



## Wilma L. West Library Resource Notes

### Time

#### January 2003

While waiting for my husband to finish dressing on New Year's Eve, I was watching a news program on the BBC station. It was 6:00 PM in Fairfax, Virginia, and we were meeting friends for an early dinner, with the hope that we could stay awake to welcome in 2003, six hours away. With footages of the finished and just-happening festivities welcoming in the New Year from Sidney, Australia and Berlin, Germany, I saw that for millions of folks, the celebration was winding down, and they had managed to not only stay awake but to CELEBRATE.

Time seems to be an apt topic for contemplation, as we begin a new year. Does time seem to be flying by you? Is there just not enough time in a day for all that you need or wish to do? Are you using your time wisely? Are you spending time regularly with family and friends or engaged in meaningful activities? Has your time been disrupted by one or more life change event? How much time do you have?

One of my resolutions for managing my work time is to spend the first hour or so of each morning at the library, adding new records to OT SEARCH or indexing records "in process." I know that if I do not, my time is eaten up with responding to reference questions or filling orders from individuals or libraries for materials. On the morning of January 2, 2003, the first journal on my stack was the November 2002 issue of the Journal of Occupational Science. You guessed it, one of the articles addresses time.

Seymour, W. & Bunrayong, W. (2002). Time and the body: re-embodiment in disability. *Journal of Occupational Science*, 9, 135-142.

We live our lives within the context of time. Ageing and death are constant reminders of the precarious nature of human existence. The immense range of technologies and strategies used to measure, manage and order time throughout the ages are testimony to our preoccupation with bodily extinction and our sense of powerlessness in the face of the relentless passage of time. Time is more than just the context for our lives, time is the medium through which our lives are lived. We experience our lives through the medium of time. Development, maturation, learning, wisdom, and serenity are critically related to the passage of time. Similarly, the powers of reflection, retrospection, self-knowledge, and contemplation, evolved through time, become tools to excavate new meanings from old experiences. Time is an urgent and omnipresent factor in the work of health professionals. It is the framework within which treatments are pursued, management strategies are instigated, progress is measured, and discharge decisions are made. Professional workers negotiate with time in order to make sense of an illness, to predict the progression of the disease, and the impact the condition may have on a person's life. These cognitive negotiations are an ongoing, but often invisible, feature of professional client

relationships. Though the concept of time as a framework for illness is intriguing, in this paper I plan to focus attention directly on the relationship between time and the body, specifically the relationship between disability and time. Disability represents a disruption in the inexorable progress of bodily aging. It presents us with a rare opportunity to view the frailty of the body and the fleeting nature of time. The process of rehabilitation is more than a rescheduling of events or reframing of personal goals. It is a much more thoroughgoing process of reintegration of time with the body and the body with time. Time is reembedded in the body; the body is reconstituted in time. While time assumes a dictatorial role in the management of the damaged body, it is the re-embodiment of time in the body that points to new opportunities and a chance to remake a life that has past. Using examples from research projects, the paper will identify and discuss aspects of this process.

Time had to be the subject of the first 2003 Resource Note. Typing "time" as a key word in OT SEARCH, yields 1,105 hits. Searching as a subject heading in the way to capture all the possible related subject headings; that is TIME, TIME AND MOTION STUDIES, TIME CONCEPTS, TIME MANAGEMENT TRAINING, or TIME PERCEPTION, will yield 129 hits, with 100 as a major subject heading. Another term to consider in OT SEARCH is ADAPTATION, TEMPORAL.

So, occupational therapy practitioners are interested in time. The above is the most recent citation in OT SEARCH, while the oldest is, believe it or not, this:

Meyer, A. (1922). The philosophy of occupation therapy. *Archives of Occupational Therapy*, 1, 1-10.

Is that not a wonderful coincidence? Perhaps it is not a coincidence, but a validation of a concept important to human beings and to the occupational therapy profession. Two later references cite the Meyer article in their abstracts.

MacRae, A. (1995). The concept of time: its cultural and functional implications. IN: American Occupational Therapy Association. *Conference Abstracts and Resources 1995*. Bethesda, MD: Author (pp. 167-168).

According to Barris, Kielhofner & Watts (1988) "the theme of time or temporal adaptation is one of the earliest and most central concepts of occupational therapy", articulated by early leaders in the field such as Adolf Meyer (1922). In practice, occupational therapists use many assessments that explore time sense and orientation. Among them are variations of activity configurations, mental status exams, interest checklists, and functional living skills evaluations. Yet time itself is a theoretical construct that is laden with cultural value judgments (Hall, 1976). In order for occupational therapists to provide culturally competent treatment to a diverse population it is essential that an exploration of the professions' beliefs about time be explored. The anthropologist, E.T. Hall identified societies as either being based on Monochronic time (M-Time), such as Northern & Western European, European American and "Westernized" Cultures, or being based on Polychronic time (P-Time), such as Middle Eastern, Latin American and Native American cultures.

