

Highlight, copy & paste to cite:

Wyatt, T. A. & Wah, C. Y. (2001). Perceptions of QWL: A study of Singaporean Employees Development, *Research and Practice in Human Resource Management*, 9(2), 59-76.

Perceptions of QWL: A study of Singaporean Employees Development

Thomas A. Wyatt & Chay Yue Wah

Volume 9:

Issue 2

Regular
Papers

Practitioner
Focus

Research
Note

ABSTRACT

The present study examines perceptions of the quality of work life among a sample of Singaporean employees. Data are obtained from managerial executives (N=332) through structured questionnaires and are used to illustrate their perceptions concerning QWL. Results from the factor analysis suggest four dimensions of QWL labelled, favourable work environment, personal growth and autonomy, nature of job, and stimulating opportunities and co-workers. The results provide a useful benchmark measure of QWL in Singapore. Overall, the findings support conceptualizations of factors involved in perceived QWL derived from different parts of the world. Limitations of the study, implications of the research findings, and directions for future studies are discussed.

INTRODUCTION

Historically, work has occupied an important place in the life of human beings. How people have thought and felt about the working experience has also been an age old concern for both workers and managers. The term quality of working life (QWL) was probably coined originally at the first international conference on QWL at Arden House in 1972 (Davis & Cherns, 1975). Mills (1978) probably coined the term quality of working life and suggested that it had moved permanently into the vocabulary of unions and management, even if a lot of the people using it were not exactly sure what territory it covered. During the twentieth century, our social science conceptualisations regarding work have been labelled scientific management, human relations, socio-technical systems theory, and now possibly holistic learning organizations. Cherns (1978) argued that:

QWL owes its origins to the marriage of the structural, systems perspective of organizational behaviour with the interpersonal, human relations, supervisory-style perspective (p.39).

In North America, Europe, and Japan, QWL has been quite well received as an approach leading to greater democratization and humanization of the work place as well as to greater productivity on the part of the work force. As Thompson (1983) indicated, QWL programs propose a movement toward greater engagement with the cooperation, knowledge, and tacit skills of the work force. Delamotte and Walker (1974) indicated that a number of emphases have been made in the humanization of work including: the need to protect the worker from hazards to health and safety,

the wage-work bargain (a fair day's pay for a fair day's work), the protection of workers from the hazards of illness and unemployment, and the protection of the worker from arbitrary the authority of management.

More recently, Deutsch and Schurman (1993) suggested that strategies in the USA developed by unions are to increase the amount of employee participation and involvement in decision-making around the areas of new technology, work environment and skill training and development. This move is set within a context of a split between anti-union and pro-union factions who would like to see different kinds of activities among the employees. The existence of and the quality of the relationship between union and management is an important factor in the success of cooperative undertakings.

With the exception mainly of Japan, Asia has emphasized QWL to a far lesser degree than North America and Europe. Therefore, not only are there probably fewer organizations operating QWL programs in Singapore, but there are also fewer published QWL research papers in Singapore. Cheng (1992) is one of a few authors who have presented several cases of QWL through employee participation in Singapore. Four different approaches to QWL were discussed and included an employee share option scheme, joint labour-management consultation, quality circles, and industrial relations circles. This is an interesting situation given the high degree of emphasis on achieving high standards in performance and quality known in Singapore.

Quality of working life has also been viewed in a variety of ways including: (a) as a movement; (b) as a set of organizational interventions, and (c) as a type of working life felt by employees (see Carlson, 1980). Our paper focuses on the third perspective of QWL. That is, our main concern is finding out what comprises a quality working life experience among organizational employees in Singapore.

In the present study, we are concerned with how the employee perceives a high quality working life experience. There are a number of reasons why investigation of the perceptions of quality of working life for employees merit investigation. Nirenberg and Wilkinson (1986) conducted a study of work values of Singaporean employees in which they found somewhat conflicting views of the Singaporean work values from 1980 to 1986. Nirenberg and Wilkinson (1986) noted that in a Economic Development Board report (NTUC, 1980a) the Singaporean employee was characterized as being " ...reluctant to take menial and unpleasant jobs, impatient, not taking criticism easily, lacking a sense of responsibility and loyalty, and being a malingerer" (p.1). In another Economic Development Board report (NTOC, 1980b) Nirenberg and Wilkinson (1986) indicated that there were other complaints from employers about employees concerning " ...high labour turnover (typically 6-8 percent per month); the ' even more pernicious' turnover of trained manpower (engineers, supervisors, etc.); and the related ' attrition of managerial authority" (p.2). In contrast to these negative views of employees, Times Publishing (1983) reported that " ...most working persons in Singapore possess positive attitudes towards their work" (Nirenberg & Wilkinson, 1986; p.2). The view that Singaporean employees showed positive work attitudes is supported by a survey of English-educated white-collar workers. Wimalasiri (1984) found that pride in work and a positive attitude towards higher order needs were the most prevailing work values of Singapore employees. These are all issues that relate to the nature of quality of working life and the employee.

