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Title: Health Professionals' Attitudes and Practices in relation to Functional Capacity Evaluations.

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ABSTRACT:

Functional Capacity Evaluations (FCE's) are part of practice in work injury prevention and rehabilitation, and are designed to define an individual's functional abilities or limitations in the context of safe, productive work tasks. Qualitative research methodology was used to investigate the attitudes and behaviours of health professionals in relation to FCE use. The study aimed to identify why health professionals chose a particular FCE, and to identify what factors influence health professionals' clinical judgements when providing results and recommendations for the individual being assessed. Five health

professionals from the Hunter Region of New South Wales, Australia participated in semi-structured, individual interviews using a phenomenological approach. Following inductive analysis of the data, four themes reflecting participants' attitudes and behaviours of FCE use emerged: i) referrals and expectations, including why and when the assessment is completed ii) outcomes, - what the results aim to provide iii) workplace / practice / usage issues and iv) skills of the assessor.

The results indicate the need for further research on the clinical utility of FCE's. A large scale quantitative study would allow results to be generalised to a wider community of FCE users.

Keywords: Functional Capacity Evaluation, Occupational Rehabilitation.

1. INTRODUCTION AND LITERATURE REVIEW

Functional Capacity Evaluations (FCE's) are part of practice in work injury prevention and rehabilitation, with the aim of defining an individual's functional abilities or limitations in relation to work tasks [12]. They are commonly used with individuals who have suffered work related musculo-skeletal injuries, to assist in decision making about return to work, entitlements and rehabilitation [18].

There are many different FCE's available commercially and many clinicians/rehabilitation providers have developed their own non- standardised, work specific FCE's. All FCE's attempt to measure functional performance objectively. However, there are limited published studies appraising the reliability, validity and utility of the assessments, to establish if this objectivity is achieved [8, 9, 10, 12, 18]. Many of the studies that have been completed do not relate to tools developed in the Australian context [8, 18, 2, 13]. Strong et al (2004) identified limitations of current research and difficulties of extrapolating information from a single point in time in the assessment process [19]. They also found that FCE's were conducted with limited contextual information, with variations in guidelines or practice standards and that practices were influenced by referral source and market demands [18]. Pransky & Dempsey (2004) suggest the dynamic nature of a job and of capacity, and of the differences between tasks completed by employees of the same job description present issues for FCE's [16]. It is suggested a job

analysis is required to identify the specific tasks within a job and absence of formal job evaluation constitutes a threat to validity [16, 10].

Within Australia, Innes and Straker (2002) studied the current practice of therapists in relation to work assessment and found that generally assessments were grouped into work assessments, FCE (no job) and FCE (job) [11]. A variety of factors affecting the type, purpose and characteristics of the assessment and their influences and constraints were described, Deen et al (2002) surveyed Occupational Therapists in Australian work practice and found 96% conducted Workplace assessments, 86% Functional capacity evaluations and 75% Job/risk assessments. Of those conducting FCE's, specific tools being used were, Workhab- 36%, Valpar – 23% and West – 18% [5]. However, Innes and Straker (1999) found none of these tools had adequate documentation for validity. There are some more recent studies that investigate components of specific assessment tools in relation to validity and reliability [2, 6, 13], however little is known about therapists' attitudes and practices in relation to the different FCE tools. Literature regarding attitudes to practice only illustrated articles related to clients or related groups rather than assessment tools.

The current beliefs of therapists in Australia in relation to workplace and functional capacity evaluations were also studied by Innes and Straker (2003). In this study it was found that therapists believed they, as therapists, were the assessment tool, and were central to the credibility of the assessment [10]. They also found many of the strategies used by therapists in FCE's were

similar to those used in qualitative research, such as using multiple data sources and methods of data collection, collecting information until no new data is gained, triangulating data sources, and member checking to confirm results from the assessments.

This study aims to build upon the existing studies of FCE's to investigate the attitudes and behaviours of Australian health professionals in relation to Functional Capacity Evaluation (FCE) use, to identify why health professionals chose a particular FCE and to identify what factors influence health professionals' clinical judgements when providing results and recommendations for the individual being assessed. It is a precursor to a more in-depth quantitative study measuring which FCE's are in use.

