

Disentangling Type A Behavior: The Roles of Ambition, Insensitivity, and Anxiety

ROBERT O. HANSSON AND ROBERT HOGAN

University of Tulsa

JOHN A. JOHNSON

The Pennsylvania State University

AND

DAVID SCHROEDER

Augustana College

This study identified stable components of Type A behavior as usually defined, and examined their relationships with more traditional psychological constructs. Overall scores on the most popular Type A measure (a version of the Jenkins Activity Survey) were moderately associated with ambition but largely unrelated to measures of adjustment. An item analysis yielded subcomponents of Drivenness and Involvement. Drivenness was unrelated to ambition, but was positively related to anxiety and negatively related to interpersonal perceptiveness. Involvement was positively related to ambition and to interpersonal competence. It is suggested that the Jenkins Activity Survey measures a heterogeneous mixture of constructive commitment and self-defeating responses that clouds its psychological interpretation.

The Type A syndrome was first identified by Friedman and Rosenman (1959), who suggested that a particular group of behaviors is common among coronary patients. Type A behavior involves achievement striving, hostility, and time urgency (Glass, 1977). It is a "relatively chronic struggle to obtain an unlimited number of poorly defined things from (the) environment in the shortest period of time, and, if necessary, against the opposing efforts of other things or persons in (the) same environment"

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(Friedman & Rosenman, 1969, p. 84). Type A behavior has been operationally defined in several ways. A structured interview asks questions regarding Type A characteristics and notes both the content and the expressive style of the patient's responses (Rosenman, Straus, Wurm, Kostichek, Hahn, & Werthessen, 1964). The popular and widely used Jenkins Activity Survey (JAS; Jenkins, Zyzanski, & Rosenman, 1979) is a self-report measure of Type A behavior. An alternate version of the JAS was developed for use with college students (Krantz, Glass, & Snyder, 1974). This modified form is identical to the original version except that items pertaining to individuals' jobs or incomes have been either dropped or changed to refer to schoolwork.

Research on the Type A behavior pattern has been thoroughly reviewed elsewhere (cf. Jenkins, 1978; Glass, 1977; Jenkins et al., 1979); here we need only note that Type A behavior is associated with coronary heart disease and cardiac mortality over and above other traditional risk factors. Another typical finding is that measures of Type A generally have low correlations with standard measures of adjustment, although moderate relationships have been observed with activity, dominance, and impulsivity (Glass, 1977; Krantz, Note 1). These low correlations with well-known measures of adjustment are somewhat surprising because Type A behavior is thought to be a robust syndrome. Nevertheless, these findings are usually cited as evidence that Type A is a unique characteristic and relatively independent of other aspects of personality and/or psychopathology (cf. Jenkins et al., 1979).

An inspection of the JAS items suggests, however, that the Type A behavior pattern may not be an independent psychological dimension. Rather, it seems to be a composite of more traditional variables. When combined, these variables may well "cancel out" their separate correlations, so that few relationships can be observed. It should be noted that the JAS was not designed with item homogeneity in mind; rather, its purpose is to predict the outcome of a structured interview, which itself defines a heterogeneous mix of attributes related to coronary heart disease. Unfortunately, the resulting item heterogeneity of the JAS has made the Type A syndrome difficult to interpret in psychological terms.

The present research attempts to disentangle what seems to be a heterogeneous mixture of (a) constructive career involvement and (b) self-defeating interpersonal behavior. Our theoretical orientation—Socioanalytic theory (cf. Hogan, 1982)—emphasizes the roles of ambition, adjustment, social perceptiveness, and interpersonal competence in everyday life. Accordingly, we were concerned, for sound theoretical reasons, about the relationships between these constructs and the Type A syndrome. We now describe our reasons for choosing these constructs, and how they were operationally specified in this study.

Ambition

Hogan and Schroeder (1981) note that ambition can be a constructive personal characteristic; moreover, ambition may result from an individual's having internalized a set of goals and aspirations that themselves promote social progress as well as personal well-being. This position is supported by a long tradition of research in the areas of educational achievement and creativity (cf. Oden, 1968; Hogan, 1981; MacKinnon, 1962). In general, studies of individuals characterized by high levels of achievement find that they are well-adjusted, socially active, autonomous, and open to experience. They are involved in, and their accomplishment often extends across, areas of personal concern (e.g., art, literature, science) and social service (e.g., politics, local government, volunteer organizations, church groups). To the extent, then, that the Job Involvement factor of the JAS reflects ambition (so construed), persons scoring high on this factor might be expected to be competent, successful, and reasonably well-adjusted.