With the rising standard of living in Singapore (Census of Population Office, 2001), the values and expectations of employees should also change in accordance with rising disposable income and opportunities to spend such income. Singapore's rapid industrialisation and economic growth need to be accompanied by an equally rapid development of a social organization and framework to support, complement, and sustain this process. As the Singaporean worker climbs the industrial ladder, it becomes increasingly important to improve the quality of working life (Lee, 1980; Tang, 1998; Chan et. al. 2000). Another feature related to improving QWL is the urge to look for restructuring jobs with less fragmentation and regimentation and more coherence and meaning. In some respects, there is an element of holism in utilizing a variety of employee skills and in the redesigning of jobs with more feedback and meaningfulness to the work process. For many, this

might seem a very attractive aspect of a quality of working life experience.

Thus, with the somewhat conflicting views of the work values of Singaporeans and the various mandates for improving the quality of working life in Singaporean organizations, it seems appropriate to study the conception of quality of working life held by Singaporean employees.

The present study attempts to make an identification of factors perceived to be important in a quality working life experience. Elizur (1990) indicated that since a number of approaches have been taken to defining QWL, discrepancies exist in the use of the term. He pointed out that earlier QWL was seen in terms of availability of jobs, training and mobility, and job security and earnings. Then, QWL was perceived to include working conditions, equitable compensation and job opportunities while more recently, QWL was viewed as involving autonomy, accomplishment, challenge, personal responsibility, chances to make decisions and develop interests and abilities. Numerous components of a concept of QWL have been suggested, for instance, the humanization of work, albeit discussed under guises such as empowerment (Elden, 1986), emancipation (Alvesson and Wijnjott, 1992), total management (James, 1992), and quality improvement programs (Elmuti and Kathawala, 1994). Values continue to be a cornerstone of QWL today as much as it was yesterday (Hartenstein & Huddleston, 1984; Harris & Moran, 1990).

This investigation centres on finding a parsimonious set of factors that can adequately represent the conception of a quality of working life. It aims to explore the conception Singaporean workers have of QWL. Given the rising standard of living and increasing visibility in world economics of Singapore and the relative paucity of knowledge about Singaporean employees' views as to what they want from a quality working experience, the present study hoped to contribute to a fuller understanding of Singaporeans' conceptions of QWL. Employees and employers are both able to enrich their understanding of the kinds of factors that could be introduced into the work environment (Lawler, 1975).

Literature Review:

How Do Employees Perceive QWL?

A number of researchers and theorists have been interested in the meaning of the QWL concept and have tried to identify the kinds of factors that determine such an experience at work (Dejamotte & Talcezawa, 1984; Kalra & Ghosh, 1984; Kahn, 1981; Seashore, 1976; Mirvis and Lawler, 1984; Lawler, 1982; Kerce and Booth-Kewley, 1993). For example, Seashore (1975) stated that:

... a significant by-product of the approach to the quality of working life discussed has been the identification of those aspects of jobs and work environments that impact most strongly upon the job satisfaction, job performance, and life-long well being of those who are so employed (p.78).

Table 1 presents a summary of a number of previous studies indicating the various factors deemed to be of significance for employees.

Table 1
QWL Factors from previous research

Study	Factors Identified	
	Work Environment	Employee Welfare
Cooper (1980)	democracy	security equity individuation
Delamotte & Takezawa (1984)	challenging work content traditional goals influence on decisions	fair treatment; work as part of life cycle
Davis (1983)		equitable pay

Kahn (1981)	task content; supervision Resources; promotion; work conditions; organizational context	autonomy & control; relations with co- workers; wages
Kaira & Chosh (1984)	safe & healthy working conditions; physical environment; absence undue work stress	employee welfare; job security
Kirkman (1981)	job mobility quantity & quality of leisure time created by job	pay
Lippitt & Rumley (1977)	organizational environment physical environment features of job itself	healthy social relations
Macarov (1951)	chance to advance	seniority
Meta (1982)		job security
Mirvis & Lawler (1980)	work environment	employee welfare
Walton (1974)	safe healthy work conditions opportunity to use abilities future growth opportunity constitutionalism work relevance to society	adequate & compensation social integration

Given the many perspectives illustrated in Table 1, what constitutes a high quality working life (QWL) for people? That is what are the important factors comprising a high QWL for future and current Singaporean workers? Surely groups of people from varied socio-cultural contexts will view QWL in a variety of ways, which are determined, in part, by local values and conditions.