Occupational therapy originally developed in a M-time society but must adapt to include, or at least recognize, the values of other societies. M-Time societies view time as linear and therefore its members typically prefer to do one thing at a time. People in M-time societies also tend to view time as a commodity; a thing that can be saved/lost, spent/wasted, squandered/managed. Pelouin (1993) describes the clinical concerns of viewing time as a commodity, however, P-

time cultures do not share the same time values. P-Time tends to be cyclical and unscheduled, typically viewing time as a natural rhythm where several things can happen at once and is not controlled by human beings.

Hall applied the concepts of M-Time and P-Time to specific cultural and societal groups. But the concepts of are also useful in understanding the difference in temporality of various age groups and different genders. Furthermore, certain disorders can markedly change a person's sense of time. Among these conditions are acute and chronic pain, brain injury, dementia, and schizophrenia.

There are many implications for treatment when the therapist has a different time sense than the person receiving services. The trends towards managed care and increased productivity in the work place have placed a high value on a minute increment therapy model, in which quantity of therapy minutes is equated with quality of intervention. How are these trends reconciled with the trends towards incorporating multi-cultural and individual consumer perspectives?

In summary, occupational therapists must sensitize themselves to the relationship between time and ethnicity, gender, age, and diagnosis. In order to develop such sensitivity, one must explore personal and cultural biases about time as well as critique the profession's values regarding time.

Crist, P.H., Davis, C.G. & Coffin, P.S. (2000). The employment and mental health Status on the balance of work, play/leisure, self-care, and rest. *Occupational Therapy in Mental Health*, 15(1), 27-42.

In occupational therapy, a fundamental belief is that a healthy lifestyle reflects the adapted balance between work, play/leisure, self-care and rest activities, which promotes occupational function. Adolph Meyer (1922) stated that our existence is structured through occupation. The occupational balance may be disrupted when an individual experiences a mental health problem. Mental health problems vary in terms of diagnosis, but more importantly, they vary in the amount of occupational dysfunction. In this study, the type of environmental support needed to function with a mental health problem is an indicator of differences in abilities to perform daily activity patterns. This study describes this balance of occupations as the temporal adaptation between two comparison groups. The effects of gainful employment and mental health status on the activity patterns for work, play/leisure, self-care and rest are discussed in terms of hours utilized, and the perceived competence, importance, and enjoyment for these activities.

Following is a selected list of articles on the multiple aspects of time as it affects inpatients, outpatients, families, students, management, workers, the young or the not so young. Naturally, they are organized by time, from the most recent to the oldest, with the exception of the 1922 Meyer article already identified.

Fricke, J. & Unsworth, C. (2001). Time use and importance of instrumental activities of daily living. *Australian Occupational Therapy Journal*, 48, 8-131.

This study investigated time use and the importance of instrumental activities of daily living (IADL) tasks to an older community-dwelling population. In addition, the study compared occupational therapists' and older people's perception of importance of IADL tasks for maintaining community living. Thirty-three subjects completed a time diary and an interview-based questionnaire to ascertain their time use and the importance of IADL tasks. It was found that older people living in the community spent most of their time at home and alone, with nearly half the day being spent on IADL tasks. The subjects indicated that the three most important tasks were use of the telephone, use of transportation (including driving) and reading.

Differences were found when the results from an earlier study of occupational therapists were compared with results from the present study of older people. The occupational therapists also considered use of the telephone as most important but then rated medication management and snack preparation as the most necessary activities for continued community living. These results emphasize the differences in the perception of 'important' between the two groups studied. The results from this research confirm the importance of IADL to both the occupational therapy profession and older people living at home in the community. Further, these results confirm the need for client-centered practice and collaborative intervention planning for occupational therapy.

Nygaard, L & Johansson, M. (2001). The experience and management of temporality in five cases of dementia. *Scandinavian Journal of Occupational Therapy*, 8, 85-95.

How persons with dementia may experience time, temporal problems and temporal adaptations in their everyday lives is explored. The clinical implementation process and outcome of time aid interventions in five cases are also described. Data were collected through initial interviews with five participants, diagnosed with dementia and with three spouses. Thereafter, time aids were chosen for intervention in each case. During the intervention, data were collected through field notes and interviews, including evaluative interviews closing the interventions. The participants described experiences of temporal rhythms and extensions. Their temporal problems mainly concerned temporal relationships and coherence, and "knowing when" and "how long". They individually met the problems with strategies that aimed to overall decrease the effects of the temporal problems in general, as well as with direct and conscious attempts to address problems mainly concerning temporal orientation. When time aids were used, difficulty "knowing when" seemed to be the most responsive to aids. However, the success of the time aid interventions was limited, as was the success of the spontaneously used strategies. Motivation and insight seemed to be important, as well as the participants' present and former attitudes to temporality. Possible implications for occupational therapy interventions are discussed, considering the clinical and piloting nature of the study.

