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Targeting implementation efforts for maximum satisfaction with new computer systems: Results from four human service agencies

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Abstract

Human service management needs to pinpoint the areas in which to concentrate computer implementation efforts in order to achieve maximum satisfaction with new systems. This study sought to identify the most salient factors affecting user satisfaction in management and client oriented computer systems in human services. Along with commonly used factors to assess user computer satisfaction (UCS), congruence with human service norms was added. UCS was evaluated in newly implemented computer systems in four human services. Two had introduced management oriented systems and two had introduced client oriented systems ($N = 517$). Hierarchical regression was conducted to assess the relative effects of four classes of variable (user, environmental, process, and system), on UCS. Contrary to expectations, results show that the two types of system were analogous with respect to contributing variables to UCS. Preparedness, importance to management, integration, usefulness, and technical support best predict UCS. Moreover, the systems did not differ with respect to congruence with human service norms, and this variable did not load on the regression. A discussion of the implications of these findings for implementation theory and human service management concludes the paper.

Keywords: Human–computer interaction; Social services; Systems design; Computer acceptance; System types

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1. Introduction

Implementing a new client system in a human service agency is expensive, time consuming, and requires significant organizational resources. These costs make it imperative for human service managers to maximize their system implementation efforts in areas that yield the greatest return in terms of user computing satisfaction (UCS).

The literature is replete with reports on failed system implementation and low user satisfaction in the business sector (Cule, Schmidt, Lyytinen, & Keil, 2000; Markus, 2000; Joshi & Lauer, 1999; Wallace, Keil, & Arun, 2004). Research on system satisfaction in human services is scarce (Choi, Ligon, & Ward, 2002; Savaya, Monnickendam, & Waysman, 2006), and studies reporting on failed system implementation in these services is virtually non existent (Monnickendam, 1996; Savaya & Spiro, 1997). It is reasonable to presume that human services are not immune to the risks and effects of failed systems. Implementation issues have maintained a constant presence in prescriptive human services computerization literature and internet discussion groups over the last twenty years (Carrilio, 2005; Whitten, Notman, Maynard, & Henry, 2004). These attest to the quest for creating systems that satisfy the end-user.

Historically, most of the human service systems were redesigned management information systems (MIS) and thus management oriented. The quest for client oriented systems stems in part from practitioners' dissatisfaction with the incongruence they perceived between management oriented system attributes and client-related information needs. Planners did not allow sufficiently for the subjective qualities of professional tasks (Abbott, 1992; Savaya, Spiro, Waysman, & Golan, 2004). Systems designed and oriented to management needs could not cope with the professional world view of practitioners (Hasenfeld, 1992b). Whereas management oriented systems aim first and foremost at generating management oriented information, client-focused systems are typically designed to generate information to be used by the practitioner as part of the treatment process. A computer system is an expression of the organization's practice ideology, as reflected in the degrees of complexity of tasks carried out by human service workers (Hasenfeld, 1992a). In management oriented systems tasks will tend to be transaction oriented and simple, and in client oriented systems tasks will tend to be process or decision oriented and complex. Consequently users' interaction with these systems is vastly different.

MISs will help practitioners and manager–practitioners handle their work, where manager–practitioners such as team-leaders, unit or branch directors are usually senior practitioners promoted to middle management. Manager–practitioners still deal directly with clients when needed, although their main responsibility is management. MISs collect from the practitioner, generate simple client data (age, gender, previous treatment, present problem, etc.), and produce aggregated single case and treatment data (treatment events, appointments kept, discharge summaries, case load management data, accounting, reporting, etc.). Use of the data by practitioners is mainly for routine client processing, and by manager–practitioners for supporting managerial decision making and resource allocation.

Client oriented systems are designed to support the treatment process in addition to MIS functions. Sophisticated case management systems are created from scratch as integrated systems rather than MISs with a few added components. These systems may include the aforementioned simple transaction data for use of manager–practitioners and practitioners alike. In addition, they include complex evaluative clinical assessments,