

**SUMMARIES OF RESEARCH RELEVANT TO THE MIND/BODY EFFECT AND
ILLNESS RECOVERY AND CONDUCTED BY DR. DAWN RAYNER-BROSNAN AND
COLLEAGUES**

by Dr. Dawn Rayner-Brosnan (PhD)

PHYSICAL DISORDERS WITH PSYCHOLOGICAL COMPONENTS

Title Ideopathic hypertension and disclosure behaviour. PhD in the field of psychosomatic medicine (clinical psychophysiology) University of Queensland conferred 1988.

Author: Dawn Cumes-Rayner

Details: A series of 11 investigations (experiments and questionnaire analyses) resulted in the conclusion that borderline hypertensives are psychologically concerned regarding personal disclosures and react with blood pressure elevation when asked personal questions that might affect their social acceptance level. This characteristic was also found in older groups with persistently high blood pressure. Borderline hypertensives were more likely to report that their father expressed anger and was unable to deal with emotional issues. Pitfalls in methodology that had existed previously in research were explored. The findings (4 published articles) were mainly published in the Journal of Psychosomatic Research (Oxford) between 1982 1988 1989 and 1993. under the name Cumes-Rayner and J. Price, and Rayner-Brosnan and J. Price.

PSYCHOLOGICAL DETERMINANTS OF ALCOHOL OVER USE

Title: A high-risk community Study of Paternal Alcohol Consumption and Adolescents Psychosocial Characteristics.

Authors: D.P. Cumes-Rayner PhD J.C. Lucke, B.A. B. Singh, PhD B. Adler PhD. T. Lewin B.Com Psych. M. Dunne, PhD. and B. Raphael MD.

Source: Journal of Studies in Alcohol Volume 53, p.626-635 1992.

Abstract: A prospective study looked at drinking behaviour and biopsychosocial correlates of adolescents (in years 9 and 10 and again in years 11 and 12 at 23 high schools) and their parents. Heavy drinkers were compared to nil/low drinkers. Sons were more likely to drink heavily if fathers drank heavily and mothers who drank heavily were more likely to cohabit with heavy drinkers. Differences in psychological characteristics and home environment were defined in regard to heavy drinking fathers and drinking sons. Difficulty in settling disagreements and reduced time spent with family were the main correlates associated with drinking by both boys who did not necessarily have a heavy drinking father and those who did. (30 references)

TRAUMA

Title: Specific psychophysiological diagnosis in post-traumatic disorder.

Source: Biological Psychiatry, Vol 1 1991 (Racagni et al editors).

Authors: B. Raphael and D. Cumes-Rayner (Rayner-Brosnan)

What does this short paper say:

That the most commonly used methods of evaluating PTSD had been questionnaires or verbal questioning. However biological approaches to the diagnosis to PTSD were also possible in particular those associated with heart rate and blood pressure response. These biological approaches could help identify factitious reporting (malingering) from real dysfunction. The failure to report due to amnesia or trauma related repression (avoidance) could also be identified. Techniques devised by Cumes-Rayner (Rayner-Brosnan) were explained and two case studies were presented. Case 1 involved a airtraffic controller on duty at the time of a midair collision. Case 2 involved a police

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officer who had been attacked when off duty. The physiological changes that could be tracked while they reported each stage of their experience are shown in graphs. The findings indicate the potential utility of such measures in defining a specific stressor and its contribution to the individuals overall distress. (20 research papers were referenced).

CHRONIC ILLNESS - IDENTIFICATION OF KEY FACTORS FOR RECOVERY

Title: Psychosocial factors in immunity for cancer and HIV progression: conceptual and methodological issues. Review and recommendations.

AUTHORS Cumes-Rayner, D.P. and Raphael, B. Paper presented to the Australian Immunology Conference, Behavioural Immunology Section, Perth, December, 1991.

The review of the field specifically searched for pitfalls in methodology that had occurred for cancer researchers which could be considered when designing research for HIV progression. However during this search, the personality characteristics and behaviours and coping strategies that were found to exist in people who survived cancer were identified, along side those characteristics which appeared to relate to risk of survival failure. A meta model was drawn to represent pathways between the past experiences, the current social conditions, the physical state, and the psychological processes and the outcome. The conclusion was that more work was needed to define the role of both fatigue and the role and determinants of fighting spirit. (51 references)

Title: Wellness and HIV: Developing a model for progression from theoretical knowledge about psychosocial factors to application. (review)

Source: International Journal Immunopharmacology Vol 17 No. 8 pp663-676.