Walker, C. (2001). Occupational adaptation in action: Shift workers and their strategies. *Journal of Occupational Science*, 8, 17-24.

This article discusses findings from a larger study about what it means to be a shift worker in regional Australia. Twenty-seven shift workers including taxi drivers, sex workers, police officers, factory workers and truck drivers participated in order to provide a cross section of diverse occupational and social strata. Using Frank's concept of occupational adaptation, the shared adaptive strategies of these shift workers are explored. It is argued that their routines and rituals form a protective device for shift workers in their daily struggles to overcome both physical and social barriers to meaningful occupation. That the experiences and adaptational strategies of shift workers from such diverse occupational groups were similar reveals a high level of shared meaning.

Jonsson, H., Borell, L. & Sadio, G. (2000). Retirement: an occupational transition with consequences for temporality, balance and meaning of occupations. *Journal of Occupational Science*, 7, 29-37.

The aim of this study was to explore retirement as an occupational transition. Twenty-nine participants aged 66 years were interviewed and the data analyzed using a comparative qualitative method. The analysis showed that a new temporal structure developed where the

participants were gliding into a slower rhythm. Some occupations also changed meaning when they were performed in the new circumstances of retirement. A common pattern in the transition was to go from one imbalance where some kind of regular commitment within retirement would have been preferable. The discussion relates the findings concerning meaning and rhythm to concepts in dynamic systems theory. The importance of regular commitments in life for experience of occupational balance and the changing perspective of the future are also discussed.

Farnworth, L. (2000). Time use and leisure occupations of young offenders. *The American Journal of Occupational Therapy*, 54, 315-325.

**Objective.** The overall goal of this study was to understand the time use, including leisure occupations, of a sample of young offenders in Melbourne, Australia.

**Method.** This study investigated how 37 probationary young offenders (from 13-18 years of age) spent their wakeful time during 1 week. The study used a combination of the Experience Sampling Method and interviewing. Participants were beeped 60 times over 7 days and, each time, they were asked to complete a questionnaire about the occupations in which they were engaged. Each participant was interviewed both before and after the

Experience Sampling Method data collection about their everyday lives, including their leisure occupations. Data were analyzed qualitatively and quantitatively. **Results.** The young offenders reported that they were engaged in leisure occupations, predominantly passive, 57% of the times beeped, and in personal care occupations 21% of the times beeped. Only 10% of the times beeped did they report being engaged in productive occupations such as education or employment. The time spent in passive leisure occupations was 30% higher than for the average Australian adolescent. Leaving school and lack of financial and human resources contributed to the high percentage of engagement in passive leisure occupations.

**Conclusion.** Findings from this study help us to understand the relationship between use of time and social well-being, particularly the nature of time use of young offenders, and will help to inform occupational therapy practices with such groups. **Key Words:** adolescent behavior, juvenile delinquency, occupational science.

Willis, E. (2000). Deadlines and the Purgatorial Complex. *Journal of Occupational Science*, 7, 128-132.

This paper draws on Le Goff's social history of purgatory and Richard Fenn's concept of the purgatorial complex to outline a social history of deadlines. The purgatory complex is a form of sadomasochism where time is the disciplining tool. According to Fenn the purgatorial complex has its origins in the medieval invention of purgatory the Protestantism of Richard Baxter, North American Methodism and Evangelism and the ideas of John Locke. In taking up these ideas I am giving particular attention to the hope inherent in the invention of purgatory. It offered the possibility of delaying the deadline, but was squandered through a neurotic imagery of time. Likewise in the secular world time is both the cure and the disease and deadlines the sadomasochistic and neurotic ritual of time.

Killegrew, D.H. & Kroksmark, U. (1999). Examining school routines using time-geography methodology. *Physical & Occupational Therapy in Pediatrics*, 19(2), 79-91.

The school routines of a seven-year old Swedish child with low vision deficits were examined using time-geography methodology. A qualitative analysis of the time-geographic data indicated that time use, physical location and social networks were inextricably linked. In addition, the

structure of the classroom routines directly impacted the child's skill performance. This methodology appears to contribute valuable information that can facilitate the collaboration between school-based therapist and other educational team members.

Corrigan, J.D., Smith-Knapp, K. & Granger, C V. (1998). Outcomes in the first 5 years after traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*, 79, 298-305.

**OBJECTIVE:** To examine the extent to which outcomes from traumatic brain injury differ as a function of time and can be predicted at discharge from inpatient rehabilitation.

**DESIGN:** Survey method employing cross-sectional analyses.

**SETTING:** An inpatient brain injury rehabilitation unit in a large Midwestern academic medical center.

**SUBJECTS:** Ninety-five adults with traumatic brain injuries, 6 months to 5 years after inpatient rehabilitation, stratified by time postdischarge.