2. METHODOLOGY

2.1. Research Design

A phenomenological, qualitative study design was utilised to explore the attitudes and practices of health professionals who use Functional Capacity Evaluations as part of their work within occupational rehabilitation.

This approach seeks to describe, understand and interpret experiences from the perspective of those experiencing the phenomenon [4, 3].

2.2. Participants

Four occupational therapists and one physiotherapist participated in the study. They had been qualified between 1 year and 6 years, and worked for a range

of public and private rehabilitation providers. They had been conducting FCE's for varying lengths of time ranging from 6 months to 4 years. All participants, except the Physiotherapist, had worked solely in the area of occupational rehabilitation. (See Table 1).

2.3. Procedure

Recruitment of health professionals (eg. physiotherapists, occupational therapists, occupational health nurses) who conduct FCE's and work for WorkCover (NSW) accredited rehabilitation providers in the Hunter region of NSW, took place following ethics approval from the University Human Research Ethics Committee. Contact details of providers in the Hunter region (16 providers), were obtained from the Yellow pages phone directory. A letter was sent to the manager of each provider asking them to distribute information letters and consent forms to therapists or nurses who conduct FCE's for the organisation. Participants returned consent forms to the researcher in pre-paid envelopes, and were then contacted to arrange a mutually convenient time and place for the interview.

2.4. Data Collection.

Data were collected by in-depth, one to one interviews using a semi-structured interview schedule (Appendix A). This schedule was developed by the researcher from existing literature about FCE's; the use of the assessment; and following consultation with a senior academic experienced in qualitative research methodology [7]. The schedule provided a framework of topic areas to be addressed in the interviews and ensured similar issues were

explored with each participant [15]. The use of open ended questions encouraged descriptive responses to be given according to each participant's own narrative style and facilitated opportunities for the researcher to probe further into participant experiences [20]. Interviews ranged in length from 60 – 90 minutes. Each interview was audio-taped, to increase accuracy of data, and was transcribed verbatim.

2.5. Data Analysis

Transcripts were coded inductively, whereby phrases, sentences or words were coded according to the topic or issue being discussed [4]. These codes were then grouped into categories using the constant comparison method [14]. This method involves comparing and contrasting new information with previously obtained data. Next, the data assigned to the various categories was analysed, and patterns, similarities and relationships were grouped into larger categories or themes.

To increase data credibility reflexivity was used. This is a process of self examination whereby reflection on bias, theoretical predispositions and perspectives, and how this had influenced data collection and analysis took place using a personal diary to record thoughts, feelings and ideas [1, 4].

Member checking was also conducted by contacting some participants by phone to discuss themes derived from the data and the researcher's supervisor also reviewed and provided feedback on the analysis.

Triangulation was used to enhance rigour throughout the interview development stage, data collection and analysis. This is the use of multiple methods to cross check the validity and offers deeper insight into the

relationship between inquiry and the phenomenon under study [15]. Triangulation was accomplished using existing literature, reflexive analysis as the interviews progressed and through member checking.

3. RESULTS AND DISCUSSION

Four key themes emerged from the data relating to health professionals' attitudes and practices in relation to functional capacity evaluations. These were; i) referrals and expectations, ii) outcomes, iii) workplace / practice / usage issues and iv) skills of the assessor.

3.1. Referrals and expectations:

Several factors emerged from the interviews, relating to referrals and the expectations of the referrer, the employer, the insurer and the doctor.

All participants commented that the reason for referral or clients' goal, affected the FCE completed. If a client had a job to return to, all participants stated that tasks related to the specific job would be included in the FCE, and that if the client did not have a job, a more general FCE would be completed.

Referral reasons can be expanded upon, as Participant 2 states: *'a lot of them are for vocational retraining.....to clarify the job they are looking at is indeed suited to their functional ability.'* Participant 1 also added *'the legal status of the client makes a difference to the FCE.'* This was specifically in relation to Section 40 Assessments which are assessments completed under Section

40A of the NSW Workers Compensation Act 1987, of a partially incapacitated injured worker's ability to earn in some suitable employment [21]. With regard to Section 40 Assessments a more general FCE was conducted as the goal is to look at the capacity of the client to earn rather than a specific job goal.

