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AUTHOR Thomas, Sandra P.
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ABSTRACT

Little is known about the Type B behavior pattern which is allegedly antithetical to the coronary-prone Type A pattern. The purpose of this study was to develop a descriptive profile of individuals in middle adulthood who exhibit the Type B pattern. Cognitive/attitudinal characteristics, stress reactivity, and health status were examined in 98 adults. The results indicated that Type Bs had better general health than Type As, fewer days ill during the past year, fewer physician visits, fewer hospitalizations, fewer surgical procedures, and fewer prescription medications. Type Bs were more likely than Type As to hold internal locus of control beliefs, to view life as a joy, and to understand themselves and their needs. In addition, Type Bs had greater certainty about the meaning of their lives than did Type As. Compared to Type As, Type Bs reported significantly less stress due to daily hassles, less pressure about having "too many things to do," and less job dissatisfaction. Just as health is more than the absence of disease, Type B is more than the absence of Type A characteristics. Parallels with Kobasa's (1979) hardiness concept and Antonovsky's (1984) sense of coherence are evident. Further investigation of Type B cognitions and attitudes, addressing mechanisms of acquisition and conditions facilitative of maintenance, is warranted. (Author/NB)

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Sandra P. Thomas

University of Tennessee, Knoxville

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Correspondence may be addressed to:

Sandra P. Thomas, Ph.D., R.N.

The University of Tennessee, Knoxville

College of Nursing

1200 Volunteer Blvd.

Knoxville, Tennessee 37996-4110

Telephone: 615-974-4151

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Little is known about the Type B pattern which is allegedly antithetical to the coronary-prone Type A pattern. The purpose of this study was to develop a descriptive profile of individuals in middle adulthood who exhibit the Type B pattern. Cognitive/attitudinal characteristics, stress reactivity, and health status were examined. Type Bs had better general health than Type As ($t = 2.09$, $p < .04$), fewer days ill during the past year, fewer physician visits, fewer hospitalizations, fewer surgical procedures, and fewer prescription medications. Type Bs were more likely than Type As to hold internal locus of control beliefs ($t = 1.97$, $p < .05$), to view life as a joy, and to understand themselves and their needs. Further, Type Bs had greater certainty about the meaning of their lives. Type Bs reported significantly less stress ($t = -3.21$, $p < .002$) due to daily hassles, less pressure about having "too many things to do", and less job dissatisfaction. Just as health is more than the absence of disease, Type B is more than the absence of Type A characteristics. Parallels with Kobasa's (1979) hardiness concept and Antonovsky's (1984) sense of coherence are evident. Further investigation of Type B cognitions and attitudes, addressing mechanisms of acquisition and conditions facilitative of maintenance, is warranted.

Type B: Cognitive/Attitudinal Characteristics, Stress Reactivity, and Health Status

Statement of the Problem

Research on the Type A pattern has established that individuals who exhibit a characteristic constellation of impatient, competitive, and hostile behaviors are at risk for coronary artery disease (Rosenman & Friedman, 1974). However, little is known about the Type B pattern which is allegedly antithetical to the coronary-prone pattern. Price has noted that "Type B is rarely defined or even described in the literature beyond offhand references to it as the opposite of Type A . . . or as the relative absence of Type A characteristics" (Price, 1982, p. 20). There has been no research on the Type B pattern, perhaps because pathology is of more compelling interest to researchers; however, behavioral health researchers are moving toward a salutogenic rather than pathogenic approach (Antonovsky, 1979), i.e., seeking to illuminate factors facilitative of health rather than disease.

The purpose of this study was to develop a descriptive profile of individuals exhibiting the Type B pattern. Cognitive/attitudinal characteristics, stress reactivity, and health status were examined. The mid-life age group was deemed most appropriate for this investigation, because the preponderance of Type A/B research has been conducted with such subjects.

Method

Subjects

Subjects were 98 adults from 25 states in the U.S.A. who had agreed to participate in the second phase of a longitudinal investigation of health in middle adulthood which had its genesis at the 1982 World's Fair in Knoxville, Tennessee. A complete description of the original sample has been presented previously (Thomas, 1983). There were 61 females and 37 males. The diversity

of the sample was a strength of the study and is further elucidated in the "Results" section of the paper. All subjects were between the ages of 35 and 55 at initial testing in 1982; mean age for females at second testing (1984) was 45.6 years and for males was 45.9. All but one of the second phase participants were Caucasian.