**MAIN OUTCOME MEASURES:** Functional Independence Measure (FIM), Sickness Impact Profile (SIP), Medical Outcomes Survey, SF-36, Community Integration Questionnaire (CIQ), Craig Handicap Assessment and Reporting Technique (CHART), Brief Symptom Inventory (BSI), Satisfaction With Life Scale (SWLS), and indices of current psychosocial functioning.

**RESULTS:** Substance abuse, need for supervision, life satisfaction, and selected subscales of the CIQ and CHART differed over the period 6 months to 5 years after discharge. Approximately 74% of the variance in current FIM scores, and 40% to 50% of CHART, CIQ, and SIP total scores, could be predicted at time of discharge. **CONCLUSIONS:** Outcomes over the first 5 years after discharge were dynamic, with most change being improvement, at least after the first 2 years. Important aspects of outcome could not be predicted based on premorbid characteristics, injury severity, and initial functional abilities. (c) 1998 by the American Congress of Rehabilitation Medicine and the American Academy of Physical Medicine and Rehabilitation.

Cole, M.B. (1998). Time mastery in business and occupational therapy. *Work: A Journal of Prevention, Assessment & Rehabilitation*, 10, 119-127.

This article compares the results of an occupational therapy focused ethnographic study of time management with current concepts of time management in the business field. Researchers conducted in-depth interviews with six married working mothers to explore issues of time management. Qualitative analysis was used to identify four essential components, which are re-labeled Time Mastery: (1) Routines, (2) Instrumental and Social strategies, (3) Motivation, and (4) Cognitive Components. This occupational therapy model, is discussed within the context of Stephen Covey's 'four generations' of time management in the world of business: (1) Notes and checklists, (2) Calendars and appointment books, (3) Prioritization and goal-setting and (4) Enhancing relationships and accomplishing results. Possible applications of the Time Mastery Model in work rehabilitation are suggested.

Segal, R. (1998). The construction of family occupation: A study of families with children who have attention deficit/hyperactivity disorder. *The Canadian Journal of Occupational Therapy*, 65, 286-292.

Families are the main caregivers of children who have special needs and are essential in the client-centered occupational therapy practice. They also provide the immediate social and cultural environments of their children who have special needs. A qualitative study of daily experiences and adaptations of 17 families with children who have attention-deficit/hyperactivity

disorder is described in this paper. The analysis of interviews with parents revealed that they developed and used strategies to enable their children's occupational competence. Further, whenever parents reported on the success of these strategies, they also described changes in the daily routines of other family members. The interactions between these enabling strategies and the daily routines of family members are presented and discussed in this paper.

Segal, R. & Frank, G. (1998). The extraordinary construction of ordinary experience: Scheduling daily life in families with children with attention deficit hyperactivity disorder. *Scandinavian Journal of Occupational Therapy*, 5, 141-147.

Interest in the concept of occupation as a basic human phenomenon, and the establishment of the discipline of occupational science, are prompting a renewed appreciation among occupational therapists of the temporal dimension of patients' lives in and out of the clinic. Although most clinicians know that the orchestration of activities in daily life can support or hinder treatment, the organization of occupations into daily routines has not yet been studied extensively in occupational therapy or occupational science. The present study examines the adaptation of families raising children with attention deficit hyperactivity disorder (ADHD) in terms of the extraordinary work they perform to construct daily schedules within the ordinary pattern of time use. Seventeen families with children with ADHD were interviewed about their daily schedules and routines. This paper focuses on parents' explanations of their family's afternoon (i.e. after-school) schedules, particularly how the parents scheduled times for homework, dinner, and free time. Parents' scheduling considerations included their children's abilities to concentrate, the children's other physiological and emotional needs, and parental work schedules. The cultural relevance of the afternoon schedule and its importance for designing occupational therapy intervention at the homes of children with special needs is discussed.

Wood, W. (1998). Environmental influences upon the social choices, occupational behaviors and adaptedness of zoo chimpanzees: Relevance to occupational therapy. *Scandinavian Journal of Occupational Therapy*, 5, 119-131.

This study investigated adaptedness within an institutional setting with a captive chimpanzee model, asking the question: What is the relationship of environmental opportunities for occupation, of the lack thereof, to adaptation? Eleven group-living chimpanzees at the Los Angeles Zoo were studied across three common environmental conditions: new enrichment, in which materials were introduced into their habitat to support diverse occupations; old enrichment (days after new enrichment); and no enrichment (barren habitat). Shifts in social and occupational choices across conditions were analyzed quantitatively and qualitatively. While the chimpanzees employed various adaptive strategies that favorably influenced their experiences of time's passage, their adaptive capacities were also environmentally overwhelmed. Time emerged as an environmental factor that created situations of occupational deprivation and also channeled behavior into more constricted forms of expression. It is proposed that the findings here may be particularly germane to persons who frequently confront empty time (little available by what there is in the environment to do) or, more seriously, occupational deprivation. Specific considerations for occupational therapists are developed with respect to three constructs: environment, adaptation, and occupation.