Participant 3 stated '*Section 40 FCE's (i.e. with no job to go back to), should be exactly the same for everyone - it should be quite big and cover everything, whereas a rehab FCE should be set up depending upon exactly what duties, what job they have and what injury.*' However, in relation to a Section 40 assessment being exactly the same for everyone, this was not the case, even within this small sample where a range of FCE's, not one standardised FCE, were being used for all assessments.

Two distinct forms of FCE - no job and job, depending upon the employment status of the injured worker and the potential for returning to the pre-injury workplace have been identified [11, 12]. An FCE (no job) is more comprehensive and assesses generic work skills and physical demands, whereas the FCE (job) has a more job specific focus and includes job simulation tasks. However, as a result, standardisation of the specific tasks used was precluded because of customisation for job simulation [11]. In relation to FCE (job) when return to work is the major focus, it has been suggested a job analysis should be performed to determine the tasks required for the job. The results of the FCE can then be compared with the physical requirements of the job [12, 18, 19, 16].

Insurers, employers, solicitors and a range of health professionals referred for an FCE, and this along with the reason for referral impacted upon the type of

assessment that was performed. Participant 2 stated *'they (the insurer) are looking for a stronger opinion on whether the person can or cannot do something.'* This is consistent with previous findings indicating that legislation and related regulations, and the expectations of referrers impacted upon the assessment and when it was performed [11].

In relation to the views of other professionals on the FCE, Participant 4 commented that *'Doctors are responsive to the FCE, as it gives them something concrete to put on a medical certificate, and 'it is can be used to identify functional abilities when there are discrepancies and differences in the goals of rehab, between the Doctors and the employee.'* Participant 3 also commented that Rehabilitation Counsellors view the FCE positively as it gives them an indication of the clients' functional abilities and limitations. Strong et al (2004) studied the users' perceptions of the FCE reports and found that FCE's were being described as useful information tools [19].

3.2. Outcomes:

The outcome of the FCE was discussed as being related to the goal of rehabilitation and, specifically related to whether the client had a job to return to or not, and the legal status of the client. The ability of the FCE to predict outcomes was discussed as was the limitations of the assessment and the recommendations made as a result of the assessment.

Several participants commented about the ability of the FCE to predict a clients' abilities:

'The FCE is good at predicting whether a person can go back to suitable duties, but not always a predictor of returning to normal duties.' (Participant 1).

'It clarifies a client's abilities and limitations is a starting point for rehab.'

Participant 3). Participant 2 stated *'the FCE is able to predict if someone is suitable for sedentary or manual work.'*

The limitations of the FCE in relation to predicting outcomes was also commented upon, Participant 5 stated *'the FCE is able to determine if a person is not able to return to pre-injury duties as this is beyond their functional capacity, however the assessment is only an accurate indication of what the client can and can't do at the time of testing.'*

Participant 3 continues: *'the FCE is not there to predict vocational outcomes for those without a job but makes sure a person can do a proposed outcome (job type) and prevents putting them in a situation where they won't cope or where there is an increased chance of injury or aggravation.'*

Participant 2 stated: *'the FCE we use is able to indicate if a client needs counselling for fear avoidance behaviours or cardiovascular conditioning.'*

The FCE was discussed by this group as providing information which allows recommendations in relation to work, strengthening or other services that may assist the clients' rehabilitation.

All participants commented that the recommendations made in relation to the FCE related to consistencies and inconsistencies of performance observed during the assessment, as was also found by Strong et al (2004) [18].

It is interesting to note that the purposes documented in the literature relating to why FCE's are conducted discuss the need to match the worker and the work duties and to identify the individuals' physical abilities and limitations for employment [12]. However, any FCE will only give a picture of the time of the assessment, and the ability to predict return to work or injury recurrence has not been proven [16, 18]. The reliability and validity of the FCE is also questioned if FCE's are adapted to suit each individual injured workers' situation.

