184 - ADAPTATION FROM THE WALTON'S MODEL FOR EVALUATION OF QUALITY OF WORK LIFE

LUCIANA DA SILVA TIMOSSI[1]
BRUNO PEDROSO[1]
ANTONIO CARLOS DE FRANCISCO, Dr.
LUIZ ALBERTO PILATTI, Dr.
1 - CAPES/UTFPR
UTFPR - Ponta Grossa - Parana - Brazil
lucianatimossi@yahoo.com.br

1. Introduction

The contemporary scenario show that the companies are increasingly trying to accompany the changes occurred in the business environment and, consequently, they concentrate great part of their effort in the attempt to possess a differential, which may guarantee competitive advantage on the market. This way, some companies are starting to realize that changing their focus to the individuals that compound the organization may be a good business strategy.

This way, the investigation on Quality of Work Life (QWL), the development and the application of programs that intend to improve the work environment can bring benefits to the company in the relationship with its workers and in the quality of its products, making them more competitive. Further more, nowadays it is possible to realize a differentiated approach regarding people's Quality of Life (QL), indicating a valuation in factors inherent to the human being, like satisfaction level, professional and personal achievement, good relation with society and access to culture and leisure as real examples of well being.

The discussion about QWL is not recent. After an investigation on the bank of thesis from the Coordination for the Improvement of Higher Education Staff (Capes), a good number of thesis and dissertations in the Management area related to QWL since 1989 were found. And, since 1996, they were also found in the Production Engineering area. In general the researches about the QWL have as purpose the comprehension regarding individual situations of workers in their laboural environment, including behavioral aspects, and individual satisfaction (LIMONGI-FRANÇA, 2004). To evaluate the QWL, the models more frequently found in the literature are Hackman and Oldham (1975); Westley (1979); Wether and Davis (1983); Walton (1975) and Fernandes (1996). In Brazil, the Walton's QWL model (1975) is one of the most accepted and used by the researchers QWL.

During the development of some studies related to QWL, and after a lot of applications of the Walton's QWL model, it was observed the fact that some collaborators, when subjected to the evaluation of QWL, presented difficulties to interpret and understand the original form of the model, due to the use of more elaborated terms and expressions. Another point of difficulty was regarding the lack of direct and specific questions or the definition of each criterion. Based on this perspective, it is verified the need of an instrument of easy comprehension to attend collaborators with a low schooling level.

In this context, the objectives of this study are:

-To adapt the evaluation model of QWL proposed by Walton in 1975 in a simpler and direct language, allowing its application to individuals with a low schooling level.

-To present the development of the adapted version, pointing out that this study was not aimed at creating of a new model of evaluation of the QWL, but just adapts a model already existent and broadly used.

2. Quality of Work Life

The work, in its purposes and also in its concept, evolved over time. Work is not a simple instrument or a mean of subsistence anymore; it is now a multifactor process, in which the human being is placed as a driving centre. Following the work evolution came the QWL, which have the focus centered on the individual, and its concerning is to try to offer good laboural conditions to the worker, so that he can develop his tasks with satisfaction and well-being.

According to Walton (1975), the QWL is getting importance as a way to rescue human and environmental values that have being neglected in favor of technological advancement of the productivity and economic growth. To Fernandes (1996), the QWL cover the conciliation of the individuals' and organizations' interests, that is to say, at the same time that it improves the worker's satisfaction, it improves consonantly the productivity of the company. Cole *et al.* (2005, p. 54) states that “the quality of life at work includes broad aspects of the work environment which affects the collaborator in its health and in its performance”.

With the technology available to everyone, the companies started investing on the transformation of the laboural environment, trying to make it suitable to the physical, mental and social needs of its workers, having in mind that this is a way to impose its differential in face of the market. According to Limongi-França (2004, p. 10), [...] when this vision is consolidated, the businessman no longer looks at the money he applies in better conditions of life at work as expenditure, but yet as an investment, that certainly will bring him in return a virtuous circle, where the quality of life at work represents the quality of his products, productivity and, consequently, higher competitiveness.

In this perspective, it is possible to state that, while technology ceases to be a differential for the company, it is the persons who are inserted in it that promotes or not its success. This way, the concern with the health, and the well being, and, consequently the QWL of the workers is intensified.