The findings of a literature search for various features defining QWL led to an identification of two general factors namely work/work environment and employee welfare and well being. Within the first factor are included such features as democracy (Cooper, 1980), task content/physical features of the job (Kalra & Ghosh, 1984; Kahn, 1981), quantity and quality of leisure time created by the job (Kirkman, 1981), and promotion (Kahn, 1981; Macarov, 1981). The second broad QWL factor mainly emphasizes employee welfare and well-being. Kalra and Ghosh (1984) emphasized the physical working environment including safe and healthy working conditions while Cooper (1980) stressed security, equity, and individuation of the employee as features of a quality working experience. Metz (1982), Kirkman (1981), and Macarov (1981) emphasized job security, good pay, and benefits respectively. Healthy social relations (Lippitt & Rumley, 1977) and social integration (Walton, 1974) were two other employee welfare features thought to comprise QWL.

QWL AND CULTURE

QWL involves a variety of different factors held to be of some importance by employees in Canada, U.S.A., Japan, and Western Europe. Singaporeans presumably have their own conceptions about what comprises a quality working life. These notions have been tempered by their respective experiences at work as well as their particular cultural values.

Hofstede (1980) identified four broad dimensions of culture that he named individualism, power distance, masculinity, and uncertainty avoidance. Hofstede (1980) depicted Singapore as being much less individualistic than countries like the USA and Canada. Being low on individualism, Singaporean employees may expect a more group oriented, family-like relationship than employees from more highly individualistic countries such as the USA.

Low' s (1984) survey of Singaporean-based subsidiaries of U.S. multinational and Singaporean firms found that many of the Singaporean firms endorsed an authoritarian style of management. That is, most of the decision-making resided in the upper echelons. Stacey and Wise (1983, p.138) stated: a ... " quality of work life is a management style that adheres to the belief that the

organization's health improves as employees become more knowledgeable about and more active in company matters." Hofstede (1980), however, reported that one of the countries least similar to the U.S. on both individualism and power distance was Singapore. Hofstede's (1980) research indicates that cultures scoring high on power distance are more likely to exhibit reluctance in the adoption of QWL. One might well expect Singaporean employees to place less value on participation and democracy in the workplace than employees in such countries as the U.S.A. and Canada who score high on individualism and low on power distance.

The masculinity dimension identified by Hofstede (1980) needs to be treated with some caution since Singapore scored slightly below the mean of all countries in the sample. For low masculine oriented (low MAS) countries, managers place less emphasis on leadership, independence, and self-realization. Hofstede (1980, p.280) also found that factors such as the relationships with one's manager, cooperation, friendly atmosphere, and employment security were relatively more important to the respondents in lower MAS countries.

Respondents from these countries also believed more in group decisions, and placed work less centrally in their lives than respondents from higher MAS countries. Therefore we might expect similar kinds of endorsements by Singaporean employees on the identification of important QWL factors.

Uncertainty avoidance, the fourth cultural dimension identified by Hofstede (1980), refers to the disliking for ambiguous, poorly defined situation. The implication is that employees from countries in which there is high uncertainty avoidance will likely prefer a work environment that is highly structured with rules and regulations to cover a variety of circumstances. Singapore ranked lowest on uncertainty avoidance in Hofstede's (1980) research and this implies that Singaporean employees will prefer a working situation with fewer rules and guidelines.

Tseng and Ismail (1991) discussed the importance of QWL in Singapore in terms of its main resource, humans, and in terms of Singapore's increasing emphasis on high technology industries. With higher education and more training, Singaporean workers have rising expectations with regard to the workplace. Therefore, it is important that organizations foresee the needs of a rather large segment of potential employees. QWL programmes may be the kind of approach to help fulfil the rising expectations of the more highly educated and trained workers.