Zuzanek, J. (1998). Time use, time pressure, personal stress, mental health, and life satisfaction from a life cycle perspective. *Journal of Occupational Science*, 5, 26-39.

The article examines relationships between the use of time, subjectively perceived time pressure, life stress, mental health, and life satisfaction from a life cycle perspective, using data collected as part of the 1986 and 1992 Canadian General Social Surveys, and the 1994 Canadian National Population Health Survey. Analyses reported in the article suggest that subjective sense of time pressure is grounded in objective reality. Respondents and life cycle groups reporting higher levels of perceived time pressure carry heavier loads of paid and unpaid work, and are limited in their access to leisure time resources. Low as well as excessive levels of time pressure seem to correlate negatively with mental health. Life-cycle situation strongly affects respondents' sense of life satisfaction and emotional well-being. Employed married respondents in the 25 to 44 age group, and particularly the 45 to 64 age group, with or without children at home, report the highest levels of emotional well being, in spite of the fact that some of these groups are pressed for time. The lowest levels of life satisfaction are reported by the unemployed, students, and divorcees. The article testifies to the fruitfulness of Wilensky's (1981) attempt to tie the analysis of perceived quality of life to life course progression, stress, and access to time.

Henry, A.D., Costa, C., Ladd, D., Robertson, C., Rollins, J. & Roy, L. (1996). Time use, time management and academic achievement among occupational therapy students. *Work: A Journal of Prevention, Assessment & Rehabilitation*, 6, 115-126.

The purpose of this study was to examine time use patterns and variables related to time use, including feelings about time use, time management, and academic achievement, among normal college students. Time use was examined from the perspective of the model of human occupation. One hundred and six male and female occupational therapy students enrolled at Worcester State College in Worcester, MA completed two self-report questionnaires and a demographic questionnaire. The subjects completed the Occupational Questionnaire (Riopel Smith, Kielhofner, and Watts, 1986) which measured time use (activities engaged in during a typical 24-h period), and feelings about time use (related to competence, value, enjoyment) for the activities they reported. In addition, they completed the Time Management Questionnaire (Britton and Tesser, 1991), which measured their attitudes, preferences for short range planning, and preferences for long range planning. The results of the study suggest that older students and those experiencing role overload perceive themselves as less competent, and value and enjoy their time use less than younger students and those with fewer role demands. In addition, the use of time management was related to academic achievement. Implications of the findings are discussed.

Pierce, D.E. (1996). *Infant space, infant time: development of infant interactions with the physical environment from 1 to 18 months*. Los Angeles, CA: University of Southern California.

This study describes the typical development of independent infant negotiations of spatial and temporal dimensions of the physical environment of the home. The study's design was qualitative and longitudinal, using videotapes and maternal interviews from a cross-class sample of 18 typically-developing Caucasian infants followed from ages 1 to 18 months of age. The focus of data collection was self-directed play with objects and spaces of the home. At the broadest level, this theory highlights three central characteristics of human occupation: instrumentality, intentionality, and the interactive dynamic between individual with context. Description of the emergence of the infant's capacity to instrumentally negotiate and manipulate the space and objects of the physical environment included ranging patterns, activity maps, the motor lens, the role of gaze and visual play, and a variety of types of stationary and mobile

object interactions, including previously undescribed types of play such as dancing, climbing, propelling, driving, carries, and ferries. The infant's increasing intentionality was seen in developmental changes in the temporality of infant object play across three existing sequence lengths: the infant object interaction, phases within that interaction, and series of infant object interactions. Viewing this interaction across development revealed the lengthening of interactions, strengthening of the infant's ability to conceive and complete an action over time, and the extension of the infant's temporal horizons in past and future. Contextual influences on the infant's play in the home were described within sociocultural, spatial, temporal, and physiological domains. This occupational science study provides a developmental description of a set of human occupations in their simplest infant forms. As such, it contributes to the understanding of occupation, as well as promising potential to support the play-based interventions of occupational therapists working with children at risk for developmental delays.

Creighton, C. (1995). Effects of afternoon rest on the performance of geriatric patients in a rehabilitation hospital: a pilot study. *The American Journal of Occupational Therapy*, 49, 775-779.

**OBJECTIVE.** When a person is hospitalized, he or she enters an environment in which time is structured very differently than it is in everyday life. Research with healthy young subjects in sleep laboratories has indicated that disruption in activity-rest cycles significantly affects mood, physical skills, and cognitive performance. Older persons whose daily routines are upset when they become patients in a hospital may be even more vulnerable to performance deficits. This pilot study was implemented in a regional rehabilitation center as an initial step in exploring the relationships between variations in schedule and geriatric patients' functioning while hospitalized.

