science emphasis in order to disseminate scientific knowledge and its application to clinical problems. Clinical research can only be conducted in the clinical environment, for example by systematic enquiry as described by Gonella. Research co-ordinators could assist in the design and analysis of research projects, which should occur in both clinical and academic environments. Research can be enhanced further if specialization is encouraged by formal graduate education, elimination of clinical rotation, formal professional identification of areas of specialization and recognizing employment opportunities. The profession will have to set and recognize standards of specialization and continuing education courses at reasonable cost at attractive hours will have to be provided to maintain quality care and competency.

Hence we will have to come to terms with science as a growing, changing phenomenon and its consequent instability, confusion and ambiguity that upsets so-called established truths. If physiotherapy is to be credible, it has to progressively accumulate increasing quantities of knowledge, develop and use precise measurement systems and be subjected to argument, discussion and analysis in order to produce factual evidence to support both the art and the science.

References

A STUDY OF THE PROFESSIONAL IMAGE OF THE DEPARTMENT OF PHYSIOTHERAPY AT THE TYGERBERG HOSPITAL COMPLEX

E. MOUTON, B. Verpl., B.A. (Hons. Sielk.) (Stellenbosch)*

SUMMARY
In this study the professional image of the Department of Physiotherapy as observed by physicians, physiotherapists, paramedical staff and laymen (patients) was looked at. The Nominal Group Technique (N.G.T.) was used to develop the Semantic Differential (S.D.) which was used as the criterion of measurement. In the results, the afore-mentioned groups indicated a positive image of the Department of Physiotherapy and there seems to be a minimal difference in image observation amongst the different groups.

Image research has been used in the past for different projects, particularly in the field of marketing research in order to stimulate two-way communication between consumer and producer (Anastasi, 1964). “Image” is a concept which refers to the conceptualized notion of what we know. An image is therefore the connotation of what we believe to be the truth (Spoelstra, 1976). In the literature on the subject different approaches to the concept image are found. These vary from a personality speculation of the concept on the one hand, to a trend to define “image” as an attitude, on the other. By using the term professional image, the emphasis moves towards the profession and its attendant behaviour.

In this study the professional image as a reflection of the attitudes of individuals towards the Department of Physiotherapy was looked at. Attitudes are often defined as tendencies to react favourably or unfavourably to specific stimuli (Anastasi, 1968). It was possible to use one of several available attitude measurement techniques for this study by viewing “image” as a function of attitudes.

The Semantic Differential developed by Osgood (1952) as a criterion for the psychological meaning of concepts, has been used in the past for similar purposes. Images are the simplified impressions of people of an otherwise complex entity (Kotler, 1972). It was these “impressions” which were measured in this study.

The different professional groups used in this study were well known to the Department of Physiotherapy as can be seen from Table I.

It could therefore be expected that the selected groups would indicate certain attitudes, assumptions, actions and preferences in respect of the Department of Physiotherapy and would thus have a certain image of the profession. According to Spoelstra (1976) the information gained by image research can be used for several purposes:

- planning and promotion strategies
- evaluation of efficiency and internal re-organization and
- as a communication medium for better mutual understanding amongst concerned parties.

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Table 1. Degree of contact with the Department of Physiotherapy

<table>
<thead>
<tr>
<th></th>
<th>Often</th>
<th>Seldom</th>
<th>Never</th>
</tr>
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<tbody>
<tr>
<td>Physicians</td>
<td>57.9%</td>
<td>41.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Paramedical staff</td>
<td>66.4%</td>
<td>33.7%</td>
<td>—</td>
</tr>
<tr>
<td>Laymen</td>
<td>61.6%</td>
<td>31.2%</td>
<td>7.3%</td>
</tr>
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</table>

The main benefit of this exercise was that it provided the opportunity to identify problem areas existing between physiotherapists and each of the selected groups. This could lead to mutual understanding and greater efficiency in the department concerned.

**METHOD**

The Semantic Differential was selected as a criterion of measurement for two important reasons:

- It has been successfully applied in different contexts such as clinical diagnoses and therapy, consumer reactions to products and trade names (Anastasi, 1968).
- It is not a specific test, but a very flexible approach to obtain scores, attitudes and other sentiments.

Research workers can therefore create a semantic differential by using Osgood's original scales or by using their own scales more suited to their own specific situation. The S.D. method consists basically of repeated ratings of one or other concept. In this case the concept “professional image” was rated against pairs of descriptive opposite adjectives on a 7-point scale. On this scale 7 represented the positive pole and 1 the negative.

**THE QUESTIONNAIRE**

Originally 93 items were generated and selected by physiotherapists (clinical and teaching staff) by using the Nominal Group technique. The final list consisted of 25 items, and these were divided into 6 dimensions: effectiveness, dynamics, productivity, loyalty, scientific and professional aspects. The final questionnaire was presented in both official languages, with clear instructions, and additional information, such as occupation, English- or Afrikaans-speaking, as well as the degree of contact with physiotherapists, was also requested.