2.1 Walton's QWL model

To this proposal of adaptation it was selected the model proposed by Walton (1975), that comprehend eight dimensions according to the writer, directly influence the employee. His choice is justified because its eight criteria addressed broadly covers basic aspects of the work situations, and for being a widely used instrument in the QWL evaluation in Brazil.

The listed criteria that compose the Walton's QWL model (1975) are not in priority order, and can be arranged in distinct manners to assume other importance, according to the reality in each organization. Table 1 indicates the criteria and subcriteria presents in Walton's QWL model (1975).

Evaluation criteria of QWL	Waltons QWL model (1975)
1. Adequate and fair compensation	**5. Social integration**
Fair Remuneration	Discrimination
Wage Balance	Interpersonal Relationship
Participation in Results	Teams Compromise
Extra Benefits	Ideas Valorization
2. Safe and healthy environment	**6. Constitutionalism**
Weekly Journey	Workers Right
Workload	Freedom of Expression
Process Technology	Discussion and Norms
Salubrity	Respect a Individualities
EPI and EPC Equipments	**7. The total life space**
Fatigue	Influence on the Family Routine
3. Development of human capacities	Leisure Possibility
Autonomy	Time of Work and Rest
Importance of the Task	**8. Social relevance**
Polyvalence	Proud of the Work
Performance Evaluation	Institutional Image
Conferred Responsibility	Community Integration
4. Growth and security	Qualities of the Products/ Services
Professional Growth	Politic of Humans Recourses
Trainings	
Resignations	
Encouragement for studies	

Source: Adapted from (WALTON, 1975)

3. Methodology

This study has been developed in three different contexts: first in the context of the current academic literature about QWL and its evaluation models; next, in the investigation and the adaptation of the questions; and, finally, the application of the instrument and the analysis of the coefficients found by criteria and in a general way of the whole instrument. A more detailed description of the stages is presented below.

3.1 Questions development

The questions development process and adaptation of the technical terms to simpler and more usual terms, without changing its meaning, involved the following steps:

a) Application of the instrument in its original shape and the identification of the terms that would be adapted. Some of these terms are indicated in the Table 2.

Original Terms	Adapted Terms
Fair Remuneration	Salary
Extra Benefits	Alimentation, transport, doctor, dentist, etc.
Salubrity	Work conditions
Fatigue	Tiredness
Polyvalence	Possibility to perform several works
Constitutionalism	Respect to laws and norms

Source: Research data, 2007

B) Elaboration of a set of questions involving anchors terms and adapted terms;

C) The permanence of the original anchor term of the instrument between brackets in the question, beside the term that corresponds to its modified synonymous, as presented in Illustration 1.

d) Standardization of the questionnaire involving the eight criteria proposed by Walton (1975) and 35 subcriteria, each being represented by a question.

e) Formulation of a response scale equivalent to all questions, as showed in Illustration 1.

Regarding a fair and appropriate salary (compensation):

1.1 How satisfied are you with your salary (remuneration)?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

Illustration 1 Example of the question present in the instrument

3.2 Development of the answers scales

In order to identify the collaborator' perception regarding his QWL, it was used a Likert scale, polarized in five points. The purpose of this scale, exemplified in Table 3, is to verify the collaborator' satisfaction according to the indicated criteria, taking into account its individual's needs and aspirations.

Scale	0% anchor	25%	50%	75%	100% anchor
Evaluation of the satisfaction level.	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
Numerical Grade	1	2	3	4	5

Source: Adapted from Fleck, 1999

This scale was based on the model of answer used by the Health World Organization in the instrument WHOQL-100. To make comprehension easier and to standardize the respective answers to the questionings, it was used only one scale of answers referring to the evaluation of the intensity of satisfaction for all questions.

3.3 Verification of the instrument's consistency

To ensure the inner consistency of the present instrument, it was used the Cronbach's alpha coefficient. Developed by Lee Cronbach in 1951, the Cronbach's alpha coefficient is a statistic tool that evaluates the confiability through the inner consistency of a questionnaire. For the utilization of the Cronbach's alpha coefficient, it is a requirement that all the items of instrument use the same measurement scale (FREITAS; RODRIGUES, 2005).

