Família: fatores de sobrecarga e mecanismos de enfrentamento. 2007. Dissertação (Mestrado em Enfermagem Psiquiátrica) - Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo, São Paulo, 2007.

WARE, J. R. et al. *SF-36 health survey*: manual and interpretation guide. Lincoln: QualityMetric, 2000.

ZANCHETTA, M. S. et al. Education and professional strengthening of the community health agent - an ethnography study. *Online Brazilian Journal of Nursing*, Niterói, v. 4, n. 3, 2005. Disponível em: http://www.objnursing.uff.br/index.php/nursing/article/view/35>. Acesso em: 4 dez. 2007.

Authors' contribution

Ribeiro Paula was responsible for collecting the data. Walsh conceptualized the project, analyzed the data and revised. Castro was responsible for analyzing the data and revising. Marcacine collected the data. All of the authors participated in editing and approving the final article.

Received: 15/04/2013 Resubmitted: 23/12/2013 Approved: 25/02/2014