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Age differences in coping and locus of control: A study of managerial stress in Hong Kong

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Abstract

The present study involved data collection from 3 samples of Hong Kong managers to examine mechanisms by which age would relate to work well-being. A total of 634 managers was drawn by random sampling and purposive sampling methods. The results showed that age was positively related to well-being (job satisfaction and mental well-being). Furthermore, older managers reported fewer sources of stress, better coping, and a more internal locus of control. Multiple regression analyses suggested that the relations of age with 2 well-being indicators can be attributed to various combinations of coping, work locus of control, sources of stress, managerial level, and organizational tenure.

It has been well established in western and Asian samples that age is associated with employee well-being, with particular attention given to job satisfaction (e.g., Ang, Goh, & Koh, 1993; Birdi, Warr, & Oswald, 1995; Clark, Oswald, & Warr, 1996; Warr, 1992). However, the form of the relationship between age and job satisfaction varies; it is either linear (e.g., Birdi et al., 1995) or curvilinear (e.g., Clark et al., 1996; Kacmar & Ferris, 1989). We expect age and job satisfaction to be especially relevant in Chinese employees. Filial piety is one of the important behavioral rules in Confucianism. The attributes of intergenerational relationships governed by filial piety are structured, enduring, and invariable across situations within Chinese culture (Ho, 1996). Filial piety attributes may be generalized to the superior–subordinate interaction that Chinese employees have more favorable attitudes toward older workers, and older workers therefore have higher job satisfaction than their younger counterparts.

Wright and Hamilton (1978) proposed several explanations for the age–job satisfaction (and possibly other aspects of well-being) link. Of concern here is the job change mechanism, which says that older workers have better jobs and more skills, hence they are able to cope better with the demands of their jobs. White and Spector (1987) tested the job change hypothesis and showed that the

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relationship between age and job satisfaction could be accounted for by better congruence between what people want and have in jobs, greater internal locus of control, and higher salaries for older workers.

Clark et al. (1996) suggested that employees' mental health is as important as job satisfaction. They found that a similar age pattern occurs for employees' general mental health. In a review provided by Semmer (1996), employees adopting problem-focused coping tend to have better mental health. Spector and O'Connell (1994) showed that internality in locus of control is associated with better work well-being.

Age Relations With Coping, Locus of Control, and Perceived Sources of Stress

Age relates not only to work well-being but also to several factors that are in turn related to well-being. Older workers tend to be internals (White & Spector, 1987). Lachman and Weaver (1998) concluded that, for the domain of control over work, control beliefs increase with age. Through their greater range of experience, older people may have developed more coping resources and therefore appraise problems as less stressful and thus report fewer hassles than do younger adults (Aldwin, 1991; Aldwin, Sutton, Chiara, & Spiro, 1996).

The Present Study and Hypothesis

Little research has been done in Chinese societies concerning the mechanisms by which older workers achieve better work well-being. The present study replicated the investigation on the relationship of age and employee well-being in Hong Kong to determine whether western findings concerning age and well-being also hold true among Hong Kong managers. Because curvilinear relations seemed to occur for the very young group (Birdi et al., 1995), and our managerial sample tended not to contain very young people (i.e., 18–20 years), we therefore examined only the linear age–job satisfaction relation in this study. We used a procedure similar to White and Spector (1987) to test the hypothesis that older workers are more satisfied (and have better well-being) because they demonstrate a better ability to cope with work, have greater internal locus of control, perceive fewer sources of stress, are at higher managerial levels, and have been at the current job longer. Sources of stress might be noted as indicating differences in the job (although it is also possible that better coping makes the same situation seem less stressful). We used organizational tenure as a control variable to ensure that any age−well-being relationships were not purely a function of the number of years worked in an organization.