Data collection procedures

The first phase of data collection for the larger project took place during the summer of 1982 at the World's Fair in Knoxville, Tennessee. The investigator received permission to collect data at the Wellness Station sponsored by the College of Nursing, University of Tennessee-Knoxville. A poster soliciting volunteers for the study directed individuals to the researcher's data collection area. Potential participants were given both verbal and written explanations of the study and an opportunity to ask questions about the project. Questionnaires were then completed on-site. Subjects who desired feedback provided the investigator with their mailing addresses.

Because the researcher sought a sample representative of all stages of the health-illness continuum, additional data were collected during the winter of 1982-1983 from inpatients at a 525-bed metropolitan general hospital. All nursing units except the Obstetric Unit and the Acute Care units were visited regularly. After a review of the Kardex of the nursing unit, noting persons in the 35-55 age group, consultation with the staff of the unit ensured that the potential participant was in appropriate condition to be approached. Persons who were incoherent, sedated, or in acute distress (e.g., pain, vomiting) were, for obvious reasons, excluded. Individuals deemed appropriate were visited by the researcher and invited to participate in the study. Forms were left with subjects for completion at their convenience and collected by the researcher later in the same day or the next day. The total number of participants in Phase I was 251.

During the autumn of 1983, letters were sent to all subjects who had elected to provide mailing addresses to the researcher at initial testing (N=226). Explanation of the second phase of the study was given, along with a postcard for indicating agreement to continue participation. Responses were received from 122 individuals, of which 4 declined further participation and the remainder agreed to continue. Questionnaire packets for the present study were mailed to subjects is January, 1984. A total of 104 packets were returned; of this number four sets were incomplete and two sets were returned after data analysis had been completed.

Instruments

Health Perceptions Questionnaire (Form II)

Ware's (1976) Health Perceptions Questionnaire (Form II) is a 32-item instrument with several scales; only the Current Health scale was used in this study. After field testing on approximately 2,000 adults, Ware reported that the scales were valid, reliable, and stable over time for diverse populations. The HPQ was included in the health status measures used in Rand's Health Insurance Study.

Health Habits Scale

Nine items from the Health Habits scale of the Medical History Questionnaire, Form A, developed for the Rand study (Brook, Ware, Davies-Avery, Stewart, Donald, Rogers, Williams, & Johnston, 1979) were used to assess exercise, sleep, smoking, and drinking habits of the subjects.

Multidimensional Health Locus of Control Scale

The Multidimensional Health Locus of Control Scale (MHLC) was developed by Wallston, Wallston and DeVellis (1978) to provide an improved health-specific assessment of locus of control. Alpha reliabilities have ranged from .67 to .77; test-retest data suggested acceptable stability (Wallston and Wallston, 1981).

Tennessee Self-Description Form

The Tennessee Self-Description Form is a 47-item instrument developed by Thomas, Williams, and Olsen (1982) to assess self-management effectiveness in four areas of life: work, social, health, and leisure. Test-retest reliability coefficients ranged from .61 to .86 for the subscales and the correlation for total self-management was .82. The compilation of normative data is in progress at the present time.

Jenkins Activity Survey

The Jenkins Activity Survey (Form C) is a 52-item questionnaire developed to assess the coronary-prone behavior pattern and standardized on participants in the Western Collaborative Group Study (Jenkins, Zyzanski, & Rosenman, 1979). Test-retest reliability coefficients for the Type A scale have ranged from .64 to .76; internal consistency reliability coefficients have ranged from .83 to .85 (Jenkins et al., 1979). Form N was used for unemployed individuals (housewives, retirees).

Hassles Scale

The Hassles Scale (Kanner, Coyne, Schaefer, & Lazarus, 1981) lists 117 irritating, frustrating demands of daily life. Frequency and intensity scores are computed; test-retest reliability for frequency was .79 and for intensity was .48.

Social Support Questionnaire

The Social Support Questionnaire (SSQ) was developed by Sarason, Levine, Basham, and Sarason (1983) and yields scores for preceived number of social supports available to an individual and for satisfaction with that support. The SSQ has satisfactory stability over a four-week period of time and high internal consistency among items.

Exercise of Self-Care Agency Scale

The Exercise of Self-Care Agency Scale is a 43-item instrument which assesses the individual's power to engage in health self-care actions. This instrument was found to be reliable with both the test-retest and split-half methods, and there is preliminary evidence of content and construct validity (Kearney & Fleischer, 1979).