The existence of comprehensive QWL programmes was yet to be found in organizational settings in Singapore according to Tseng and Ismail (1991). Except for the work by Cheng (1992), no published QWL work that focused on employee perceptions of what comprised QWL conducted in Singapore was uncovered in the current literature search. As noted earlier, Hofstede's (1980) work suggests that cultures scoring high on power distance may be less likely to institute QWL programmes than cultures scoring low on power distance. Thus, the present research seeks to describe how Singaporean workers view QWL. In so doing, we hope to be more enlightened as to what Singaporeans value and expect to be present at the work place in order that work may be seen as a quality of working life experience.

METHOD

Sample

Data were collected by means of structured questionnaires from 332 Singaporean employees. The questionnaires were delivered to the workplace and those who volunteered to participate answered the questions on their own time. All questionnaires were accompanied by a covering letter stating the purpose of the study, as well as its voluntary, and confidential nature. The questionnaires were returned to a liaison officer in sealed envelopes. The completed questionnaires were collected by the authors. A number of questionnaires were also mailed to employees in a few organizations that communicated to the investigators that they were willing to participate. The response rate for employees was 66.4%. This high response rate is probably due to the commitment of senior management to the study and the conscientious follow-up of the organizational representative for

the project.

The sample is predominantly Chinese (94.3%) and comprised 53.5% females. About half of the employees (51%) worked for organizations operating in the financial sector while about one quarter of respondents worked for companies in the transport business. Seventy-six percent of the respondents had at least a diploma and/or university first degree. The majority of respondents were in middle management (34.6%) and junior management (36.1%) with 80% of the sample holding 'A' level certificates and/or higher educational attainment.

Measurement Device

A thirty-five (35) item questionnaire, derived and adapted from an earlier QWL study (Miller, 1978a), was used to measure QWL. Respondents were asked to rate the extent to which they perceived the importance of each QWL item in their work situation. The scale employed a 5-point Likert format ranging from (1) 'very low importance' to (5) 'very high importance'. Sample items include 'A work situation in which there are opportunities for me to use my abilities'; 'A job which provides me with adequate challenge'; and, 'A work situation in which my co-workers are committed to the organisation and its future'. A fuller sample of items may be seen in Appendix 1. The scale's Cronbach alpha coefficient is .94.

Results

The underlying dimensions of the QWL construct was examined using principal components factor analysis with varimax rotation. Table 2 shows the results of the factor analysis. Four main factors were derived and were respectively labelled favourable work environment, personal growth and autonomy, rewarding nature of the job, and stimulating opportunities and co-workers. Cronbach's (1951) alpha for the four factors of the QWL questionnaire are .93, .92, .88 and .79 respectively. The total variance explained by the four factors is 62.5%. The QWL items which loaded on the four factors in the present study are consistent with those reported by Levine (1983).

Table 2
Loadings of QWL Items on the four sub-scales

Scale	Item No	F1	F2	F3	F4
	4	.625			
	14	.537			
	5	.528			
	32	.503			
	12	.503			
	7	.476			
	29	.459			
Nature of Job & Career Progress	10	.448			
	22	.408			
	20	.403			
	15	.386			
	13	.360			
	35	.356			
	6	.345			
	11	.345			
	24		.342		
	26		.788		
	25		.656		

Management Support	28	.525		
	27	.416		
	34	.370		
	16	.369		
	23	.358		
	17	.767		
	18	.654		
Rewards	31	.475		
	9	.452		
	8	.439		
	20	.531		
Impact of Work on Personal Life	22	.479		
	19	.441		
	21	.404		
Percentage of explained variance		37.2	10.4	8.2 6.7
Cumulative percentage of explained variance		37.2	47.6	55.8 62.5

DISCUSSION

The results from the present study suggest four underlying dimensions of QWL: supportive management and favourable work environment, personal growth and autonomy, the nature of the job, and stimulating opportunities and co-workers. These dimensions encompass the concepts identified by Kirkman (1981), Helzel et. al. (1973), Portigal (1974), Levine (1983), as well as many of the features of work listed by Walton (1974) and Davis (1983). The present four-factor model provides useful benchmark measures of QWL in Singapore and represents a more parsimonious approach in contrast with the 16 QWL dimensions reported in the original General Motors QWL study (Miller, 1978a).

