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Exploring client adherence factors related to clinical outcomes

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ABSTRACT

With the increase in chronic disease and the ageing of the population, understanding requisite self-management adherence of people who are frail is important, especially given its association with service outcomes. This study sought to investigate five key client adherence factors reported in the literature, and frailty reduction in a clinical trial intervention group. The intervention participants in the Frailty Trial were stratified into three groups on the basis of their frailty score; improved, unchanged or deteriorated, and a sample meeting the inclusion criteria was randomly selected from each group. The intervention therapists were asked to complete a survey for each of the clients seeking their views on client motivation, client participation, client–therapist relationship, client trust and the value of the service to the client. A strong relationship was demonstrated between each of the five adherence variables and the outcome of the service, with motivation and participation having the greatest impact.

CHINESE ABSTRACT

随着慢性疾病的增加和人口的老龄化，了解体弱者自我管理的必要遵从则显得至关重要，尤其是考虑到它与医疗效果息息相关。本文旨在探讨文献中报道的五个主要的客户遵从因素，以及临床试验介入治疗组中虚弱度减少的情况。按照其虚弱度评分，虚弱试验的参与人员被分为三个组，即改善组、无变化组或恶化组。每个组的参与人员均按照纳入标准随机抽取。介入治疗师填写有关每位医疗客户的问卷调查，即治疗师对客户的动机、客户的参与、客户与治疗师的关系、客户的信任度以及为客户提供的服务的价值等方面的意见看法。结果表明，五项遵从因素中，每项因素都与医疗效果存在紧密联系，其中动机和参与的影响最大。

1. Introduction

Non-adherence creates significant challenges for health professionals, clients, and researchers, because it impacts on clinical service outcomes (DiMatteo et al., 2012), with a meta-analysis conducted by Zolnierek and DiMatteo (2009) reporting non-adherence rates ranging from 25% to 50%. However despite the importance of client adherence, clinical outcome research in the health sector has largely focused on identifying evidence about which interventions work best for which types of clients and under what circumstances (National Health and Medical Research Council, 1999). Health services have traditionally been designed around individual specific diseases with the illness focused paradigm situating control with the specialist service provider, who then implements its operation. The resultant distortion in the priorities and ethos of medicine has created a reductive focus on disease processes and organ systems (Miles and Mezzich, 2011). As a consequence, clinical outcome research has resulted in the development of associated clinical frameworks and guidelines (Hughes and Mackay, 2006), largely ignoring the significant role of the client despite acknowledgement that client adherence is important to the clinical outcomes (Vermeire et al., 2001). Research in the services sector is client centred and draws a connection between outcome and the value of the service to the client, where value is created collaboratively through interaction (Vargo et al., 2008). Service outcome therefore does not only sit in the provider's domain. This paper identifies and explores

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reported factors related to client adherence, and clinical outcomes using a sample of intervention group participants from a randomised controlled trial (RCT) in the area of frailty.

Frailty has been used to label the situation of an older person with medical conditions and a loss of functional ability that is likely to further deteriorate. In 2001, Fried et al. (2001) reported a frailty phenotype which was empirically derived and offered a validated set of criteria related to body weight loss, weakness, exhaustion, poor endurance and low activity. This phenotype specifies that to be classified as frail a person must meet pre-determined values of three or more of five criteria. Whilst the syndrome has now been defined and work undertaken to measure its prevalence in the older population, Cameron et al. (2013) identified the need for intervention studies which applies a specific definition of frailty to recruit participants, and that whilst some attempts had been made to improve outcomes for frail older people, there were no specific interventions designed to reverse it. They conducted a single centre RCT with frail older people and compared usual care with a targeted, holistic and sustained approach intervention programme with frailty improvement designated as the primary outcome. The study proposed that the common patterns of frailty could be treated and mitigated, and the literature was used to identify interventions that had been shown to effectively address the different components of the syndrome (Fairhall et al., 2011). The trial was implemented in the Hornsby Kur-ring-gai Health Service, New South Wales, Australia. People, who were identified as meeting the frailty criteria and formally consented to participate in the study, were randomised to receive either usual care or a multifactorial, multidisciplinary frailty intervention. The comparison group received usual care. Those participants randomised into the intervention group received tailored interventions for a period of 12 months based on individualised assessments. The intervention covered medical, nutritional, psychological, cognitive, visual, auditory and mobility aspects including falls risk. Chronic health conditions were also considered due to their potential to contribute to the characteristics of frailty. All interventions were provided by trained clinicians and efforts were made to ensure that the participant's dignity and wellbeing takes precedence at all times. The physiotherapist primarily responsible for the intervention group participants documented adherence to the study protocol and estimated a global level of adherence (in five categories) over the 12-month intervention period. The interventions sought to improve the individual's general well-being and involved nursing, medical, physiotherapy, occupational therapy and psychology input. Each intervention group participant was instructed in how to perform specific activities tailored to reduce their frailty and requested to regularly perform their programme, mostly on a daily basis. The study found that a higher level of adherence in the intervention group was strongly associated with improved outcomes, in particular the primary outcomes (Cameron et al., 2013). At the conclusion of the RCT, one of the intervention clinicians observed adherence differences between similar clients receiving a comparable intervention programme and that this had impacted on the service outcomes. The question was raised as to what could have influenced adherence.