Author: Dr. Dawn Rayner-Brosnan

Abstract:

Psychosocial factors and immunological markers have been associated not only with progression from HIV to AIDS and AIDS survival but also with wellness. Not yet identified, and therefore not yet formalized into a system for clinical decision-making are those individual differences that moderate both the impact of the psychosocial factors and the potential benefit of interventions. Therefore the link between theoretical knowledge and application has not yet been established in a manner that would predict the outcome of recommended interventions. Presented here are background considerations to a combination of short-term and longitudinal studies which investigate these issues. The decision process devised here would be suitable for use with individuals with any physical disorder that has a psychological component.

What this paper is about:

This is a review paper of research up to 1995. The conclusions reached after exploring the research published in the English language internationally were:

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1. that despite claims that mood or behaviour or social circumstance had no effect on course of illness, there was no evidence to show these these factors could not effect HIV progression or illness recovery of any type. Therefore these factors deserved to be investigated. Problems of research design were discussed so that poor research could be identified. The pathway of activity between the nervous system and the immune system and other organs had been well defined by others. There was clear evidence from various types of studies that showed that physiological response occurred as a result of mood and behaviour and social circumstance and persisted when habits creating repetition of thought and action occurred. Biochemical agents most likely to enhance immune system functioning and be related to wellbeing were identified in several studies. Activities most likely to bring about increases in these biochemical agents were identified by some studies. The reasons for possible failure of therapy and failure of research to find positive results were explored. Therapy that was least likely to succeed was the type which failed to tailor the therapy components to the individuals personality and social needs. This paper provided an outline of a research programme as well as a model of the most commonly defined individual differences and experiences that led to depression anxiety and lowered immune function, and the most commonly defined interventions to reverse those conditions. The conclusion reached was that the therapy most likely to succeed for the a given individual was one that first identified the full spectrum of risk factors (at a psychological and physical level) for that individual and then defined suitable antidotes for each one of the risks and personal blocks to therapy. (based on 96 scientific papers references to which are provided).

Title: The influence of Stress reduction activities, cognitions mood and social contact level on immune responses: an exploratory study.

Authors: Dr. D.P. Rayner-Brosnan, (PhD) Research Fellow and Principle investigator The Wellness Programme National Centres for HIV Social Research and Department of Psychiatry University of Queensland. Dr. G. Williams M.Sc. M.SC (epi) (Statistician) Assoc Professor, Tropical Health Programme Medical School University of Qld, Dr. M.F. Robinson MBBS MD Partner in charge of immunology Sullivan and Nicolaidis Pathology Laboratory.

Source: unpublished paper presented to the Fourth International Behavioral Neuroscience Society Conference, Santiago de Compostella Spain May 18-21 1995. and also contained with a three part presentation to Australian Behavioural Immunology Group international multidisciplinary scientific meeting. Thurs 27th April - Saturday 29th April, 1995, and to the 26th Congress of the Australian Society of Hypnosis, Fraser Island Queensland 31st August -7th September 1996.

This paper showed the immediate changes (increases and decreases) and those that persisted across 2 hours in the immune system associated with change in mood created by the involvement in certain activities and changes in attitude.

Abstract: The influence of three popular stress reducing activities on short term immune cell change in the presence of HIV were investigated. Single case design, grounded in psychophysiological laboratory methodology provided 87 blood collection occasions for comparison, i.e. 29 occasions for each individual. Three men who differed in regard to age immune status and experience with activities were monitored across an 8 week programme of activity sessions which for each man occurred at the same time and same place. Each 30 minute session either exercise massage or a session aimed at improving cognition, mood, and physiological response (a guided imagery script with specific instruction for physical change preceded by the music "RainForest Magic" music by Tony O'Connor) was repeated after 48 hours. The influence of social contact was evaluated separately. After 5 weeks one activity was chosen and practiced and repeated for a third time together and immune change was evaluated. The experimental environment was well controlled.

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Blood was both handled and analysed according to international standards. Analyses are reported here on the lymphocyte subset, metenkephalin and cortisol. Data reflected changes beyond diurnal rhythm influence. The music and Guided imagery, with its instructions (presented hypnoidally) aimed to improve mood and immune function, led to the most persistent biphasic change pre/post activity ending in increases 90 minutes further on (cell count increase: CD8+30-60%, while NK cell count rise of 120% not associated with cortisol rise, occurred for one individual who scored highly on visual imagery capacity). Negative mood associated with an unexpected and unwanted social isolation activity was found to be immunosuppressive. The study prepared the way for further research (51 references)

(the emotions that rose or decreased depending on activity type and associated with immune cell elevation were feeling joyful and happy while the emotions associated with immune cell decreased numbers were feeling angry and peeved)

Title: Identifying physical and psychological resilience and vulnerability factors in men recently versus longterm diagnosed with HIV.

