

Reflections on an international workshop

Coronary-prone behaviour

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Summary

The strong psycho-social overtones in the manifestations of CAHD have only recently been accepted. The use of the structured interview to detect coronary-prone behaviour is explained and discussed, particularly in relation to general practice. A Types and B Types (and others) are defined, referring especially to the work of Rosenman and Chesney.



Curriculum Vitae

Dr Joseph Henry Levenstein graduated at UCT in 1965 with MB ChB and in 1972 he obtained the MFGP(SA). He is currently Head, Unit of General Practice, Dept of Community Health at UCT and is examiner for the Faculty of General Practice Examination. He has received numerous awards and honours amongst which are the Louis Leipoldt Medal for the most outstanding article in the *S Afr Med J* (1971) and the Noristan Gold Medal for contributions to medical science (1976). He has served on various academic and medical committees and was Vice-President of WONCA (1978-'80). He is serving on the committee of the SA Academy of Family Practice/Primary Care as well as on the Faculty of General Practitioners of the College of Medicine of South Africa. He has 34 publications to his credit.

KEYWORDS: Coronary disease; Stress; Interview, Psychological; Behaviour; Personality Assessment.

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INTRODUCTION

An international workshop on coronary-prone behaviour sponsored by Ciba-Geigy, was held in Basle, 17-21 March 1985. It was led by Ray Rosenman and Margaret Chesney of the Stanford University, California and attended by twenty eight representatives from several countries and several disciplines, psychologists, psychiatrists, cardiologists, physicians and a general practitioner.

It is over 25 years since Friedman and Rosenman¹ focussed attention on their, to quote the British Medical Journal², 'media capturing' classification of Type A and Type B personalities, indicating the former to be highly coronary-prone and the latter, far less so. Only recently has their scientific endeavour as to the strong psychosocial overtones in the manifestations of coronary artery heart disease (CAHD) been accepted in a meaningful fashion. A review panel of the American Heart, Lung and Blood Institute accepted that Type A behaviour had been scientifically shown to be associated with an increased risk of CAHD³.



Prof Ray Rosenman

The workshop highlighted the emergence of CAHD as a post first world war phenomenon, the failure of conventional risk factors to explain satisfactorily or predict CAHD events and the use of the *structured interview* to elicit and detect Type A behaviour.

As much as anything, the workshop was a tribute to Rosenman's and Friedman's persistence in their belief and observations coupled with conscientious scientific endeavour and a younger generation, who are continuing with the work.

BACKGROUND

CAHD is a new phenomenon^{4,5}. It was not 'missed'. It is not due to current longevity. It is a consequence of post first world war society⁶. To this day its incidence is highest in the more industrialized urban areas almost regardless of the risk factors. As Rosenman pointed out, incidences of CAHD differ in the USA according to urbanization and industrialization. New York has an incidence of 416/100 000 as

CAHD is a new phenomenon.

compared to the West Coast (257/100 000). These figures were recorded when there was an increase in smoking in California. In Hawaii, where the risk factors are said to be similar to those of Framingham, the incidence is one-quarter of this Massachusetts town. The Hawaiians are also over-weight and physically inactive. The Mid-West farming belt in the USA where the highest concentration of dairy fats is consumed, has a far lower incidence of CAHD. Rosenman embroidered on this and other epidemiological evidence which showed the relative non-specificity and non-sensitivity of the commonly accepted risk factors. This does not mean that these should not be treated but their overall validity was not proven.

PATHOGENESIS OF TYPE A BEHAVIOUR

It was eloquently argued that the mix of industrialized societies with the competition to survive and the 'time urgency' inherent in the situation 'brought out' A Type behaviour.

In fact, society rewarded A Types, who were aggressive, faster and hard-driving. They always had to be busy and rushed and this behaviour manifested itself in all activities regardless of priorities and defined goals. These people manifest anger and hostility, always competing and attempting to be in control.

In industrialized urban areas the incidence is highest, almost regardless of risk factors.

Consequently our fight or flight reflex has gone haywire — every issue has become a competition either with others or ourselves. Not being able to wait in queues, and competing with ourselves even while performing recreational activities, are some of the examples of everyday competitiveness which result in anger and hostility: "No one, no event, **nothing**, is going to get the better of us. We will always remain in control".