Anxiety

The items included in the Speed and Impatience, and in the Hard-driving factors of the JAS, however, deal with impatience, irritation, temper, interpersonal insensitivity, and an apparent inability to keep one's instrumental striving in perspective. In this connection, Jenkins et al. (1979) acknowledge that many clinical and epidemiological studies have related cardiac risk to the presence of anxiety, depression, and neurotic defenses, but they go on to point out that the relationships between such psychological conditions and the Type A behavior pattern are negligible. Such results might be expected when using a heterogeneous pool of items, some of which reflect positive adjustment and some of which reflect self-defeating feelings and behaviors. It may well be that there exists a substantial cluster of items within the JAS which would, for example, correlate strongly with standard measures of anxiety.

Interpersonal Sensitivity

The Type A behavior construct is permeated by one theme: instrumentality. The Type A individual is viewed as driven to pursue his or her career agenda within a challenging and competitive environment. In these efforts he or she is often impatient with others, hurries them along, is frequently irritated, works harder and longer, and lacks time for eating, hair cuts, social amenities, and so on.

What may have eluded the Type A individual (and perhaps his or her inventors) is that the instrumental world is also a social world; consequently, characteristic Type A behavior may also reflect a lack of interpersonal perceptiveness or sensitivity. This issue is highlighted in a paper by Athay and Darley (1981). These authors point out that most instrumental pursuits

(which presumably include occupational and professional goals) are carried out in an environment where other people, on whom one must depend, pursue their own instrumental agendas. As egocentric pursuits diverge, an element of conflict and competition becomes a normal part of interaction. At the same time, one of the assumptions of Type A theory is that the environment is challenging and competitive. Athay and Darley note that when instrumental interests compete or conflict, an element of "instrumental manipulation" is crucial for persuading others to cooperate in the service of one's projects. To accomplish such manipulations or to facilitate social exchange, it is often necessary to be able to take the other's perspective, to understand the other's point of view, and to appreciate the normative principles by which other people are guided. Such capacities render others more predictable in any situation and facilitate manipulative control. A lack of such capacities should be associated with decreased predictability and control, and with a greater likelihood of resulting frustration and stress. Jenkins et al. (1979) assert that Type A behavior reflects a behavioral style rather than a reaction to stress. However, the loss of predictability and control in challenging or threatening environments is a central theme in the stress literature (e.g., Averill, 1973; McGrath, 1970). One focus of the present study, then, was to identify any substantial cluster of JAS items negatively correlated with a standard measure of the capacity to understand and appreciate the viewpoints of others.

Interpersonal Competence

Interpersonal competence and effectiveness are related to the ability to appreciate the perspective of others. Items on the JAS reflecting hard work and drive may simply point to a need to compensate (somewhat ineffectively) for poor social skills and competencies. The present study therefore also focused on the issue of interpersonal competency as a key to understanding Type A behavior.

METHOD

Subjects

The subjects for this study were 69 male undergraduates from two fraternities at the Johns Hopkins University. They were tested as part of a larger study of peer ratings.

Measuring Type A Behavior

The Jenkins Activity Survey was developed as a self-report measure of Type A behavior. It is designed to parallel closely the content of the structured interview, but it does not measure speech stylistics, which carry a large weight in the structured interview. Recent research also indicates that the JAS contains a component of self-reported time pressure not assessed by the structured interview (Matthews, Krantz, Dembroski, & MacDougall, 1982). The JAS scoring system was developed via a stepwise discriminant analysis, in which the JAS items classified individuals into A and B groups previously established by

the structured interview technique (Jenkins et al., 1979). This analysis yielded a linear weighting of 21 JAS items, which currently provides the Type A–B score. Krantz et al., (1974) developed a similar 44-item form of the JAS for use with student populations. On this form each of the 21 items used in scoring the adult JAS are recorded as 0 or 1 and then summed to yield the Type A–B score. Since the other 23 items do not contribute to the Type A score, we used only the 21 scored items in this study.