The fact that very few Malay and Indian Singaporeans participated in the survey deserves some consideration. According to the Department of Statistics, Singapore, the Chinese comprise 76.9% of the Singaporean population, the Malays 14.0%, and the Indians 7.7% (Singapore In Figures, 2000). Thus, relative to the composition of the resident population in Singapore, the Malays and Indians were somewhat under-represented in the present sample. Hence, the results obtained from this predominantly Chinese sample can only be regarded as more descriptive of the concepts and views of Singaporean Chinese employees towards quality of working life, than other minority groups in Singapore. Future research in Singapore should include a more representative sample of both Malay and Indian Singaporean workers since they comprise such a significant proportion of the Singapore population. It may well be that perceptions of QWL for Malay and Indian Singaporeans will differ significantly from each other as well as from Chinese Singaporeans, since it might be presumed that they would differ in terms of values and expectations about work experiences. Cultural differences naturally exist between the ethnic groups and historically, the Malays have been 'known to be driven' less by the profit motive than the Chinese or the Indians. With the current global focus of interest on Asia and South East Asia as new emerging business markets, it would be interesting to examine perceptions of QWL among other Chinese groups outside Singapore as well as non-Chinese ethnic groups, for instance in Malaysia, Indonesia or Brunei. In this respect, future research ought to consider cross-national studies that could well provide useful insights into our understanding of the work ethics and value systems of other ethnic groups.

A number of the suggestions for organizations made by Lee (1980) seem to be supported by the findings of the present study. Factor 1 indicates that employees prefer a degree of autonomy of

decision making as well as a management who is concerned and actively assists in problem solving. Although Hofstede's (1980) research suggested that cultures that scored high on power distance, for instance, Singapore, would likely place less value on participation and democracy, the present findings do not support this conclusion. It may well be that the rising education levels and standards of living have altered the workers' self-assessment as well as the expectations of one's role in the workplace regarding the extent of participation expected. Total job involvement may be fraught with difficulties. As Igarria, Parasuraman and Badawy (1994) indicated, there may be both positive and negative effects of high levels of job involvement in that high levels may be associated with the negative effects of role stressors.

Employees viewed a high QWL as one in which there were no negative impacts on personal life and such a high QWL would also exhibit an absence of inappropriate work demands. One might view a low QWL as one in which there are predominantly negative features in the working environment.

It is expected by the predominantly Chinese sample of employees that good performance will be recognized and that rewards are based on performance. This sample of Singaporean employees is working and living in a meritocratic society. There is a great need for employees to be treated as mature individuals who are respected at work. Factor 1 also includes an expectation for a high level of predictability in the work environment and this is in contradiction to the finding of Hofstede (1980) for low uncertainty avoidance countries. Since Singapore scored lowest on uncertainty avoidance in the Hofstede (1980) study, one would have predicted less emphasis on predictability than was found in this sample.

Factor 2 may be described as personal growth and autonomy in that employees prefer a positive impact on personal life and an opportunity to develop close personal ties while they attempt to achieve their career goals. Achieving some level of personal growth may be quite related to the quality of communication in the organization. King (1992) proposed that organizations could improve the quality of working life through improving the nature and quality of communication of the mission and vision through the use of team briefings as a first step in the process of employee participation. Again, this corresponds to the suggestions made by Lee (1980) about the organizations' need to look for ways of accomplishing a number of goals. The expectation of a positive impact of the job on one's life supports Ong's (1980) comments about the reluctance of Singaporean employees to avoid shift work since it disrupted family and social life. It appears that Singaporean employees have not changed in this regard. The present findings support Hofstede's (1980) research about low MAS countries in that relationships with one manager, in the form of cooperation, and friendly atmosphere, were also perceived as important in a high QWL experience. In addition to wanting a chance to be involved in decision-making, they also want an absence of excessive job stress, a positive impact on their personal lives, and an opportunity to develop close interpersonal ties. Bevert, Pedersen and Sundbo (1992) discuss similar employee desires when they present the notion of a multidimensional barter between the employer and the employees. From a Danish perspective, Bevert, Pederson and Sundbo, (1992) suggest that it is possible that wages will mean less in motivating employees compared with social welfare arrangements and the opportunities to develop professional and interpersonal skills. This attitude seems to be expressed in the importance attached to such issues in the present sample.