Authors: Dr. Dawn Rayner-Brosnan, Research Fellow Department Psychiatry/National Centre for HIV Social Research, University of Queensland,
Dianna Battistutta B.SC, Hons, Bio-statistician, Faculty of Medicine, University of Queensland; Prof. Beverly Raphael, AM MBBS MRC (Psych MD) FASSA FRC (Psych)FRANZCP Department Psychiatry University of Queensland.

Source: This paper remains unpublished due to disruption to the research process following the closure of the Queensland research unit, however the results were presented to the Australian Behavioural Immunology group international multidisciplinary scientific meeting 1995.

excerpt from discussion follows:

The strength of this work was the use of methodology to dispel the ambiguity surrounding group differences in psychosocial factors that occurred when phase and illness factors remained enmeshed. This methodology directly addressed the controversy that arose in regard to this enmeshment [1-3]. The separation of symptom severity together with daily functioning level from actual duration of HIV presence clearly demonstrated that the relationship between physical and psychological factors was unrelated to actual length of time since infection or diagnosis of infection with HIV.

Within the 101 men with complete data sets, there were clear differences in cognitions mood and behaviour despite the duration of HIV presence between the group of men who were vulnerable (Physically doing poorly) and the men who were resilient (doing better). Factors found by others to be associated with outcome and survival (level of loneliness, fighting spirit, personal responsibility, and depression were again confirmed here. Six previously unidentified factors were also found. "Feeling needed" was shown to be an important adjunct to the more commonly investigated perceptions of being supported by others. Perceived stigma revealed to be greater for those doing poorly has not previously been related to actual health outcome. The possibility that guilt feelings exacerbated the perception of stigma was investigated and found not to be relevant. Greater spiritual beliefs were found in the group with recent HIV presence and doing poorly as well as in the group who were doing better with longterm HIV presence. The cross sectional nature of the design prevented clear understanding regarding this finding. The ability of those who do better, to take personal responsibility for their health outcomes as shown by the higher internal health locus of control scores, and to have the ability to listen to their body and slow down, indicates possible important characteristics for people living with the virus or other chronic disease. Similarly, the finding that those who do poorer have higher Type A scores reveals behaviour and cognitions that might well be accompanying the higher autonomic reactivity reported by other researchers to be prognostic of poorer outcome.

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Response patterns were determined using standardized scores as shown in Figures I and II to provide visual profiles of resilient men (those doing better) versus vulnerable men (those doing poorly). In regard to recreational drugs, usage was actually high overall. The data suggested higher use in those with recent HIV presence who were doing poorly. Unfortunately due to insufficient group numbers this possibility was not able to be analysed and clarity regarding influence of alcohol, tobacco and other recreational drug use could not be determined.

Unexpectedly, the subgroups did not differ regarding rates of "loss of a significant other" (Table 1b). Further analyses were done in regard to questions specific to loss through death and there were no group differences.

There were limitations. Confidentiality requirements precludes random selection in HIV communities. Therefore caution is needed when generalizing these findings to the broader community containing those people who choose not to volunteer for such studies.

The clinical question "can we define behaviours and cognitions that without intervention place a person sitting in front of us right now at risk of physically doing poorly could not be answered using this cross-sectional large group design. The direct influence of cognitions mood and behaviour upon physical state could only be determined by a carefully monitored intervention studies. Longitudinal studies that commenced within weeks of infection would also be considered almost ideal although the confidentiality requirements of this highly mobile population are again limiting.

Notwithstanding this design weakness however, similar scores for those doing-poorly-with-recent-HIV-presence and those doing-poorly-with-longterm-HIV-presence were suggestive of prognostic characteristics therefore providing a list of characteristics to be included or eliminated by the therapist when developing tailored therapy for each client/patient.

Overall, the methodology adopted here resulted in identification of factors for use in the clinical and counselling decision-making process. The clarification of the relative contributions of functioning and duration of presence of HIV (phase) will hopefully be useful both in theoretical and clinical contexts. These findings suggest the need to further pursue evidence of direct influence of cognitions, mood and behaviour upon physical functioning. (51 references)

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The experience and outcomes of this research process has been included in the therapy process (cognitive behavioural and other methods) now adopted by Dr. Dawn Rayner-Brosnan. (see notes on therapy process made available for clients and their doctors on [www.The Stress Clinic of Hobart.Com](http://www.TheStressClinicOfHobart.Com)).

Other papers are available on request.

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