The adult form of the JAS generally has good internal consistency with coefficients ranging from .73 to .85 (Jenkins et al., 1979). The test–retest reliability is in the .60–.70 range for time intervals as large as 4 years. In addition, Pittner & Houston (1980) have reported a split-half reliability for the student version of .82. The validity of the adult form has been assessed in two ways. It correlates between .25 and .35 with the structured interview (MacDougall, Dembroski, & Musante, 1979; Chesney, Black, Chadwick, & Rosenman, 1981). The manual for the JAS reports a series of studies using coronary and noncoronary populations, in which the JAS discriminated between the two groups at a moderately high ($p < .01$) level of significance, although “hit” rates are not reported (Jenkins et al., 1979). The student version shows modest correspondence with the structured interview (correlations of .30 to .33) in the limited research to date (MacDougall et al., 1979). The relationship between the student form and coronary heart disease has not been tested.

Assessing Ambition

Hogan and Johnson (Note 2) developed a measure of ambition using items from the California Psychological Inventory (CPI; Gough, 1975). Twelve items judged to be clear, face valid indicators of ambition were chosen to form a “core” scale. The following are examples of these items: “I have a very strong desire to be a success in the world (T).” “I always try to do at least a little better than what is expected of me (T).” “I have a tendency to give up easily when I meet difficult problems (F).” “If given the chance, I would make a good leader of people (T).”

Scores on this core scale were computed for subjects in an archival data set (furnished by H. G. Gough, Director, Institute of Personality Assessment and Research, University of California, Berkeley), which included 100 Air Force Officers, 45 research scientists, and 66 student engineers. These scores were then correlated with other CPI items. Fifteen items were added to the Ambition scale on the basis of their content and correlations with the core Ambition scale. The final scale contained 27 true–false items. The internal consistency reliability of the scale in the original sample was .82 (Cronbach’s alpha).

The validity of the scale was supported by correlations with *Q*-sort ratings in the archival sample. For example, in the Air Force sample, the following *Q*-sort items had the largest positive correlations with Ambition: “Takes an ascendant role in his relations with others,” “Tends to arouse liking and acceptance in people,” “Has social poise and presence.” The following items had the largest negative correlations: “Is self-defeating,” “Is thin skinned; sensitive to anything that can be construed as criticism or an interpersonal slight.”

In a sample of 50 police officers, Ambition had the following correlations with the CPI: Dominance, .74; Sociability, .48; Self-Acceptance, .61; Achievement via Conformance, .47. In the same group Ambition correlated .52 with the Enterprising scale of Holland’s (1979) Self-Directed Search, and .62 with the Extraversion scale of the Myers–Briggs Type Indicator (Myers, 1962). In a sample of 99 Johns Hopkins undergraduates, Ambition correlated .19 with grade point average, .27 with participation in athletics, and .39 with number of extracurricular activities the student was involved in. In the police sample mentioned above, Ambition correlated .24 with grades at the Police Training Academy and .37 with the number of spontaneous letters of commendation in each officer’s personnel file. In a sample of 44 consulting engineers, Ambition correlated .28 with an index of how rapidly each person had been promoted in the organization (this was the highest correlation in

the study). Across all of our samples, salesmen had the highest scores for Ambition, undergraduate marijuana smokers had the lowest. Taken together, these correlations indicate that persons with high scores on our Ambition scale are assertive, ascendant, forceful, achievement oriented, socially self-confident, and upwardly mobile.

Measuring Anxiety

Anxiety was assessed by means of the A Trait scale from the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970). This scale is designed to measure an individual's characteristic tendency to experience anxiety when faced by threatening or challenging events. The STAI is a widely used measure with a test-retest reliability of around .80, KR-20 reliability in the high .80s, and demonstrated convergent validity (e.g., correlations with other anxiety measures as high as .85).

Empathy

Hogan's (1969) Empathy Scale assesses an individual's capacity to understand and appreciate the viewpoints of others. This 64-item true-false scale contains items which were empirically selected from the CPI, the Minnesota Multiphasic Personality Inventory (Hathaway & Meehl, 1951), and other tests used at the Institute for Personality Assessment Research at Berkeley, California. It has good reliability: KR-21 = .71, test-retest $r = .84$. It has been related to sociopolitical intelligence, therapist effectiveness, lack of anxiety and neuroticism, and accuracy in interpersonal judgments (see Johnson, Cheek, & Smither, in press).