Fairhall et al. (2011), in their practical guide for assessing and treating frailty, defines client adherence as the extent to which recommendations were followed, and highlighted that it required a client taking responsibility for maintaining or improving their health status. Understanding adherence in the context of self-management and chronic disease is growing in importance, especially with the ageing of the population in westernised countries. It is vital to health service managers and providers because client adherence has both economic and social outcomes. We identify that adherence has been linked with the construct of service value in the services literature, and also outline the health literature reporting individual links between adherence, service outcomes and four client related factors. Using the outcomes of the RCT intervention group, we developed an exploratory study. This study aims to investigate if there might be a link between clinical outcomes and these individually reported client related adherence variables. We present this small retrospective exploratory study and its results. To the best of our knowledge this is the first study that has attempted to consider clinical outcomes in the context of client specific adherence variables.

2. Literature review

The literature on adherence (also referred to as compliance) is extensive, with research spanning many fields, including psychology, medicine, and consumer behaviour (Vermeire et al., 2001). As early as 1959, Rosenstock pointed out that non-adherence produced substantial adverse effects on health service quality and ultimately clinical outcomes, both directly (by disrupting or negating the potential benefits of preventive or curative therapies) and indirectly (by involving the client in further unnecessary diagnostic procedures and treatments) (Rosenstock et al., 1959). Adherence to medical recommendations is a complex behavioural process strongly influenced by the environments in which clients live, health care providers practice, and how health systems deliver services (van Dulmen et al., 2007). In this sector, adherence continues to be used as a synonym for compliance (Cramer et al., 2008). DiMatteo (2004), in a meta-analysis of the literature on adherence to health advice, found that adherence averaged around 24.8 percent. DiMatteo (2004) pointed out that adherence was not a function of illness severity, nor was it related to the demographic characteristics of age or gender. The health services outcomes literature reports a number of client variables that influence adherence. Motivation has been described as an important determinant of a health service's outcome (Maclean et al., 2002), and there is a significant body of empirical work which has focused on client participation and service outcome from the health professional's perspective (Cahill, 1998). The relationship between the health professional and their client has been highlighted as vital to service results (Gittell, 2002) and described as the "keystone" of a health service (Dorr Goold and Lipkin, 1999). Further, trust has been identified as an important precursor of collaboration because it facilitates cooperative behaviours (Dibben et al., 2000) and Martin et al. (2005) argued that trust between the health professional and the client was important to the outcomes. These four variables have been used separately to explain health service outcomes, and despite their individual inclusion in numerous health studies, there is no theoretical model or research that considers them together.

In the services literature adherence has been linked to client perceptions of the value of their service, where service value influences both client satisfaction and behavioural intention (to adhere), and therefore impacts on service outcomes (Choi et al., 2004). Vargo and Lusch (2004) have contended that a service involves the application of a professional's competences (knowledge and skills) for the benefit of the client (Vargo and Lusch, 2004), where value is created collaboratively through interaction (Vargo et al., 2008). Payne et al. (2008) argued that every encounter between the client and the professional creates a cumulative contribution to the co-created value of the service. DiMatteo et al. (2002) highlighted that treatment must be personalised and adapted to the individual so as to guarantee their involvement and thereby maximise their adherence with the intervention, where the client's perception of service value is achieved through the client-centred approach (Epstein and Street, 2011).

2.1. Adherence and motivation

Adherence has been identified as requiring motivation on the part of the client (Foxall et al., 1998) because motivated clients are