The Cronbach's alpha is obtained by the variance of individual components and by the variance of the components sum of each evaluated, aiming to investigate the possible relations between the items. It is important to observe that, even being widely used in many areas of the knowledge, there is not a consensus about the evaluation of the Cronbach's alpha coefficient. Some literatures consider satisfactory an instrument of research that obtains =0,70. Nevertheless, it is the researcher's task to decide which the minimum confiability value is to his respective instrument (FREITAS; RODRIGUES, 2005).

According to the verification of the instrument's consistency, it will be used as base the classification proposed by Freitas and Rodrigues (2005), who suggest the following scale to analyze the Cronbach's alpha coefficient:

α value	Confiability
$\alpha \leq 0,30$	Very low
$0,30 < \alpha \leq 0,60$	Low
$0,60 < \alpha \leq 0,75$	Moderate
$0,75 < \alpha \leq 0,90$	High
$\alpha > 0,90$	Very high

Source: Freitas and Rodrigues, 2005

Table 4 – Cronbach's alpha confiability scale.

Table 4 Cronbach's alpha confiability scale.

According to Freitas and Rodrigues (2005), the factors that could influence the confiability of a questionnaire are: the number of items, length of time for the application, and the sample of evaluators.

-Number of items: a questionnaire with a large number of items can cause impulsive and relapsing answers, beyond tending to increase the number of items without answers.

-Length of time for the application: limiting to a space of time pre-established can also cause the same problems describe in the previous item. It is commonly observed that due to lack of time to fill out the form, the last questions of it will not be answered.

-Sample of evaluators: applying a questionnaire to a similar sample, should reduce the confiability of a questionnaire, because, the more homogeneous, the variance tends to become null.

Concerning the previous items, it can be stated that none of these suffer any changes in the present research, having in mind that the purpose of this study was not to create a new instrument, but yet, to facilitate the understanding and comprehension of

the items of an instrument already existent and validated.

3.4 Application of the instrument

To test the inner consistency of the present instrument, an application was carried out in a sample of 99 respondents. It was tried to use, concerning the educational level, the most heterogeneous sample possible, once the objective is the adaptation of the instrument in a way it facilitates the comprehension of questions and the answers scale. This way, the distribution of the sample according to the schooling level is configured as: illiterate (5), elementary/middle school (29), high school (35), higher education (1) e postgraduate (29).

The adapted version of the evaluation model of QWL proposed by Walton (1975) is available at: http://www.pg.utfpr.edu.br/ppgep/qvt/walton.html.

4. Results and discussion

The application of the Cronbach's alpha coefficient with the purpose of testing the inner consistency of the instrument adoption presented the following results concerning the eight QWL criteria proposed by Walton (1975):

Criteria	α value
Adequate and fair compensation	0,86
Safe and healthy environment	0,84
Development of human capacities	0,86
Growth and security	0,79
Social integration	0,66
Constitutionalism	0,88
The total life space	0,84
Social relevance	0,81
TOTAL	*0,96*

Source: Research data, 2007

Table 5 – Cronbach's alpha coefficient of the adapted instrument.

Based on the classification of alpha's values, proposed by Freitas and Rodrigues (2004), it can be stated that the criterion "Social integration" is the only one that presents moderate consistency, while the other criteria are classified with a high consistency. On its turn, the alpha of the whole instrument was calculated in 0,96, which guarantees a very high inner consistency to the adapted instrument proposed in this study.

This way, the results obtained from the application of the adapted version from the Walton's QWL model, indicate that the proposed adaptation in this work presents a high inner consistency, which makes it, as the original model proposed by Walton (1975), proper to subside de researches from the QWL area.

In the evaluation of the scores obtained from the adapted version application of Walton's QWL model, it was established that the criteria with an average over score 3, which corresponds to 50% on the scale of 1 to 5 points, would be considered positive or factors of satisfaction in the work environment. The criteria indicating an average lower than 3 would be classified as negative/unsatisfactory on the QWL. Illustration 3 presents the results according to the eight investigated criteria.