Factor 3 focuses more on the rewarding nature of the job itself. Employees prefer meaningful jobs that provide adequate challenge without compromising their values. Such high QWL jobs must have good benefits, pay well, provide assistance for planning one's career and exist in a work context that is perceived to be fair. Factor 4 emphasizes the importance of the existence of stimulating opportunities and co-workers. The findings show that the employees thought it was very important to have an opportunity to use their abilities and apply their knowledge, to learn new things, and to work with co-workers who were not disinterested in their job but were rather both interested and committed to the organization. This latter facet is in direct contrast with the negative loyalty attitudes that were expressed by Ong (1980). In this sense, perhaps the Singaporean employee has changed somewhat. The Singaporean employee in this study appears to have developed an interest in having the opportunity to apply what they have learned and to be

able to continue learning.

Portis and Hill (1991) argued that employee participation is a necessity in doing business and this necessity is congruent with the Singaporean employees' valuation vis a vis a quality of working life experience. Portis and Hill (1991) reported that one company out of a sample of four, failed to accomplish employee participation because of a lack of management support and understanding. The existence of most factors comprising QWL are largely under the control of management. Cooperation between employee and employer are needed, however, to make employee participation work as well as to bring to the work environment the other factors which employees desire.

In sum, four factors of QWL were found with this predominantly Chinese Singaporean sample of employees. The first factor relates to a favourable working environment. A high QWL job is one in which there is an efficient work situation, a management who is concerned about helping subordinates solve problems and actively assists on work problems, no negative impact on personal life as well as an absence of inappropriate work demands. Factor 1 emphasizes that good performance is recognized in addition to rewards being based upon performance while employees are respected and treated like mature people. This is congruent with the notion of a meritocracy. Thus, a high QWL work situation is one in which there is a great deal of management support.

The second QWL factor was labelled personal growth and autonomy. For there to be a high QWL, employees in this sample also wanted competent supervision and a management who actively assisted them on solving work problems and who were also concerned about their personal problems. A high quality work life was perceived to be one in which there was an opportunity to develop close personal ties, achieve career goals with an absence of excessive job stress. In a high QWL there should be a positive impact on personal life, an opportunity to be involved in decision as well as an acceptable level of physical comfort. Jobs seen to exist within high QWL work situations are those in which there is minimal negative impact on one's personal life, and hopefully one which has a positive impact on one's personal life. These preferred qualities of work life are broadly similar to those expressed by workers in the industrialized west (Miller, 1978b; Kirkman, 1981; Metz, 1982; Mirvis & Lawler, 1984; Cooper, 1988).

The third QWL factor identified has been labelled rewarding nature of the job. Work situations providing adequate levels of pay and other benefits are perceived as being high QWL work environments. As socio-economic conditions change, it is expected that the importance of this factor will also change.

The fourth and last factor identified was the perception of stimulating opportunities and co-workers. It is clear from the findings that the aspiring Singaporean job entrant seeks a relatively high level of security, career opportunities, personal development and reward incentives in his/her working environment. We would expect that these dimensions comprising QWL that were found in the present sample are consistent with the rapid economic growth and increasingly higher levels of educational standards in Singapore. Research studies (Taylor, 1977; Taylor, 1978; Donald, 1997) have generally established that QWL is positively associated with job satisfaction and can be a significant motivator. One implication of this finding for management is the need to consider the type of intrinsic and extrinsic factors highlighted by the four aspects of QWL that comprise the motivational reward-incentive system used in organizations. Designing the job and the work environment so as to include the characteristics of the QWL dimensions discussed above will contribute to the worker's sense of well-being, and provide a more positive start to other work motivation programmes within the organization. The integration of socio-technical aspects of work is strongly needed if future jobs are to provide some degree of humanization. Surely, as technical developments in the field of human factors become adopted in the workplace, questions concerning the effects of mechanization automation, and the cybernation of work will still loom large. Kirkman (1989) suggests that in the future work society the drive for more humanitarian treatment both in and out of work will increase.

As noted earlier, there is an under representation of the Malay and Indian subgroups in the sample.

Future research needs to redress this imbalance especially since there may well be cultural differences in value dimensions as suggested by Hofstede (1980). Additionally, other industries should be studied to examine the extent to which the present results can be generalized across industries. Given the major changes of the socio-technical systems in the work context and greater society, further work needs to be carried out to examine the extent to which perceptions of QWL may have changed as well.