Interpersonal Competency/Effectiveness

Interpersonal competency was assessed using Holland and Baird's Interpersonal Competency Scale (1968). This 20-item true-false scale possesses moderately good reliability (KR-20s from .63 to .69) and predicts social skill, popularity, physical energy, and general competence. It reflects a much broader conception of interpersonal competence than the Empathy scale and, in contrast to that empirically keyed scale, has high face validity.

Procedures

The subjects completed the five scales: JAS, Ambition, STAI, Empathy, and Interpersonal Competency. Two subjects gave clearly careless responses, so they were not included in the total sample of 67 subjects. The few missing responses were replaced by item midpoints on all scales.

RESULTS

The correlations between the various scales are presented in Table 1. There are three points about the correlations in Table 1 that we would like to highlight. First, there is only a moderate (.37) correlation between Ambition and the JAS, suggesting that the JAS measures a good bit more than pure ambition. Second, in these fraternity samples, men who were ambitious were not maladjusted. On the contrary, they were well-adjusted, perceptive, and possessed a wide range of interpersonal skills and competencies. Third, persons with high scores on the JAS were somewhat ambitious and tended ($r = .24$) to have interpersonal competencies. Table 1 also suggests that the JAS is apparently a rather unique measure, only weakly related to some core aspects of interpersonal functioning. We now turn to a closer examination of this finding.

TABLE 1
SCALE INTERCORRELATIONS

Scale	Ambition	Anxiety	Empathy	Interpersonal competency
Ambition	—			
Anxiety	-.25*	—		
Empathy	.31**	-.37**	—	
Interpersonal competency	.66***	-.39***	.39***	—
JAS	.37**	.15	.20	.24*

Note. $N = 67$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

In order better to understand the results in Table 1, we examined the item correlates of the JAS to determine whether the low scale correlations might be due to the heterogeneous item content of the measure. We correlated each of the 21 JAS items with Ambition and Anxiety. Six items correlated significantly ($p < = .05$) with Ambition, five items correlated significantly with Anxiety, and one of these also correlated with Ambition. We dropped this item and used the others to form Ambition and Anxiety subscales. To the five ambition-related items we added three JAS items which (a) increased the internal consistency of the subscale and (b) were not significantly correlated with anxiety.

A word of explanation is required regarding this method of structuring the JAS item pool. It is conceptual rather than empirical—this is so because we were interested in the roles of adjustment and ambition in the Type A syndrome. The alternative, empirical method would have been to factor analyze the interitem correlation matrix and form factor scales. Such analyses have already been performed (cf. Zyzanski & Jenkins, 1970), and they turn out not to clarify conceptually the structure of the JAS item pool (Krantz, Note 1).

The items on each JAS subscale are given in Table 2. An examination of the anxiety-related items reveals a common theme of intensity, impatience, and overseriousness, which reflect the Speed and Impatience, and Hard-driving factors of the JAS. These four items, which we have labeled Drivenness, have an internal consistency reliability (alpha) of .53. The ambition-related items indicate vigor, assertiveness, and ambition, and for the most part reflect the Job Involvement factor of the JAS. These items, which we have labeled "Involvement," have an alpha of .65 in this sample. The correlation between Drivenness and Involvement in a modest .24.

Table 3 presents correlations between the two subscales and the other variables in the study. Both subscales correlate with the overall JAS

TABLE 2
SUBSCALES OF THE JENKINS ACTIVITY SURVEY

Drivenness (Anxiety Related Items)

When you listen to someone talking, and this person takes too long to come to the point, do you feel like hurrying him along?

How often do you actually "put words in his mouth" in order to speed things up?

Do most people consider you to be hard-driving and competitive?

I approach life in general . . . (much more seriously than the average student).

Involvement (Ambition Related Items)

Is your everyday life filled mostly by . . . (problems needing solution)?

How would your spouse (or best friend) rate your general level of activity?

Would people who know you well agree that you have less energy than most people? (Reversed scoring)

How often are there deadlines in your courses?

Do you ever set deadlines or quotas for yourself in courses or other things?

In school do you ever keep two projects moving forward at the same time by shifting back and forth rapidly from one to the other?

When you are in a group, do the other people tend to look to you to provide leadership?

How would your spouse (or close friend) rate you . . . (hard-driving and competitive)?

score. As expected, Involvement correlates with Ambition, but not Anxiety, whereas Drivenness correlates with Anxiety but not Ambition. With regard to social effectiveness, Involvement is positively correlated with Interpersonal Competency and the Drivenness sub-scale is negatively correlated with Empathy. The differences in the correlations of the Involvement and Drivenness subscales with the other variables were all significant.