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Method

Participants and Procedure

We collected data from three samples of managers with anonymous self-report surveys from March 1997 to May 1998. Data collection in Sample 1 and Sample 3 benefited from research grants that enabled us to draw random samples from the Members' Business Directory of the Chinese General Chamber of Commerce 1997 (Chinese General Chamber of Commerce, 1997). This directory was chosen because the persons in the directory are representative of most Hong Kong managers. A purposive sampling procedure was adopted to recruit managers from firms and part-time master's of business administration classes for Sample 2. The three samples consisted of 280, 192, and 162 managers, respectively. These samples make up a total of 634 participants in the full sample, which is about 0.1% of the total population of managers and administrators in Hong Kong (Population by Census, 1996).

The age range of the three samples, in years, is from 20 to 72; with 27.3% between 20 and 29, 42.3% between 30 and 39, 15.1% between 40 and 49, 7.4% between 50 and 59, 2.7% between 60 and 69, and 0.3% between 70 and 79. The mean age of the respondents was 35 years (SD = 9.92), 59% were male, 52% were married, 35% were in middle management, and 64% had a college education. The mean number of years with the present company was 7.5. To make certain that sample differences did not confound results, we compared Pearson rs with pooled within-group rs (which control for group differences). The pooled within-group correlation controls for subgroup membership by computing covariance and variances around each subgroup mean instead of the grand mean (Finn, 1974). It is equivalent to computing a partial correlation with subgroup membership controlled. Of the 45 correlation pairs among the 10 variables in the study, the mean difference in magnitude of corresponding correlation pairs was .02. The pattern of relations (relative magnitude of relations among different variable pairs) was maintained, suggesting clearly that subsequent results are not attributable to differences in the three samples. Thus, we combined samples for the remaining analyses. A detailed description of the participants, procedures, and sample difference analysis can be found in Siu, Spector, Cooper, Sparks, and Donald (1999).

Measures

We used the Occupational Stress Indicator–2 (OSI-2; Williams & Cooper, 1996) and the Work Locus of Control Scale (Spector, 1988) as the instruments for the study. Four sections of the OSI-2 were used including job satisfaction (12 items), mental well-being (12 items), sources of stress (40 items), and control coping (5 items assessing problem-focused coping), with respective high score denoting higher job satisfaction, better mental well-being, perception of more sources of stress, and more frequent use of coping. The Work Locus of Control Scale consists of 8 items measuring “internal” and 8 items measuring “external” control over work-specific issues (with high scores indicating

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externality). Single items were included to measure managerial level (with low scores denoting high position), organization tenure (number of years with present company), and age. All of the items in the questionnaire were translated into Chinese by Oi-ling Siu and back-translated into English by a professional translator to assure equivalence (for detailed description of the scoring procedures and sample items, see Siu et al., 1999).

Results

Reliabilities of Scales

The internal consistency reliabilities of the scales used in the study are presented in Table 1. The coefficient alphas of subscales are acceptable (greater than .70). It seems that the internal consistencies were maintained across most translations. These statistics provide evidence of scale equivalence of measures across cultural groups (Riordan & Vandenberg, 1994).

Table 1
Intercorrelations Between Age and Explanatory Variables

Variable	1	2	3	4	5	6	7	8
1. Job satisfaction	—	.36***	−.11**	.22***	−.36***	.32***	−.38***	.21***
2. Mental well-being		—	−.20***	.29***	−.35***	.25***	−.28***	.12**
3. Sources of stress			—	.08	.16***	−.18***	.16***	−.15***
4. Problem-focused coping				—	−.18***	.14***	−.19***	.07
5. Locus of control					—	−.16***	.19***	−.10*
6. Age						—	−.66***	.68***
7. Managerial level[a]							—	−.47***
8. Organizational tenure[a]								—
M	43.84	47.29	130.17	25.38	47.08	35.36	2.82	7.51
SD	9.80	8.71	21.99	4.01	8.75	9.92	1.12	8.09
Possible range	12–72	12–72	40–240	6–36	16–96	20–72	1–4	1–50
Alpha	.92	.73	.92	.80	.77			

[a] Single item with no alpha calculated, and range is actual range.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Correlates of Age With Other Variables

As can be seen in Table 1, age was positively, significantly related to job satisfaction, mental well-being, problem-focused coping, and organizational tenure, and negatively related to total sources of stress and managerial level (because a low score denotes a high position, older workers are more likely in the higher position).