REFERENCES

- Alvesson, M., & Wilmott, H. (1992). On the idea of emancipation in management and organization studies. *The Academy of Management Review*, 17, 432.
- Bevort, F. Pedersen, I. S., & Sundbo, J. (1992). Human resource management in Denmark. *Employee Relations*, 14, 6-20.
- Carlson, H. (1980). A model of quality of work life as a developmental process. In W. Warner Burke & L. D. Goodstein (Eds.), *Trends and Issues in OD: Current Theory and Practice* (pp. 83-123). San Diego, CA: Univ. Associates.
- Census of Population Office (2001). *Singapore Census of Population, 2000, Advance Data Release No. 9: A Decade of Progress*. Singapore Department of Statistics.
- Chan, K. B., Lai, G., Ko, Y. C., & Boey, K.W. (2000). Work stress among six professional groups: The Singapore experience. *Social Science & Medicine*. 50(10), 1415-1432.
- Cheng, S. (1992). Quality of work life through employee participation in Singapore: Selected cases. paper presented at the *Quality of Working Life and Enterprise Development Conference*, Taipei, Taiwan.
- Cherns A. (1978). Perspectives on the quality of working life. *International Studies of Management and Organization*, 8, 38-58.
- Cooper, C. (1988). Humanizing the work place in Europe: An overview of six countries. *Personnel Journal*, 59, 488-491.
- Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.
- Davis, L. (1983). Learning from the design of new organizations. In H. Kolodny & H. van Beinum (Eds.), *The quality of working life and the 1980s* (pp.65-86). New York; Praeger.
- Davis, L. & Cherns, A. (Eds.). (1975). *The quality of working life*. New York: Free Press.
- Delamotte, Y., & Walker, K. (1974). Humanisation of work and the quality of working life - Trends and issues. *Bulletin of the International Institute of Labour Studies*, 11, 3-13.
- Delamotte, Y., & Takezawa, S. (1984). *Quality of working life in international perspective*. Geneva; International Labour Office.
- Deutsch, S., & Schurman, S. (1993). Labor initiatives for worker participation and quality of working life. *Economic and Industrial Democracy*, 14, 345-354.
- Donald, J. E. (1997). *The influence of organizational and environmental variables on the quality of worklife of operating room nurses*. University of Toronto. Dissertation.
- Elden, M. (1986), Sociotechnical systems ideas as public policy in Norway: Empowering participation through worker-managed change. *The Journal of Applied Behavioral Science*, 22 (3), 239-255.
- Elizur D. (1990). Quality circles and quality of work life. *International Journal of Manpower*, 11, 3-7.
- Elmuti, D., & Kathawala Y. (1994). A preliminary analysis of Deming's quality improvement program: Some insights. *Production and Inventory Management Journal*, 35, 52-57.
- Harris P. R., & Moran, R. T. (1990). *Managing cultural differences*. 3rd edition. Houston Gulf

- Hartenstein, A. & Huddleston, K. (1984). Values; The cornerstone of QWL. *Training and Development Journal*, 38, 65-66.
- Helzel, M., Joyner, R., Goodale, J. & Burke, R. (1973). Development of a quality of working life questionnaire; Item discrimination study. Ottawa: Department of Labour.
- Hofstede, G. (1980). *Culture's Consequences*. Beverly Hills: Sage.
- Igbaria, M., Parasuraman, S., & Badawy, M. (1994). Work experiences, job involvement, and quality of work life among information systems personnel. *MIS Quarterly*, 18, 175-201.
- James, G. (1992). Quality of working life and total quality management. *International Journal of Manpower*, 13, 41-59.
- Kahn, R. (1981). *Work and health*. New York; Wiley.
- Kalra, S. & Ghosh, S. (1984). Quality of work life; A study of associated factors. *The Indian Journal of Social Work*, 45-54.
- Kerce, E. & Booth-Kewley, S. (1993). Quality of work life surveys in organizations: methods and benefits. In P. Rosenfeld & E. Jack (Eds.) *Improving organizational surveys: New directions, methods and applications*. Sage focus editions. Vol. 158. (pp. 88-207). Newbury Park, CA, USA: Sage Publications.
- King N. (1992). Improving the quality of working life through communication. *Asia Pacific Journal of Quality Management*, 1, 51-58.
- Kirkman, F. (1981). Who cares about job design? *International Journal of Operations and Production Management*, 2, 3-13.
- Kirkman, F. (1989). The quality of working life, robotics and the professional engineer. *Management Decision*, 27, 48-54.
- Lawler, E. (1975). Measuring the psychological quality of working life: The why and how of it. In L. Davis & A. Cherns (Eds.), *The Quality of Working Life*. (pp. 123-133). New York: Free Press.
- Lawler, F. (1982). Strategies for improving the quality of work life. *American Psychologist*, 37, 486-493.
- Lee Chiaw Meng, (1980). The second phase of industrialization and its implications on productivity for workers and managers. *In Progress into the 80s*. Singapore: NTUC.
- Levine, M. (1983). Self-developed QWL measures. *Journal of Occupational Behaviour*, 4, 35-46.
- Lippitt, G. & Rumley, J. (1977). Living with work the search for quality in work life. *Optimum*, 8, 34-43.
- Low, P. (1984). Singapore-based subsidiaries of U.S. multinationals and Singaporean firms: A comparative management study. *Asia Pacific Journal of Management*, 2, 29-39.
- Macarov, D. (1981). Humanizing the workplace as squaring the circle. *International Journal of Manpower*, 2, 6-14.
- Marks, M., Mirvis, P., Hackett, E. & Grady, Jr., J. (1986). Employee participation in a quality circle program: Impact on quality of work life, productivity, and absenteeism. *Journal of Applied Psychology*, 71, 61-69.
- Metz, E. (1982). Job security: The quality of work life issue. *Managerial Planning*, 31, 4-9.
- Miller, E. (1978a). Measuring the quality of work life in General Motors. Interview with Howard C. Carlson. *Personnel*, 55, 21-26.
- Miller, B. (1978b). GM's quality of work life efforts, an interview with Howard C. Carlson. *Personnel*, 55, 11-23.
- Mills, T. (1978). What's in a name? Detroit: General Motors Corporation.
- Mirvis, P. & Lawler, E. (1984). Accounting for the quality of work life. *Journal of Occupational*