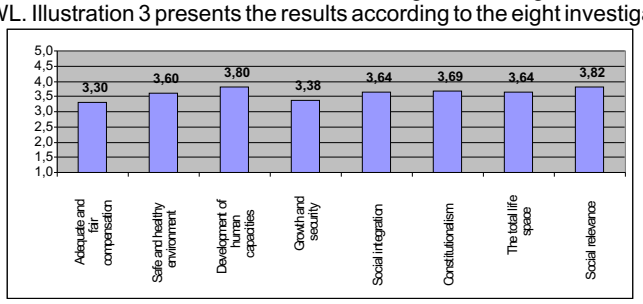


Illustration 3 - Level of satisfaction of the individuals with QWL's criteria

Source: Research data, 2007

According to Illustration 3, all the criteria present a level of satisfaction higher than 50%. The factor "adequate and fair compensation" (3,3) presented the lowest level of satisfaction adopted, and it might be interfering negativity on the QWL. The criterion: "growth and security" (3,38), "safe and healthy environment" (3,60), "the total life space" (3,64) and "social integration" (3,64) presented levels over 3, but very close to the limit of dissatisfaction, which could be indicating conflict relations between these factors, which could be considered ideal by the collaborators. Considering specifically the item "the total life space" (3,64), since it evaluates the work influence in the general life of a person, addressing questions like: the influence of the work in familiar life, leisure and rest. Table 6 presents the statistics of the QWL criteria.

Criteria	Satisfaction Level		
	Average	Standard Deviation	Variance Coefficient
1. Adequate and fair compensation	3,30	0,9	3,66
2. Safe and healthy environment	3,60	0,71	5,07
3. Development of human capacities	3,80	0,65	5,85
4. Growth and security	3,38	0,83	4,08
5. Social integration	3,64	0,62	5,87
6. Constitutionalism	3,69	0,79	4,67
7. The total life space	3,64	0,76	4,79
8. Social relevance	3,82	0,58	6,59

Source: Research data, 2007

Table 6 - Mean standard deviation and variance coefficient of QWL criteria.

In this study we can find classified as indicators of satisfaction the criteria: "constitutionalism" (3,69), "development of human capacities" (3,80) and "social relevance" with a higher score (3,82). With these results in hands it is possible to guide the company's decision making in search for best laboural conditions. As Lima (2004) points out, in the current competitive environment the organizations needs a healthy, motivated and prepared workforce to the competition. And the author still adds an important observation regarding the responsibilities on QWL, pointing out that this is not exclusive to the company. This way, the individual himself must be aware of his own importance in this process, or the organization to stimulate or instruct him on this purpose.

It is then possible to think that a good QWL will exist if the individual turn the attention to his own behavior according to his health and QL in general, trying to eliminate or reduce his negative habits that might harm his well being. For this purpose, the companies needs to have a holistic and more humanized vision according regarding the worker, once the individual out and the

employee inside the company is the very same person.

5. Conclusion

It is perceptible the fact that management has been suffering changes. The search for quality, formerly targeted only to the organizational and productive aspects, is now also focused to the collaborators' QL. It is known that, as the work is a human being need, the satisfaction from it also represents a need. In this sense, managers have sustained the precept that, by improving the collaborators' QL, consequently organization will be improving as a whole.

The objective of proposing an instrument with satisfactory psychometrics characteristics, adapted to the Walton's QWL model, was reached. The Cronbach's alpha coefficient of value = 0,96 reached on the application of the instrument indicates that it presents, based on the classification proposed by Freitas and Rodrigues (2005), very high inner consistency.

This way, it can be stated that the adaptation of Walton's QWL model proposed in this study allows, trough more clarified questions and a more objective scale of answers, its application in people with lower schooling level, ensuring the obtaining of reliable results without changing the criteria and the objectives of the original instrument.

References

COLE, D. C. et al. Quality of working life indicators in Canadian health care organizations: a tool for healthy, health care workplaces?. **Occupational Medicine**, v. 55, n. 1, p. 54-59, 2005.

FERNANDES, E. C. **Qualidade de vida no trabalho:** como medir para melhorar. Salvador: Casa da Qualidade, 1996.

FREITAS, A. L. P., RODRIGUES, S. G. A avaliação da confiabilidade de questionário: uma análise utilizando o coeficiente alfa de Cronbach. In: Simpósio de Engenharia de Produção, 12. 2005, Bauru. **Proceedings...** Bauru: UNESP, 2005.

LIMA, W. D.; STANO, R. C. T. M. Pesquisa de clima organizacional como ferramenta estratégica de gestão da qualidade de vida no trabalho. In: Simpósio de Engenharia de Produção, 11., 2004, Bauru. **Proceedings...** Bauru: UNESP, 2004.

