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A brief measure of some components of the Type A Behaviour pattern*

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Psychometric data from a 21-item measure of the Type A behaviour pattern components of Time Urgency, Competitiveness, and Work Pressure are presented. These include reliability and factor analytic data, and some preliminary normative data from a large adult sample.

The Type A behaviour pattern was originally described by Friedman and Rosenman (1959) as a constellation of actions and emotions that increased the risk of coronary morbidity. They assessed Type A behaviour with the Structured Interview (SI), which focused on speech stylistics, psychomotor mannerisms, degree of time pressured job involvement, hostility, competitiveness, impatience, and anger. Early reports from the Western Group Collaborative Study (WGCS; Rosenman et al., 1964) validated the significance of the Type A personality as a risk factor for coronary heart disease (CHD) in middleclass, white Californians. More recent studies (Multiple Risk Factor Intervention Trial, 1982; Cohen & Reed, 1985) suggest that the magnitude of the relationship between Type A and CHD has declined since 1977, and indeed the cumulative 22-year CHD mortality rate from the WGCS raises substantial doubts about the importance of Type A/B behaviour as a risk factor (Ragland & Brand, 1988). Nevertheless, public awareness of the Type A behaviour pattern is high, and underlying the rationale for many stress reduction programmes is the notion that the various components making up the Type A pattern may not be conducive to a healthy lifestyle.

Numerous measures of the Type A personality have emerged. The original Structured Interview, developed for North American subjects, which requires the rating of a 10-15 minute audiotaped interview, is a relatively time consuming and expensive procedure to employ on a large scale. Consequently several self-report measures have been developed (see O'Looney, 1984, for a review) for use in large sample surveys.

In 1985, a further health survey of the borough of Milton in Otago was undertaken, and a questionnaire assessing the putative Type A factors of Competitiveness, Time Urgency, and Work Pressure was developed based on existing self-report scales (Other Type A factors, e.g., anger expression were assessed using other questionnaires; Knight, Chisholm, Paulin, & Waal-Manning, 1988). Items for this questionnaire were derived from existing self-report scales. In this Brief Report results from the final version of this scale (designated the Milton Life-Stress questionnaire, MLSQ) are described.

Method

The results presented in the present report come from the analysis of data from 1211 adult residents in the borough of Milton, a small rural community near Dunedin, New Zealand. Subjects completed other questionnaires, had their height, weight, blood pressure and heart rate measured, and were interviewed individually about their medical history. Details of the procedure and sample are available elsewhere. (Knight, Chisholm, Godfrey, & Marsh, 1988). The final version of the MLSQ comprised eight items measuring Time Urgency (e.g., "How often do you find yourself pressed for time"), seven items measuring Competitiveness (e.g., "Do you have a strong need to be good at most things?"), and six items relating to Work Pressure (e.g., "Do you find your work day stretching you to the limits of your energy and capacity"). Responses to each questionnaire were recorded

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Table 1: *Means, standard deviations, factor loadings, and subscale item-total correlations for the Competitiveness and Time Urgency subscales.*

	M	*SD*	Factor Loading T	Factor Loading C	Subscale Item-Total *r*
Time Urgency					
Pressed for time	2.40	.68	.62	.07	.47
Under pressure	2.88	.69	.60	.03	.50
More than one thing at a time	2.54	.96	.59	.16	.51
Hard driving	2.38	.68	.52	.22	.46
No time for hair cut	1.90	.93	.33	.14	.35
Things in a hurry	2.43	.71	.42	.31	.35
Listening and thinking of something else	2.99	.61	.38	.10	.35
Waiting in line	2.07	.82	.31	.22	.26
Competitiveness					
Are you competitive?	2.52	.83	.05	.79	.54
Winning contests	2.54	.80	.03	.68	.48
Need to achieve	2.70	.78	.23	.50	.46
Get ahead in life	2.43	.90	.26	.49	.38
Leadership in group	2.33	.86	.13	.43	.28
Job recognition	2.09	.92	.15	.33	.22
Bossy or dominating	2.10	.84	.22	.32	.29

Note: T = Time Urgency, C = Competitiveness.

Table 2: *Means, standard deviations, factor loadings, and item-total correlations for the Work Pressure subscale.*

	M	*SD*	Factor Loading	Item-Total *r*
Think about work afterwards	2.48	.88	.65	.56
Take work too seriously	2.33	.74	.59	.48
Responsibility	2.98	.72	.56	.46
More Effort than others	3.04	.55	.56	.46
Exciting stimulating	2.45	.83	.55	.43
Stretched to limits	2.34	.81	.46	.42

on an appropriately labelled 4-point scale [copies of the revised MLSQ are available from the authors].

Results and Discussion

Results from the MLSQ were factor analyzed using the principal axes method of factoring, with the two to eight- factor solutions being rotated using the Varimax criterion. Since only 54% of the sample were currently employed, data from the Competitiveness and Time Urgency scales were analyzed separately from the Work Pressure results. Various combinations of items and numbers of potential factors were evaluated. The two-factor solution was chosen as optimal, taking account of the need for simple structure, the occurrence of breaks in the ordered and nonrotated equivalences when plotted, and the size of the eigenvalues. The two factors corresponded to the two sets of items for the subscales. Item means, factor loadings, and item-total correlations for the Time Urgency and Competitiveness scales are presented in Table 1, and for Work Pressure in Table 2. The Work Pressure items were analyzed separately and loaded on just one factor.

Mean subscale scores for the total sample are presented in Table 3. Although age was negatively correlated with Time Urgency ($r = -.19$) and Competitiveness ($r = -.17$), the magnitude of these correlations did not warrant presenting separate means for each age range (these data are available on request). Only on the competitiveness scale were there gender differences: Males were significantly more competitive than females, $t = 10.74$, $p < .002$. Alpha coefficients for the 8-item Time Urgency Scale,

Table 3: *Subscale means and standard deviations for males and females.*

	Male			Female		
	n	*M*	*SD*	*n*	*M*	*SD*
Competitiveness	515	18.11	3.37	512	15.84	3.44
Time Urgency	518	19.56	3.19	518	19.80	3.57
Work Pressure	381	15.48	2.79	201	15.28	2.66

7-item Competitiveness scales, and 6-item Work Pressure scale were .71, .66, and .73 respectively. These estimates of reliability can only be described as moderate but about as high as might be expected from the small number of items per scale.

The MLSQ, developed in the course of a large general population survey, is presented primarily because it is a short and efficient measure of three components of the Type A behaviour pattern. It was designed to complement the Spielberger Anger Expression Scale (Speilberger, Johnson, et al., 1984) in survey of behavioural risk factors for hypertension. The MLSQ was found to be suitable for use with a wide range of subjects between the ages of 16 and 80. Preliminary norms from an adult and largely rural sample are available and the subscales have a reasonable degree of homogeneity and reliability, given their comparative brevity.

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