**METHOD.** Single-subject methodology was used to study six elderly fracture patients' responses to the addition of an afternoon nap to their daily routine. Data were collected each morning and afternoon, during "nap" and "no nap" weeks, with simple measures of alertness, concentration, strength, coordination, and reaction time.

**RESULTS.** Tendencies toward late afternoon drowsiness and, in some cases, improved cognitive performance, were observed when naps were provided.

**CONCLUSION.** Data about the ways in which hospital routine affects performance can guide occupational therapists in advocating for balanced programs of activity and rest for older rehabilitation patients.

Suto, M. & Frank, G. (1994). Future time perspective and daily occupations of persons with chronic schizophrenia in a board and care home. *The American Journal of Occupational Therapy*, 48, 7-18.

**OBJECTIVES.** An ethnographic approach was used to study the relationship between temporal perspective in persons with chronic schizophrenia and their ability to function in chosen occupations and participate in the routines of a board and care home. Components of future time perspective (extension, coherence, and density) are associated with the ability to organize and implement goal-directed activities. The study focused on how future time perspective occurs in a board and care home, with particular emphasis on how the institution influences temporality.

**METHODS.** Participant observation and interviewing were used to gather data on 10 subjects.

**RESULTS.** The pervasive influence of the facility's institutional rules and expectations is revealed in the findings of subjects' present time orientation and limited future time perspective.

**CONCLUSIONS.** An examination of the fit between the demands of available roles within one's environment and occupations is proposed.

Tetreault, S., Weiss-Lambrou, R. & Vezina, A. (1994). Predictors of burden in Mothers of physically disabled children. *Occupational Therapy International*, 1, 65-81.

The impact a physically disabled child has on the family, particularly the impact of the child on the mother's burden, is a relatively unexplored area of study in the literature. The purpose of the present study was to identify which factors are significantly associated with the burden perceived by mothers of a disabled child. Seventy-four mothers who had a child with a physical disability, living in Quebec, Canada, completed four self-administered questionnaires, which examined certain characteristics of the mother, the child and the environment in relation to burden. The statistical analysis of the data revealed four predictors of burden in mothers of a physically disabled child: the amount of time the mother spent on caregiving, the secondary health problems of the child, the number of years of marriage and the mother's use of specific coping strategies. The findings are discussed in terms of their clinical implications for occupational therapists and recommendations for future studies are proposed.

Harvey, A.S. (1993). Quality of life and the use of time theory and measurement. *Journal of Occupational Science: Australia*, 1, 27-30.

The potential use of occupational science is its application to improving quality of life and wellbeing. The efficient design of interventions which attempt to bring about improvements in well-being and quality of life presuppose they can be meaningfully measured. While frequently considered at a macro-scale, they are equally, if not more, important in the context of daily living. This paper examines the role of time use studies, in relation to existing theory, in the measurement of well-being and quality of life, focusing on the methodological contribution they can make.

Singleton, J.F., Forbes, W.F. & Agwani, N. (1993). Stability of activity across the lifespan. *Activities, Adaptation & Aging*, 18(1), 19-27.

Previous research on the activity patterns of older individuals indicated that, as an individual became older, (s)he participated in fewer leisure activities. More specifically, it was reported that the activities that older individuals participate in were primarily sedentary and homebound in nature (Szalai, 1972; Bull, 1982). However, these findings may be affected by the research tools and methodologies used and may not represent a real decline in the activity patterns of older individuals. In fact, results based on longitudinal data suggest that the tendency toward behavioral stability is greater than might have been expected (Elliot, Harvey and McDonald, 1984:80). Also, there is evidence that both the participation and non-participation of particular activities is consistent over time, and that changes which occur tend to be structural and predictable in terms of changes in roles and obligations as one progresses through life.

Whiteford, G. (1992). The relationship between time use and health, well being and quality of life. *New Zealand Journal of Occupational Therapy*, 43, 22-23.

No abstract available for this record

McKinnon, A.L. (1992). Time use for self care, productivity, and leisure among elderly Canadians. *The Canadian Journal of Occupational Therapy*, 59, 102-110.

No abstract available for this record

Spadone, R.A. (1992). Internal-external control and temporal orientation among Southeast Asians and white Americans. *The American Journal of Occupational Therapy*, 46, 713-719.

This study examined ethnic group differences with the use of the Model of Human Occupation (Kielhofner, 1985b). Three groups - immigrants from Thailand, immigrants from Cambodia, and white Americans - were contrasted on two constructs-internal versus external control and temporal orientation. The study attempted to identify whether nonpatient subjects have an internal locus of control and a strong future orientation, as the Model of Human Occupation would predict. No differences were found with the use of the Internal-External Scale (Rotter, 1966). The Thai and white Americans differed significantly on the Time Reference Inventory (Roos & Albers, 1965b). The white Americans chose more statements applying to the present. There were no differences for past or future time extensions between groups. All the groups had a greater past extension than future extension. It was proposed that a larger future time perspective was not a requisite for functional temporal adaptation.