- Behaviour*, 5, 197-212.
- Nirenberg, J., & Wilkinson, B. (1986). Work values of Singapore employees revisited. *Singapore Management Review*, 8, 1-9.
- National Trades Union Congress (1980a). *Progress into the 80s*. Singapore: NTUC.
- National Trades Union Congress (1980b). *Work and excel for an even better quality of life*. Singapore: NTUC.
- Ong W. H. (1980). Attitudes of the Singapore workforce. In National Trades Union Congress Ordinary Delegate Conference. *Work and excel for an even better quality of life*. Singapore: NTUC.
- Payton-Miyazaki, M. & Brayfield, A. (1976). The good job and the good life: Relation of characteristics of employment to general well-being. In A. Biderman & T. Drury (Eds.). *Measuring work quality for social reporting* (pp.125-150). New York: Wiley.
- Portugal, A. (Ed.). (1974). *Measuring the quality of working life*. Ottawa: Department of Labour.
- Portis, B. & Hill, N. (1991). Making employee participation a way of life: Four Experiences. *National Productivity Review*, 10, 481-489
- Seashore, S. (1975). Defining and measuring the quality of working life. In Davis, L. and Cherns, A. (Eds). *The quality of working life: Vol. 1. Problems, prospects and the state of the art*. (pp. 105-118). New York Free Press.
- Seashore, S. (1976). Assessing the quality of working life: The US experience. *Labour and Society*, 1, 69-79.
- Shani, A., Basuray, M., Scherling, S. & Odell, J. (1992). Revisiting quality of work life interventions: A cross-cultural pilot study. *Journal of Organizational Change*, 5, 59-76.
- Singapore in Figures, 2000* (2000). Singapore Department of Statistics.
- Stacey, N. & Wise, R. (1983). The educational implications of QWL. In D. Skrovan (Ed.), *Quality of Work Life* (pp.137-145). Reading, Mass.: Addison-Wesley.
- Tang, K. L. (1998). East Asian newly industrialising countries: Economic growth and quality of life. *Social Indicators Research*, 43, 69-96.
- Taylor, J. (1977). Job satisfaction and quality of working life: A reassessment. *Journal of Occupational Psychology*, 50, 243-252.
- Taylor, J. (1978). An empirical examination of the dimensions of quality of working life. *The International Journal of Management*, 6, 153-160.
- Thompson, P. (1983). *The nature of work*. London: Macmillan Education Ltd.
- Tseng, A. & Ismail, A. (1991, May). QWL in Singapore: A focused review. Paper presented at *The Quality of Working Life (QWL) and Enterprises Development*, Taipei, Taiwan.
- Walton, R. (1974). QWL indicators-Prospects and problems. In A. Portugal (Ed.). *Measuring the quality of working life*. (pp.57-70). Ottawa: Department of Labour.
- Wimalasiri, J. S. (1984). Correlates of work values of Singapore employees. *Singapore*