TABLE 3
CORRELATIONS OF DRIVENNESS AND INVOLVEMENT WITH THE VARIABLES LISTED

Scale	Drivenness	Involvement	Test statistic (<i>t</i>)
Ambition	.10	.50***	-2.98**
Anxiety	.47***	-.10	4.31**
Empathy	-.44***	.12	-4.17**
Interpersonal competency	-.02	.38**	-2.81**
JAS	.60***	.83***	-3.15**

Note. *N* = 67. *T* test for differences between dependent correlations (Steiger, 1980).

- * *p* < .05.
- ** *p* < .01.
- *** *p* < .001.

DISCUSSION

Descriptions of Type A behavior generally include ambition as one of the elements in the syndrome; this association subtly stigmatizes ambition. In the present study, a pure measure of ambition was moderately associated with scores on the JAS. At the same time, however, persons with high scores on the ambition scale were also socially skilled and appreciated the viewpoints of other people. These findings support Hogan and Schroeder's interpretation of ambition as a function of positive mental health and social involvement.

This study also suggests that the JAS, an accepted measure of Type A behavior, contains elements that do not covary with ambition but are correlated with other, less attractive variables. This heterogeneity in the JAS item pool may explain the scale's limited correlations with traditional personality dimensions, including adjustment. The involvement (ambition-related) items on the JAS were positively related to personal and social adjustment, in a pattern similar to that of our CPI-based Ambition scale. The drivenness items, however, correlate negatively with empathy and positively with anxiety. When the two disparate item sets are combined, we find the familiar pattern of minimal correlations between the JAS and other psychological dimensions.

The pattern of correlations between our drivenness factor and anxiety and empathy is particularly interesting. In the competitive environment in which Type A behavior is assumed to occur, anxiety would be compounded by a lack of interpersonal perceptiveness (which may translate into low predictability and control with regard to those others who are important to one's instrumental pursuits). Although Jenkins et al. (1979) attempt to "distinguish Type A behavior from the concept of stress," the loss of predictability and control has been associated with stress for many years (and stress has been associated with coronary risk).

Other researchers are beginning to view Type A behavior in a more discrete and complex fashion. Matthews and her colleagues (Matthews, Glass, Rosenman, & Bortner, 1977) factor analyzed individual behaviors coded in the structured interview and found that only two of the five resulting factors, labeled Competitive Drive and Impatience, were related to coronary disease. These two factors, particularly the second, may correspond to our Drivenness dimension. Matthews et al. (1982) used a component analysis to assess similarities and differences between the JAS and the structured interview. Zyzanski and Jenkins (1970) conducted an exploratory factor analysis of the JAS and found three factors: Speed and Impatience, Job Involvement, and Hard-driving and Competitive. A recent paper by Vickers, Hervig, Rahe, & Rosenman (1981) also found that the Job Involvement, Speed and Impatience, and Hard-driving factors of the JAS relate differentially to measures (derived from the California

Psychological Inventory) of one's use of coping and defense mechanisms. In that study, Job Involvement was associated with higher coping scores and lower defense scores, Speed and Impatience was associated with higher defensiveness scores, and Hard driving was associated with lower coping scores.

A limitation of the present study should be mentioned. We used an abbreviated form of the student version of the JAS. This form may differ from the full student version, which may in turn differ from the adult form. However, we used the best 21 items from the entire A-B-item pool. Because these 21 items are statistically superior to the other items according to Jenkins et al. (1979), the complete measures may have even greater psychometric difficulties than the short form we used, although the additional length may enhance reliability coefficients. In addition, it is important to note that the psychometric implications of the present findings are applicable only to Type A behavior as defined on the JAS. As Matthews (1982) has noted, while several of the available Type A measures appear to be reliable, and do appear to be related to risk of coronary heart disease, they do not correlate very well with each other, and should not be assumed to be measuring the same behavioral characteristics.

In summary, we would like to stress the following three points about our paper. First, social imperceptiveness is part of the Type A syndrome. Second, ambition is not pathological, per se. And third, the Type A syndrome is not a unique psychological construct but is actually composed of familiar elements—the most important of which are probably anxiety and ambition.

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