Crowe, T.K. (1991). Time use and role perceptions of mothers with young children: the impact of a child's disability. Seattle, WA: University of Washington.

This study examined the impact of children's disabilities on the time use and role perception of mothers of young children. Study subjects were 45 mothers of children with multiple disabilities and significant functional impairments, 45 mothers of children with Down syndrome, and 45 mothers of typically developing children. The target children in each of the three groups were from six months to five years of age. Mothers were requested to complete a group of measures on time use and role perceptions which included an inventory which asked mothers to chart their daily time use for half-hour increments across a seven-day period, the Role Checklist, and a Demographic Questionnaire. Several demographic variables were found to be significantly different among the three groups of mothers. Mothers of children with multiple disabilities were younger than the mothers in the other two groups...

Peloquin, S.M. (1991). Time as a commodity: reflections and implications. *The American Journal of Occupational Therapy*, 45, 147-154.

American society's conceptualization of time as a commodity has supported occupational therapy practice since its inception. This article discusses numerous contemporary media messages about time both because they are pervasive and because their meaning often escapes us. Popular magazines, greeting cards, and cartoons weave themes about time into the fabric of other messages. There is remarkable coherence in the themes that cut across these three sources of time messages. Commercial messages reveal ideas that we are asked to accept about time; satirical images ask us to reflect about ideas that we have accepted. A preponderance of images suggests that we control time and live in style. These suggestions constitute a cultural force that shapes personal values toward an end that we rarely consider. Occupational therapists need to recognize the presence and power of media images that radically challenge the meaning of living a satisfying life.

Scaffa, M.E. (1991). Alcoholism: an occupational behavior perspective. *Occupational Therapy in Mental Health*, 11(2/3), 99-111.

This descriptive study attempted to determine if significant differences in temporal adaptation existed between alcoholic and non-alcoholic subjects, through an evaluation of interests and use of time. Kielhofner's conceptual framework of temporal adaptation (1977) and Kielhofner and Burke's (1980) Model of Human Occupation served as the theoretical foundation for this research. Two measurement instruments—an adaptation of Matsutsuyu's (1969) Interest Checklist and the Hourly Time Log—were administered to a group of twenty-five non-alcoholic volunteers from the working community. Data analysis revealed statistically significant differences between the two groups in several dimensions.

Venable, S.D. & Mitchell, M.M. (1991). Temporal adaptation and performance of daily living activities in persons with Alzheimer's disease. *Physical & Occupational Therapy in Geriatrics*, 9(3/4), 31-49.

The purpose of this study was to investigate the relationships between temporal adaptation and functional capacity in persons with Alzheimer's Disease. The relationships were examined through the administration of research instruments designed to evaluate temporal orientation, organization and distortion, performance of activities of daily living (ADLs), and the severity of Alzheimer's Disease. The results demonstrated significant relationships between: (1) temporal adaptation and performance of ADLs; (2) temporal adaptation and severity of Alzheimer's Disease; and (3) the severity of Alzheimer's Disease and performance of ADLs. The findings suggested that as the Alzheimer's patient progresses through the course of the disease, temporal adaptation skills and performance of ADLs deteriorate progressively. The findings also suggested that temporal adaptation may predict ADL performance in persons with Alzheimer's Disease.

Katz, N. (1990). Problem solving and time: functions of learning style and teaching methods. *The Occupational Therapy Journal of Research*, 10, 221-236.

The purpose of the two studies reported in this paper was first, to investigate the interaction between occupational therapy student's learning styles and teaching methods on their problem solving ability and the amount of time they needed to learn outside of class; and second, to replicate in Israel the original study conducted in the United States, to validate the findings in another culture. In support of the hypothesis, results from multiple regression analyses using problem solving and time as dependent variables showed significant interactions of teaching methods and individual learning styles in both studies. Occupational therapy students in "matched" conditions (reflective learning style in lectures and active learning style in group discussions) performed better on problem solving measures and needed less time to learn outside class than those in the opposite "mismatched" conditions. The results also indicate that to achieve criterion level in a specific subject matter, time is used to compensate for "mismatch" of individual aptitudes and learning environment. Implications of the findings on planning learning programs are discussed.

Courtney, C. & Escobedo, B. (1990). A stress management program: inpatient-to-outpatient continuity. *The American Journal of Occupational Therapy*, 44, 306-310.

Stress is a factor in many modern illnesses. The development of coping skills to deal with stress is an occupational therapy goal for many patients. The program presented here uses stress management techniques to improve the situational coping skills of adult psychiatric patients. When discharged to the outpatient clinic, the patients in this program continue to learn and

practice stress management techniques to increase relaxation and lessen anxiety. A case example is presented.