3.3. Workplace / Practice / Usage Issues:

The therapists' workplace had an impact upon FCE use. All participants stated the FCE they used was the result of what was available at their workplace, and what the referrer requested. The general feeling of participants was that this also related to economic issues of what was cost effective for their employer and the payer. Participant 4 commented: *'initial set up cost for the FCE and the equipment needed is a factor that my employer would consider.'* Strong et al also found referrers wanted value for money spent [19].

The therapists interviewed identified a range of FCE assessments they currently use and some that they had used with previous employers. Some

therapists discussed adapting the assessment to suit the clients' injury and job, and others discussed using parts of an assessment rather than the whole.

Usage was also discussed as being related to what the referrer wanted.

Participant 2 stated: *'large employers want a standardised FCE.'* However, Participant 1 contradicted this comment saying *'employers request the FCE to be job specific so requiring the adaptation of components.'* This participant later added *'the ability to adapt components of the FCE is desirable to suit the individual and the injury.'* The other factor that was commented upon was the issue of the assessment being from a clinical or a functional viewpoint, which also relates to the issue of making the assessment job or work focused. Participant 3 stated: *'look at kneeling, if someone can't kneel it doesn't necessarily mean they can't work at ground level adopting some other posture.'*

Linking to this issue of being standardised or not, Participant 1 commented that: *'A workplace assessment is more realistic than an assessment in the clinical environment'* and by nature of the workplace assessment this is non standardised. However, Participant 5 talked of using the clients' workplace for some components of the FCE so making it very job specific and therefore combined the FCE and the Workplace assessment.

King, Tuckwell & Barrett (1998) support the use of workplace information within the FCE [12], however, Innes and Straker (2003) identified

modifications to standardized FCE's caused concern regarding the medico-legal implications, however not to the assessment process [10].

Policies within the workplace also impacted upon the therapists. Most participants stated it was a workplace policy not to conduct an FCE on clients they were case managing. Participant 2 stated: *'doing a FCE on someone I know .. that would affect my objectivity.'* Participant 1 added: *'it may influence how you do the FCE, how you react and you may have some preconceived ideas about the assessment.'*

In contrast, Participant 5 stated: *'I prefer to do the assessment on a client known to me, as I have a better knowledge of what a person can do and therefore the risk of aggravating the injury is reduced.'*

3.4. Skills of the assessor:

The skill of the therapist was discussed in relation to FCE use and this is consistent with the findings of Innes and Straker (2002) who found therapists believed that they were the assessment tool and the quality of the assessor (therapist) was related to the credibility of the assessment [11].

All participants agreed training in the use of FCE's was essential, however the type of training varied. Several of the participants had completed formal training and accreditation in the use of a specific FCE, however Participant 4, who had completed a formal training, commented: *'observation of others conducting the FCE was also useful as a learning tool'*. Participant 2

commented when they started work, observing another therapist complete the FCE was the training, however, they went on to comment that the training procedure was now more comprehensive. On the job training was also discussed by Participant 3, as the FCE conducted was a non standardised assessment, with competency based training being employed in conjunction with a coach – or experienced therapist.

Observation was discussed by all participants as an essential skill in conducting FCE's; to be able to observe how tasks were completed, the behaviours of the client, physical signs and specifically in relation to safety. In relation to this, a thorough understanding and knowledge of body mechanics and anatomy was seen as being essential (Participant 4).

An ability to gain rapport with the client was discussed by participants 1 & 4, to assist put the client at ease and understand the purpose of the FCE.

Participant 4 commented: '*the client doesn't have a choice and often thinks it is just a process.*' Participant 4 went on to comment that listening to the stories of the client – the client narrative, was also important, '*you can learn a lot from what they are telling you.*' Innes and Straker (2003) also identified that establishing communication, rapport and trust with the injured worker and employer was a strategy employed by therapists in conducting FCE's [10].