Demographic Survey

A demographic survey was developed by the researcher to obtain standard information (e.g., marital status) as well as number of days ill during the past year and number of surgeries, hospitalizations, physician visits, and other data.

Classification of Subjects

Scales of the Jenkins Activity Survey were constructed to have a mean of 0 and a standard deviation of 10. Scores greater than 0 indicate Type A tendencies, while scores less than 0 suggest Type B propensities. Thus, some researchers dichotomize subjects with a simple median split. However, MacDougall, Dembroski, and Musante (1979) assert that classification is more valid when $\pm$ 0.5 S.D. is employed rather than the median split.

Therefore, participants in the present study were classified as follows: (a) Subjects whose Type A scale scores were greater than +5 were considered to be Type A (n=37); (b) Subjects whose Type A scale scores were less than -5 were considered to be Type B (n=29); and (c) Subjects scoring between -5 and +5 were considered to be Type X (i.e., possessing a mixture of Type A and B characteristics). There were 32 individuals in this group.

Results

Descriptive Statistics for Total Sample

Table 1 presents means, standard deviations, and minimum and maximum scores for all variables of the study except categorical sociodemographic variables. The diversity of the sample is evident, particularly in terms of education (range 8 to 22 years); income (range $3,000 to $120,000); and hassles frequency (range 3-117). Type A scale scores ranged from -17.8 (3rd percentile) to 23.6 (99th percentile), with a sample mean of 1.16.

Comparisons of Type A and Type B Subjects

Education

The difference in educational levels between Type A and B subjects was negligible; mean number of years of education for Type As was 15.0, as compared to a mean of 14.3 for Type Bs. There was greater variability among Type As than among Bs.

Income

The Type A group had a slightly higher mean annual income ($38,845) than the Type B group ($35,720), but greater variability was again observed for Type A subjects; the range was less extreme for Type Bs.

TABLE 1. N, Means, Standard Deviations, and Minimum and Maximum Scores for Total Sample

Variable	N	$\bar{X}$	SD	Min.	Max.
Health Status	98	33.61	9.7	9	45
Education	97	14.58	2.7	8	22
Health Habits	98	3.82	1.1	1	5
Internal Locus	98	26.36	5.3	6	36
Chance Locus	98	15.55	5.0	6	27
Powerful Others Locus	98	16.79	5.1	6	29
Work Self-management	98	5.18	3.1	-4.0	13
Social Self-management	98	6.87	3.0	-1.0	13
Health Self-management	98	4.71	4.4	-5.0	17
Leisure Self-management	98	6.38	2.1	1.5	12.5
Total Self-management	98	23.05	8.4	-2.5	46.5
Social Support-N	86	3.18	1.7	0.37	8.74
Social Support-S	85	4.96	0.9	2.52	6.89
Self-care Agency	98	122.24	17.7	62.0	169.0
Hassles Frequency	97	27.08	23.8	3	117.0
Hassles Intensity	97	1.47	0.4	1	2.41
Type A Pattern	98	1.16	9.4	-17.8	23.6
Income	88	37384.10	19276.70	3000.00	120,000

Note: Education is reported in number of years. Income is annual household income, not individual income of subject.

Other Sociodemographic Characteristics

The Type A group had a balanced distribution of males and females, but there were slightly more females in the Type B group. A majority of subjects in both groups were married. However, a greater percentage of Type As (10.8%) were divorced or separated than Type Bs (3.4%). Although the greatest percentage of subjects in both groups were employed full-time, more Type Bs than Type As were unemployed.

Interestingly, Type B subjects were less likely to be involved in church activities than Type As, although the majority professed belief in a higher power. Type As were more likely to be involved in managerial and technical positions than Type Bs; Bs were more likely to be in government service and homemaking roles. There were no clear indications that Type As were in more stressful positions; in fact, an equal percentage of As and Bs were involved in sales work and teaching (K-12), two occupations which are generally viewed as quite stressful.

Health Status

Type A and B subjects differed on virtually all health status dimensions. Type Bs had better general health (mean score 36.3) than Type As (mean 31.6); comparison of the two means resulted in a statistically significant difference ($t = 2.09$, $p<.04$). Type B subjects reported fewer days ill during the past year (mean 2.52) in contrast to Type As (mean 18.37); this difference was also significant ($t = -2.07$, $p<.04$). Further, Type B subjects reported fewer visits to physicians, fewer hospitalizations, fewer surgical procdures, and fewer prescription medications than Type As.