Relations of Age With Job Satisfaction and Mental Well-Being Accounted for by Sources of Stress, Locus of Control, Control Coping, Managerial Level, and Organizational Tenure

A series of hierarchical multiple regressions were performed by regressing each well-being measure on the main variables (sources of stress, locus of control, and control coping) first, age second, and demographic variables (managerial level and organizational tenure) last. The reason for entering age before the other demographic variables is that the correlations between age and managerial level and organizational tenure are so substantial that these two demographic variables would get credit for shared variance with age in predicting prior variables. In relation to job satisfaction, the unique

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variance attributed to age was 4% after the main variables were entered (see Table 2). However, age was nonsignificant in the multiple regression after we entered all our explanatory variables. In relation to mental well-being, the unique variance attributed to age was 3%, and age was significant when all the explanatory variables were entered (see Table 2).

Table 2
Summary of Regression Results for Models of the Effects of Explanatory Variables on Two Well-Being Indicators

	Job satisfaction			Mental well-being		
Predictor	Model 1 β	Model 2 β	Model 3 β	Model 1 β	Model 2 β	Model 3 β
Sources of stress	−.08*	−.04	−.03	−.19***	−.18***	−.18***
Work locus of control	−.33***	−.29***	−.29***	−.27***	−.25***	−.25***
Problem-focused coping	.16***	.13***	.11*	.25***	.25***	.23***
Age		.24***	.08		.13***	.13*
Managerial level			−.23***			−.13*
Organizational tenure			.04			.12*
R^2	.17	.21	.25	.20	.22	.25
ΔR^2		.04	.04		.02	.03
Overall F	34.05***	32.92***	26.38***	44.94***	35.97***	26.32***
N	518	495	477	532	506	488

* $p < .05$. *** $p < .001$.

Discussion

The results supported our hypothesis in that there were significant relations of age with work well-being, sources of stress, locus of control, control coping, managerial level, and organizational tenure in expected directions. Age correlated from .25 to .32 with our two well-being measures (see Table 1). These are higher correlations than are typically found in western studies with age (e.g., White & Spector, 1987). The stronger relationships between age and work well-being in this sample could be due to Chinese cultural characteristics of filial piety. As argued earlier, older people are more accepted within the Confucian tradition of Chinese companies. This greater acceptance may reduce stressors, which in turn reduces strains. The high negative correlation between age and managerial level (with low scores denoting high position) may be because 30% (93 in Sample 1 and 99 in Sample 3) of the sample were recruited from the Members' Business Directory of The Chinese General Chamber of Commerce 1997 , in which older and more prestigious people are listed. Another explanation may be related to a specialty of the traditional Asian tenure system where age is a bigger factor in promotion (Spector et al., 2001).

For job satisfaction, age was nonsignificant in the multiple regression after we entered all our explanatory variables. The age–job satisfaction relationship was accounted for by locus of control, coping, and managerial level. These results are consistent with prior research and theory about possible mechanisms. For instance, with age comes better work adjustment, as reflected in a more

internal work locus of control and enhanced coping (Aldwin, 1991). These findings are consistent with White and Spector (1987) in showing that locus of control was a significant explanatory variable and organizational tenure was not. However, we found some significance with managerial level that they did not. This discrepancy may be explained by their inclusion of salary, which might have overshadowed the effects of managerial level in their multiple regression analyses. Our work also demonstrates that the western findings concerning age and job satisfaction hold true in an Asian culture of Hong Kong. We have shown a similar pattern of relations with a variety of other variables.

For mental well-being, age was significant when all explanatory variables were entered. One possible reason is that psychological well-being is maintained or improved in later life (e.g., Baltes & Carstensen, 1996). However, the amount of variance accounted for was quite small. As suggested by Clark et al. (1996), the remaining unique variance may include nonjob factors of life stage and personal circumstances such as psychological maturity. This is a potential area for future research.

To conclude, older employees reported better work well-being than their younger counterparts, as we had hypothesized. The results from western cultures concerning reasons for better well-being among older workers also held in Hong Kong. The limitations of the study include the use of a cross-sectional design and the fact that not all of the samples were randomly chosen.