Experience was discussed by several participants- Participant 4 commented this was one of the most significant skills and was linked to confidence in their own abilities. Participant 5 commented that experienced therapists needed to

be open minded and that a broad range of experience rather than a lot of experience in a narrow field also made a difference. Innes and Straker (2003) found therapist knowledge and experience contributed to the trustworthiness or consistency of results and was critical to establishing credibility in medico-legal settings [10]. Strong et al (2004) found reasons for choosing a particular FCE provider related to the experience, professionalism, knowledge and use of clinical reasoning of the provider [19]. Strong et al (2004) also identified that FCE's rely on the training and experience of the provider [18].

Participant 4 and 5 also commented upon the different skills of therapists specifically discussing the different approaches of occupational therapists and physiotherapists. This raised the issue of reliability of providers conducting the same assessment or writing the same report. Innes and Straker(2003) found within some organisations that inter-rater reliability was attempted to be achieved using training, multiple data sources, triangulation of results and consistent report formats [10]. However, they identified there is limited research to indicate the reliability of specific assessment tools [8].

4. Limitations of the study

A limitation of this study was the small sample size, with all participants working in one regional area in NSW. Some of the participants were known to the researcher which may have implications of bias. The conclusions therefore, should be considered in light of this. The five participants provided rich data of their attitudes and practices in relation to FCE usage, and further study including a larger quantitative study would allow a more in-depth

understanding of therapist's attitudes and practices and greater generalisation of the findings.

5. Conclusion:

This study produced rich descriptive data from a small sample of therapists about their attitudes and practices in relation to FCE's.

It was found FCE's are applied differently according to the reason for referral and client goal, the therapists' workplace procedures, policies and resources and the therapist's skill and experience. There was a mix of standardised and non standardised assessments used, however therapists discussed adapting the FCE, irrespective of standardisation, for specific purposes and to meet the goal of the assessment. This goal varied according to the reason for referral, client's job requirements and the client's injury type.

Personal skills and experience of the health professional was raised as an important consideration and concurs with previous research findings.

Despite some FCE's being standardised tools, and therefore requiring certain procedures to produce reliable and valid results, therapists in this study adapted the assessment to suit their requirements. This has implications for the reliability and validity of the assessment tool, however as previous research has indicated there is limited research on the validity and reliability of these tools.

From this study further options to explore include: 1). building on these results with a larger survey based quantitative study to allow a more in-depth understanding of therapist's attitudes and practices and 2). further

investigating the implications of these findings on the reliability and validity of current practice in relation to FCE's.

FCE's are being used widely in the areas of disability management and occupational / vocational rehabilitation. Consideration needs to be given to the practices, the reliability and validity, and of the outcomes, to ensure best practice is achieved.

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Appendix A

Interview Schedule

(Introduction: thanks for agreeing to participate; ask permission to tape record and explain right to stop recording at any time, erase part of all on request; go over consent statement; any questions).

1. What is your background to conducting FCE's
Discipline, time working in OH, reasons for conducting FCE's
2. What type of FCE's do you conduct? And can you explain why you chose to use this particular FCE.
Key, West, Ergos, Blankenship, Workhab, Isernhagen, non standardised etc
Client type, referral reason etc.
Social factors/ work factors.
3. What do you feel about conducting this particular type of FCE?
Referral reasons - FCE - job / no job etc
Opinion of others to FCE.
4. Do you complete the FCE in its entirety or do you complete selected sections only and can you explain this?
Type of injury, type of job, referral reason, information for RTW.
5. What influences the recommendations you make at the conclusion of the FCE?
Reason for referral, expected outcomes - job/ no job.
Clinical reasoning, narratives, client history, legal status, relationship with client.
6. What are your thoughts about the FCE and predicting outcomes?
+/- conclusive, starting point, predicting RTW/ retraining.
7. Do you have any other experiences of this topic that you would like to share?

Appendix 2

Table 1 – Details of participants.

Participant	Gender	Profession	Years of Experience	Time conducting FCE's
Participant 1	Male	OT	4 years	3.5 years
Participant 2	Female	OT	3 years	3 years
Participant 3	Female	OT	1 year	1 year
Participant 4	Female	PT	6 years	1 year
Participant 5	Male	OT	1 year	6 months