

PROJECT PROTEUS

AN INVESTIGATION OF HEALTH FACTORS IN SCUBA SAFETY

Douglas Walker

It is now the rule that before starting instruction in scuba diving in Australia the applicant must provide a medical certificate of his or her fitness to dive. There is general acceptance of the inadvisability, for reasons of the perceived risk, of persons who have certain medical conditions being exposed to rapidly changing ambient pressures or being in a situation where any impairment of mental alertness or of physical capability would be dangerous. In practice most medical conditions present with a wide range of severity. This makes risk assessment difficult for those doctors who do not believe the "fitness guidelines" display an adequate awareness of individual variations. They are, however, hampered in acting on their beliefs by the lack of data, other than the morbidity of divers with such conditions. Furthermore there is an absence of data on those who suffer minor, or no, problems from their "disability".

There are several possible sources of information, but none free of problems. At present the most potentially available sources are the records of those treated by hyperbaric units, publications from diving incidents report schemes (Australia, UK, USA), reports from doctors who are involved with the examination and treatment of divers, and inquest documentation for diving deaths. Project Proteus intends through this project to collect reports not only from these sources but also to develop awareness among those who have dived, despite such "contraindications", using compressed air, both scuba and surface supply (hookah), for the recording of their experiences.

Doctors are inhibited from deciding on a case-by-case basis about the applicant's fitness to dive, rather than basing a decision rigidly on the advisory code, by a fear lest at some time in the future the diver suffers some morbidity (not necessarily a consequence of the health problem) and their "fitness" decision then has an examination under the retrospectroscope.

Divers who have any "medically adverse condition" are inhibited from making public their actual diving experiences by a fear that any such disclosure might invalidate their diving certification. This investigation is designed to collect information and analyse it. Medical confidentiality of information is a basic requirement. This will hold whatever type of problems are reported. All information will be treated as confidential and names never revealed. To do otherwise would defeat the object of the investigation as then no one would report their adverse experiences.

Some divers may accept that medical views about the adverse potential of their medical problems have validity, but believe they have the right to decide for themselves what risk to take with their lives. Without analysis of vastly more reports than are available now it is not possible to assess the risk posed to any particular person by their medical condition and type of diving. Some potential divers do not disclose their true medical history in order to avoid a refusal of the desired certificate of fitness. This is a natural, and effective, response by applicants determined to learn to dive. This situation will continue till those who have some "adverse" medical condition are convinced that their problem will receive an adequately researched and informed evaluation.

There are at present significant differences to be found in medical advice between the views of the British Sub-Aqua Club and those at present espoused in Australia concerning not only asthma and diabetes as contraindications, and the frequency of obligatory medical fitness to dive assessments, but in willingness to discuss the subject openly. In the UK the major diving organisations have now formed a joint medical advisory committee to adjudicate in cases where the applicant disputes a "medical fitness" assessment. Such an approach requires an accurate and wide ranging data resource if decisions are to stand up against a challenge in court at some subsequent date.

Any more flexible approach to reaching a better fit to dive assessment where there is a history of asthma, diabetes, cardiac or other adverse condition will require more than a medical approach but this must surely be the first step. There may need to be some change in certification to include specifically limited grades of permitted diving, and design of legally watertight disclaimers for signing by persons who wish to dive despite medical advice. There is sense in accepting that some people will find a way to dive, with or without formal training, and ensuring that their risks are minimised by legitimising their training. Project Proteus is limited to the collecting information to form the basis for later action.

Readers, wherever they live, doctors or not, are invited to become involved with Project Proteus, both by collecting information from and about any divers they identify as coming into the category of having a type of physical or medical condition usually considered as adverse to safety in diving, and by following up any persons they have passed as fit to dive who have such conditions. Information is particularly important to enable evaluation of the correctness (or otherwise) of our criteria. Data on divers with an history of diabetes or asthma is of special value as these conditions can be readily concealed by a determined applicant yet have a reputation for being of serious import in the diving situation. At all times reports will be treated as medically confidential and no diver is to be placed at risk of loss of certification whatever

history of problems they disclose, though they may be advised as to whether they should continue diving.

This survey is designed to create a data bank and there is no assumption made or implied that present medical standards lack validity, only that they now require scrutiny. The lack of data of this type has produced the present situation where rigid criteria of fitness have produced a group of divers who have either evaded recognition of their asthma, diabetes etc. when they were examined by a doctor, or are diving without a pre-training medical examination. This project offers an opportunity to begin remedial action for this state of affairs, with information based on actual dive histories rather than morbidity reports as the basic data input for the first time. This project will not be limited to Australia and will be ongoing. Success requires the participation, interest, and dedication of many people. Please enrol.

If you are interested in becoming involved in this Project you are invited to write to:

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JOB SATISFACTION IN QUEENSLAND SCUBA INSTRUCTORS

Jeffrey Wilks

Introduction

To many people, work in the tourism industry is perceived as both glamorous and exciting. According to McMillen and Lafferty:¹ "Tourism interests explicitly cultivate a "youthful" image to attract young workers, with notions of a relaxed lifestyle and a variety of career opportunities".

For some workers, especially those employed in marine tourism, it is possible to enjoy a special type of lifestyle along with paid employment. In one study, Volard surveyed employees of two north Queensland island resorts and found what they most liked about working at the resort was the natural beauty of the island, followed by the low cost of living. Ranked third was the type of work they did.² An interesting finding from this study was that most staff did not intend to make a career of working at the resort. They saw their present employment as an enjoyable working holiday, a chance to save money while on the island, and an opportunity to live and work with like-minded people. This transient aspect of employment is

fairly typical of the tourism industry, with a large portion of the workforce periodically moving from one location to another.³⁻⁵

While employment at an island resort or a large hotel chain may provide unique job opportunities for some workers, the reality is that most tourism and hospitality operators in Australia are small businesses, defined as having less than 20 employees.⁶ A good example of small business in the marine tourism area is that of the scuba diving operation. In Queensland many dive operators are sole traders or work in partnerships. They employ a limited number of staff, and there is a high turnover rate among their employees. One reason offered for this high turnover is that employees do not see diving as a career. Rather, their work is an extension of their hobby, which often ceases to be fun when it is pursued for a living.⁷

In order to achieve their desired lifestyles, scuba instructors are prepared to forgo many standard employment benefits. These include overtime pay, holiday pay loading, and superannuation. At the same time, instructors report enjoying some fringe benefits from their jobs, including discounts on meals and accommodation, and special staff prices for equipment and services.⁸

While a majority of scuba diving instructors, both in Australia,^{8,9} and overseas,^{10,11} say they generally enjoy their work, there is currently no information available on specific aspects of job satisfaction within the diving industry. This information is important if staff turnover is to be reduced, and a stable career path developed for workers in this area of marine tourism. In addition, previous Australian studies have found that workers with low job satisfaction tend to report more physical health problems, greater levels of stress, and more accidents travelling to and from work.^{12,13} Since workplace health and safety has recently become a major issue for the recreational diving industry,^{14,15} it is timely to examine workers' job satisfaction and job characteristics in greater detail.

Method

A total of 202 registered Queensland scuba diving instructors participated in the study. The sample contained 57% full-time and 43% part-time instructors. Most respondents reported that they were married or in a permanent relationship. Average age was 33 years, with a range from 21 to 55 years. The various employment categories were 19% business owners, 48% salaried staff, and 33% independent instructors. Figures obtained from the training agencies show that there were 616 certified instructors in Queensland at the time of the study. The sample therefore represented 33% of all Queensland instructors.