**TARGET GROUP**

The target group comprised persons in the Tygerberg Hospital Complex (physicians, paramedical staff, laymen (patients) and physiotherapists (teaching and clinical staff).

Number of questionnaires processed:
- Physicians ......................... 141
- Physiotherapists ................. 29
- Paramedical staff ............... 186
- Laymen (patients) ............... 190
- Total .......................... 546

**RESULTS AND CONCLUSIONS**

The results were processed by a computer and are indicated throughout in terms of average. All 25 items were rated between 4.0 and 6.6 on the 7-point scale. It would therefore appear that physiotherapists maintain a positive image of their profession, and this attitude was confirmed by each of the selected groups.

A profile of each of the dimensions is illustrated in Fig. 1 and each dimension is illustrated separately in Figs. 2-6.

It is fairly obvious that in the dynamic dimension the laymen (patients) tended to rate a more positive image in comparison with the other groups. The physiotherapists rated themselves less positively on the item *enthusiastic*.

In Fig. 3 (productivity) there is a marked tendency by all the groups to award a low score to the item *easily available*. This item was rated lowest of all the other items: physiotherapists (4.6); physicians (4.3); paramedical staff (4.0) and laymen (4.5).

The availability of physiotherapists seems to be a problem-area, particularly as far as the paramedical staff are concerned, and may be attributed to several factors. It may be worthwhile to do an in-depth study on this issue.
In comparison to the physiotherapists (5,5) the physicians (4,6) rate the physiotherapy profession more dependent (Fig. 5 effectiveness).

Although the physicians rated the items specialised and insight positively, they gave a lower rating than all the other selected groups (Fig. 6). The paramedical staff rated insight (5,5) lower than specialised (6,0).

In this item (Fig. 5) the physiotherapists regarded themselves less positively than the other groups. This information confirmed the fact that it was because of the physiotherapists' underestimation of their own professional image that they requested this study. There is another noticeable deviation in this dimension. The layman, who awarded all the other items the highest rating, rated the ethical aspect (5,3) lower than the physiotherapists (6,1) and the physicians (5,6). It may be a good idea to analyse this area to determine the immediate cause for this low rating.

**SUMMARY**

In this study the image observation of selected groups with regard to the profession of physiotherapy in the Tygerberg Hospital Complex was looked at. The selected groups gave a very positive rating of the physiotherapy profession. This exercise was carried out at the request of the Department of Physiotherapy in order to evaluate their assumption that certain selected groups maintain a negative image of their professions. The opposite seems to be more acceptable. The value of this study lies in the results which indicate that the selected groups maintain a positive image of the professions of physiotherapy. The Physiotherapy Department, therefore, now has an indication of the attitude of the selected groups towards their profession.
INDUSTRIAL/OCCUPATIONAL PHYSIOTHERAPY
AN INTERNATIONAL PERSPECTIVE

B. M. JAHOLKOWSKI, M.C.S.P.*

SUMMARY
An overview of the development and practice of Industrial/Occupational Physiotherapy in Great Britain, Australia, New Zealand, Finland, Sweden and Denmark is given. Training facilities and courses available in each country are mentioned. Barbara McPhee’s recommendations for the development of this field of physiotherapy are quoted as suitable for South Africa.

INTRODUCTION
Industrial physiotherapy may be seen as a part of occupational health. Physiotherapists all over the world should become more aware of their potential in this field in the face of increased emphasis on prevention, both from the medical profession and industrial concerns. Increased technology is leading to increased hazards at the man/machine interface. Preventive medicine is slowly being supplanted by “total worker well-being” in Occupational or Industrial Health Departments.

GREAT BRITAIN
The first industrial physiotherapist started work in 1923 in the medical division of Arthur Guinness and Son in Dublin. From 1923 to 1947, when the Association of Chartered Physiotherapists in Industry (A.C.P.I.) was formed as a Specific Interest Group of the Chartered Society of Physiotherapy (C.S.P.), industrial physiotherapy grew slowly, remaining basically a duplication of the hospital outpatient department in an industrial setting. By 1979 A.C.P.I. membership stood at over 100. Due to the present economic situation in Britain A.C.P.I. membership has fallen to 70 in 1982. Industrial physiotherapists in 1979 were employed in over 14 different types of industries and business concerns (see Table).

The ratio between physiotherapists and employees was determined by the A.C.P.I. as one fulltime physiotherapist to 4000 employees for therapeutic, rehabilitative and preventive treatment. Chris Hayne received a Fellowship from the C.S.P. in 1977 for his dissertation entitled “The Physiotherapist in Modern Industry”. He now specializes in Occupational Health and Ergonomics. He sums up the role of the physiotherapist in modern industry as being one of teamwork with other members of the Health and Safety Group.

He says there are three main functions of the physiotherapist in industry:
- To provide a fully comprehensive service for employees, being reasonably located in relation to their place of work.
- To prevent disease and injury, especially of occupational origin.

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