Notes

The data collection for this article has benefited from financial support from the Research Committee, Lingnan University, and the Occupational Safety and Health Council of Hong Kong.

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References

Aldwin, C. (1991). Does age affect the stress and coping process? Implications of age differences in perceived control. Journals of Gerontology, 46(4), 174–180.

Aldwin, C. M., Sutton, K. J., Chiara, G., & Spiro III, A. (1996). Age differences in stress, coping, and appraisal: Findings from the Normative Aging Study. Journals of Gerontology, 51B(4), 179–188.

Ang, K. B., Goh, C. T., & Koh, H. C. (1993). Research notes: The impact of age on the job satisfaction of accountants. Personnel Review, 22(1), 31–39.

Baltes, M. M., & Carstensen, L. L. (1996). The process of successful ageing. Ageing and Society, 16, 397–422.

Birdi, K., Warr, P., & Oswald, A. (1995). Age differences in three components of employee well-being. Applied Psychology: An International Review, 44, 345–373.

Chinese General Chamber of Commerce . (1997). Members' Business Directory of the Chinese General Chamber of Commerce 1997. Hong Kong: Author.

Clark, A., Oswald, A., & Warr, P. (1996). Is job satisfaction U-shaped in age? Journal of Occupational and Organizational Psychology, 69, 57–81.

Finn, J. D. (1974). A general model for multivariate analysis. New York: Holt, Rinehart, &Winston.

Ho, D. Y. F. (1996). Filial piety and its psychological consequences. In M. H. Bond (Ed.), The handbook of Chinese psychology (pp. 155–165). New York: Oxford University Press.

Kacmar, K. M., & Ferris, G. R. (1989). Theoretical and methodological considerations in the age–job satisfaction relationship. Journal of Applied Psychology, 74(2), 201–207.

Lachman, M. E., & Weaver, S. L. (1998). Sociodemographic variations in the sense of control by domain: Findings from the MacArthur Studies of Midlife. Psychology and Aging, 13, 553–562.

Population by census. (1996) .Hong Kong, China: Census and Statistics Department.

Riordan, C. M., & Vandenberg, R. J. (1994). A central question in cross-cultural research: Do employees of different cultures interpret work-related measures in an equivalent manner? Journal of Management, 20(3), 643–671.

Semmer, N. (1996). Individual differences, work stress and health. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), Handbook of work and health psychology (pp. 51–86). Chichester, England: Wiley.

Siu, O. L., Spector, P. E., Cooper, C. L., Sparks, K., & Donald, I. (1999). Age differences in work adjustment: A study of male and female managerial stress, coping strategies and locus of control in Hong Kong. (Working Paper Series No. 90, 2/99). Hong Kong, China: Centre for Public Policy Studies, Lingnan University.

Spector, P. E. (1988). Development of the Work Locus of Control Scale. Journal of Occupational Psychology, 61, 335–340.

Spector, P. E., Cooper, C. L., Sparks, K., Bernin, P., Dewe, P., & Lu, L. (2001). An international study of the psychometric properties of the Hofstede Values Survey Module, 1994: A comparison of individual and country/province level results. Applied Psychology: An International Review, 50, 269–281.

Spector, P. E., & O'Connell, B. J. (1994). The contribution of personality traits, negative affectivity, locus of control and Type A to the subsequent reports of job stressors and job strains. Journal of Occupational and Organizational Psychology, 67, 1–11.

Warr, P. (1992). Age and occupational well-being. Psychology and Aging, 7, 37–45.

White, A. T., & Spector, P. E. (1987). An investigation of age-related factors in the age–job-satisfaction relationship. Psychology and Aging, 2, 261–265.

Williams, S., & Cooper, C. L. (1996). Occupational stress indicator: Version 2. North Yorkshire, England: RAD..

Wright, J. D., & Hamilton, R. F. (1978). Work satisfaction and age: Some evidence for the "job change" hypothesis. Social Forces, 56, 1140–1158.