It is important to note that it is not stress per se that creates coronary proneness, but rather the **response** to stress. Furthermore, it is what an individual perceives as stress that is relevant.

MEASUREMENT OF TYPE A AND B

In the fifties Rosenman and Friedman developed an "instrument" to categorize people into Type A and B personalities. There were also sub-categories of these, hence the A1, A2, B3 and B4 personality groups were defined. An X group was also designated where it was not possible to classify a person. Rosenman maintains that this should never apply to more than a few percent

of the population. Studies have shown that the industrialized populations have an even distribution of A and B Types, ie 50% each. However, in certain areas of endeavour the percentage of A Type individuals can be as much as 70%.

A questionnaire only measures content, and not behaviour.

The "instrument" that evolved, was a *structured interview*, which is conducted in a challenging fashion and brings out the behaviours characteristic to the groups. The 22 questions are pertinent to the issues, an example being: "When you are in a automobile and there is a car in your lane going FAR TOO SLOWLY for you, what do you DO about it?"

This is followed by various probing follow-up questions. Nevertheless, the content of the answers is not nearly as important as the behaviours the patients exhibit in answering³! The interview takes between 10 and 15 minutes.

It was pointed out that a questionnaire only measures content and not behaviour. Consequently it is not nearly as valid as the *structured interview* which could elicit behaviours. Furthermore, one often has very little insight into one's behaviour and thus questionnaires are often not reflective of behaviours.

The content of the answers is not nearly as important as the behaviours which the patient exhibits in answering.

BEHAVIOURAL CHARACTERISTICS OF TYPES

There are several characteristics of the Type A personality which have been validated in studies across language and cultural barriers.

Briefly, these include the rapidity of answering, speech acceleration, explosive changes in emphasis of syllables and loudness of voice. Competitiveness, irritation, anger and hostility are also evaluated. Certain characteristics of breathing and facial movements are also indicative of the various groups, although caution must be exercised in interpreting non-verbal behaviour^{4,5}.

The Type B personality has an absence of Type A behaviours, usually speaking slowly, not demonstrating anger or competing for the space and time of the interviewer.

EVALUATION OF THE STRUCTURED INTERVIEW

The fact that there has been consistent validity between raters for decades and this across language barriers, is a remarkable testament to the observational powers of the

originators of the *structured interview*⁴. At this workshop, all the participants, who came from different language groups, comfortably rated patient behaviours, regardless of the interviewer's or interviewee's language or socio-economic status.

The *structured interview* or modifications of it have consistently been related to the prevalence of CAHD⁴. Furthermore, it has been shown in prospective studies to be an accurate indicator of CAHD. The most famous of these are the Western Collaborative Group Study, the Japanese-American Study, the Belgian-French Collaborative Study and the Framingham Study. Psychologists have provided further validity as to some of the elements of the defined behaviours^{4,6}. Studies on blood-clotting times and platelet aggregations, show increased readings in Type A's, adding further weight to the hypothesis⁴. Angiographic studies have also shown that where patients have comparable clinical disease, the Type A's have far worse atherosclerosis than Type B's.

TYPE A BEHAVIOUR AND SCIENCE

To enlarge on the Rosenman/Friedman's hypothesis — from a scientific point of view, it must be realized that the world is still functioning on reductionist Newtonian physics as a model of reality. This entails always looking for simple cause and effect relationships, thereby implying that ultimately every activity can be controlled by isolating (or reducing) it and then treating the cause.

This belief extends into every arena, whether it be in medicine — "Why did the patient die?", "What were his electrolytes?", or in the business world — "Why are the sales down?", "Was the advertising campaign up to standard?". We all know life is not so simplistic, yet we continue to intellectualize in these terms, thereby implying we can control them.

Stress, per se, does not create coronary proneness, but rather the response to stress.

It is ironic that the Einsteinian concepts of physics have really only been followed by the military. Einstein maintained, inter alia, that matter is not constant and 'changes' randomly. Furthermore, all matter is interdependent and change in any one thing, creates change in another. Thus there is multifactorial causation to any event. Furthermore, the observation, recording, peception and response of a phenomenon or situation is dependent on the subjectivity of the observer.

Of course, Friedman and Rosenman did not purport to be aware of all this but they chose to believe what they observed. When reductionist science was at its most rampant, they saw the devastating effect of the psyche on the soma and the effect the environment had on both, confirming the interplay of several dimensions of reality.