LIMONGI-FRANÇA, A. C. **Qualidade de Vida no Trabalho**: QVT. 2.ed. São Paulo: Atlas, 2004.

WALTON, R. E. Criteria for quality of work life. In: DAVIS, L. E. et al. *Quality of working life*: problems, projects and the state of the art. New York: Macmillian, p. 91-104, 1975.

Rua Abílio Holzmann, 1571 ap. 32. Jardim Florença
CEP: 84025-140, Ponta Grossa PR
Telefone: (42) 9966-6008
E-mail: lucianatimossi@yahoo.com.br

ADAPTATION FROM THE WALTON'S MODEL FOR EVALUATION OF QUALITY OF WORK LIFE

Abstract:

The objective of the present study is to propose an adaptation from the Model of Walton, where the criteria were transcribed in the interrogative form, and the scale of answers were converted into a Likert scale with five alternatives. The verification of the inner consistency of the instrument was achieved from the Cronbach's alpha coefficient, which the obtained value was 0,96. Such result guarantees a very high consistency to the instrument adopted. It can be concluded that the adaptation from the Model of Walton, proposed in this study, allows, through more clarified questions and a more objective scale of answers, its application to people with low schooling level, guarantying the obtaining of reliable results without changing criteria and objectives of the original instrument.

Keywords: quality of work life, Walton's QWL model, evaluation instrument.

ADAPTATION DU MODÈLE DE WALTON POUR L´ÉVALUATION DE LA QUALITÉ DE VIE AU TRAVAIL

Résumé:

L'objectif de cette étude est de proposer une adaptation du modèle de Walton.Dans cette adaptation les critères ont été transcrit à la forme interrogative, et l'échelle des réponses a été converti à une échelle du type Likert de cinq alternatives. La vérification de la consistance interne de l'instrument a été réalisé à partir du coefficient alpha de Cronbach et la valeur obtenue a été de 0.96. Tel résultat garantit à l'instrument adapté, une consistance très haute. Nous concluons que l'adaptation du modèle de Walton proposé dans cette étude, grâce à des questions plus claires et à une échelle de réponse plus objective, peut être appliqué sur des personnes ayant une basse scolarité, tout en garantissant l'obtention de résultats dignes de foi et ceci sans modifier les critères et les objectifs de l'instrument original.

Mots-clés: qualité de vie au travail, modèle de Walton, instument d´évaluation.

ADAPTACIÓN DEL MODELO DE WALTON PARA EVALUACIÓN DE LA CALIDAD DE VIDA EN EL TRABAJO

Resumen:

El objetivo del presente estudio es proponer una adaptación del modelo de Walton, donde los criterios fueron transcribidos en la forma interrogativa, y la escala de respuestas fue convertida para una escala del tipo Likert de cinco alternativas. La verificación de la consistencia interna del instrumento fue realizada desde el coeficiente alpha de Cronbach, cuyo valor obtenido fue 0,96. Tal resultado garantiza al instrumento adaptado, una consistencia muy alta. Se concluye que la adaptación del modelo de Walton propuesta en este estudio, permite, a través de cuestiones más esclarecidas y una escala de respuesta más objetiva, su aplicación en personas con baja escolaridad, garantizando la obtención de resultados fidedignos sin alterar criterios y objetivos del instrumento original.

Palabras-llave: calidad de vida en el trabajo, modelo de Walton, instrumento de evaluación.

ADAPTAÇÃO DO MODELO DE WALTON PARA AVALIAÇÃO DA QUALIDADE DE VIDA NO TRABALHO

Resumo:

O objetivo do presente estudo é propor uma adaptação do modelo de Walton, onde os critérios foram transcritos na forma interrogativa, e a escala de respostas foi convertida para uma escala do tipo Likert de cinco alternativas. A verificação da consistência interna do instrumento foi realizada a partir do coeficiente alpha de Cronbach, cujo valor obtido foi 0,96. Tal resultado garante ao instrumento adaptado, uma consistência muito alta. Conclui-se que a adaptação do modelo de Walton proposta neste estudo, permite, através de questões mais esclarecidas e uma escala de resposta mais objetiva, a sua aplicação em pessoas com baixa escolaridade, garantindo a obtenção de resultados fidedignos sem alterar critérios e objetivos do instrumento original.

Palavras-chave: qualidade de vida no trabalho, modelo de Walton, instrumento de avaliação.