Type A and B subjects differed in both type and number of health problems. Diagnostic classifications appear in Table 2. Less morbidity was evident in the Type B group, and the most prevalent disorders for Type B individuals were musculoskeletal/collagen (e.g., arthritis). Consistent with previous studies, Type As reported a higher incidence of cardiovascular disease.

TABLE 2. Diagnostic Classifications of Type A and B Subjects

Category	Type A %	Type B %
Allergies	16.7	17.7
Cancer	8.3	11.8
Cardiovascular	27.8	11.8
Dermatologic	0	11.8
Gastrointestinal	2.8	5.8
Gynecologic	2.8	0
Musculoskeletal/collagen	19.4	35.3
Neurologic	5.5	0
Nutritional, metabolic	2.8	0
Otorhinolaryngology	5.5	0
Psychiatric	2.8	0
Pulmonary	2.8	5.8
Renal, urologic	2.8	0

Note: Disorders were classified according to Merck disease classifications. Subjects with multiple diagnoses were listed in each applicable category.

Cognitive/Attitudinal Characteristics

Type B subjects were more likely than Type As to exhibit an internal locus of control, to view life as a joy, and to understand themselves and their needs. Further, Type Bs expressed fewer concerns about the meaning of life than Type As.

Stress Reactivity

Type Bs reported significantly less stress ($t = -3.21$, $p<.002$) due to daily hassles than Type As. Bs were less likely to feel pressured about having "too many things to do" and less likely to report stress due to job dissatisfaction.

Gender Differences

Gender differences are presented in Table 3. This comparison showed that Type A males had the poorest health of all subjects, the most days ill, the most physician visits, the lowest internal locus of control scores, the lowest social self-management scores, the lowest health self-management scores, the lowest leisure self-management scores, the lowest total self-management scores, the lowest social support-N scores, the lowest self-care agency scores, and the highest hassles frequency scores. The pattern of scores for Type A women was generally more similar to Type A men than to other women. Type A women manage their health better than Type A men, however.

Discussion

Price's (1982) analysis of the Type A pattern placed much emphasis on the irrational core beliefs of these individuals. Results of the present study suggest that Type Bs hold more rational beliefs and have greater certainty about the meaning of their lives, exhibiting less reactivity to minor frustrations.

TABLE 3. Mean Scores on Selected Variables for Type A and Type B Subjects Within Gender Groupings

Variable	Males		Females	
	Type A	Type B	Type A	Type B
Health Status	30.50	37.83	32.74	35.18
Days ill	27.29	1.92	9.94	2.94
Dr. visits	6.39	0.67	3.28	2.29
Internal locus	24.94	28.42	26.42	27.88
Work self-mgmt.	6.05	6.17	5.16	4.06
Social self-mgmt.	6.17	7.92	7.37	7.18
Health self-mgmt.	3.45	4.58	4.58	5.59
Leisure self-mgmt.	5.89	6.33	6.76	6.32
Total self-mgmt.	21.56	25.08	23.87	23.12
Social support-N	2.23	2.80	3.67	3.13
Social support-S	5.08	5.18	4.69	5.04
Self-care agency	117.39	120.90	123.50	124.40
Hassles frequency	33.33	17.90	27.63	15.12

The profile of the Type B personality pattern developed in this investigation is similar to Kobasa's (1979) hardiness concept, which includes commitment to self, an attitude of vigorousness, a sense of meaningfulness, and an internal locus of control. Similarities are also evident between Type B and the self-controlled personality type described by Bayer (1981), which was found to be conducive to good health. Further, there are some parallels with Antonovsky's (1984) sense of coherence, which includes comprehensibility of one's world, manageability (adequate coping resources to meet environmental demands), and a sense of meaningfulness of life. Just as health is more than the absence of disease, Type B is more than the absence of Type A characteristics.

This study revealed that Type Bs are clearly advantaged in terms of general health status as well as in terms of their relative immunity to cardiovascular disease. Implications for intervention with coronary-prone clients include assisting these individuals to alter their faulty cognitions, to reexamine the external contingencies toward which their efforts have been directed, and to redirect their energies toward interior contemplation on the meaning of their lives. A dramatic event such as a myocardial infarction may provide impetus for change.

Price (1982) has noted that "a preventive approach to the Type A behavior pattern would be vastly preferable to a remedial or curative approach" (p. 41). Further investigation of Type B cognitions and attitudes, addressing mechanisms of acquisition and conditions facilitative of maintenance, is warranted.

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