Yerxa, E.J. & Locker, S.B. (1990). Quality of time use by adults with spinal cord injuries. *The American Journal of Occupational Therapy*, 44, 318-326.

The self-perceived quality of time use of 15 community-based adults with spinal cord injuries was compared with that of 12 age- and sex-matched non-disabled adults through the use of the Activity Configuration Log (modified from an unpublished clinical assessment developed by Claudia Allen).

Differences in how subjects classified their daily occupations were found between and within groups, especially for the categories of Work, Self-Maintenance, and Other. The results suggest that the subjects' classifications of occupations and interpretations of their meanings are important sources of information for both the science of occupation and occupational therapy practice. The subjects with spinal cord injuries had a high rate of unemployment (67%) and much more daily free time than did their non-disabled counterparts. The affective quality of particular occupations was found to be related to the affective quality of the entire day. Occupational therapists agreed more with each other than with the subjects with disabilities when classifying occupations. Implications for practice and research are provided.

Smith, S. (1989). How occupational therapy staff spend their work time. *The British Journal of Occupational Therapy*, 52, 82-87.

This article summarizes the main findings from a survey of the treatment and treatment-related activities used during one working week by 157 occupational therapy staff working in Southampton and South West Hants Health Authority. Forty-eight percent of overall work time was spent in direct treatment, while 32% was spent in treatment-related work and 20% in other work activities. Treatment was carried out predominantly by technical and helper staff, while occupational therapists spent more time in treatment-related activities. The most extensively used treatment category was Personal-Activities of Daily Living which took up 6.80% of work time, while the most extensively recorded treatment-related category was Verbal Communication which took up 7.88% of work time. Very little home visiting was carried out, except by occupational therapists working in physical medicine.

Koon, D.K. (1989). Return to work after injury: prediction of rehabilitation Time. Fort Collins, CO: Colorado State University.

The work hardening aspect of rehabilitation, which is often supervised by an occupational therapist, has become common. It has provided injured workers the opportunity for rehabilitation so that they can return to and stay at work with greater success. In this study, worker variables and characteristics were examined in order to determine which ones would predict success in work hardening programs. It was proposed further that a certain combination of variables could predict the length of time spent in rehabilitation. Information from the records of 70 clients who had participated in a work hardening program at the Work Performance Center in Denver, Colorado, was used retrospectively. Seventeen to 23 related factors were used as predictor variables. A stepwise linear regression analysis was selected to determine the best linear combination of variables that predicted length of time in rehabilitation...

Low, J.F. (1987). Time perception and rehabilitation of the elderly. *Physical & Occupational Therapy in Geriatrics*, 5(4), 17-30.

The disabled elderly make up a continually increasing proportion of the occupational therapy caseload. Motivation with this population may be compromised by both a sense of entrapment in the present because of pain and fear of illness and the future directed time orientation inherent in rehabilitation. A survey of literature on the topic of time orientation in geriatric rehabilitation reveals inconsistencies in recognition of the influence of time perception on motivation. "Ritual" time as a compromise between immobilizing present time and future directed linear is discussed. Suggestions for incorporating ritual time into the therapeutic regime are offered.

Weeder, T.C. (1986). Comparison of temporal patterns and meaningfulness of the daily activities of schizophrenic and normal adults. *Occupational Therapy in Mental Health*, 6(4), 27-48.

Assessment of a patient's use of time and the meaningfulness of activities which make up that time is believed to provide occupational therapists with important diagnostic information. Temporal adaptation, although one of the profession's earliest concepts, remains relatively unexplored. Using a cross sectional survey, a pilot study of time use behaviors and perceived meaningfulness (enjoyability, autonomy, and competency) of daily activities was conducted for a sample of normal and schizophrenic adults. This paper presents the significant differences and trends that were uncovered, suggesting a relationship between schizophrenia and temporal dysfunction does indeed exist.

Carboneau, J. (1985). *Time conceptualization in relation to age*. Cambridge, MA: Tufts University.

No abstract available for this record

Florian, V., Sheffer, M. & Sachs, D. (1985). Time allocation patterns of occupational therapists in Israel: implications for job satisfaction. *The American Journal of Occupational Therapy*, 39, 392-396.

This study analyzes the time allocation patterns at work of a sample group of Israeli occupational therapists who function in different roles and specialty areas. The sample consisted of 89 female occupational therapists working in the areas of physical impairment, rehabilitation, psychiatry, and pediatrics. Subjects recorded all of their activities during one work week and rated 23 previously identified occupational therapy activities according to perceived levels of importance. The results indicated that, on the whole, occupational therapists in all areas devoted at least two-thirds of their time to treatment-related activities (direct and indirect treatment). The results led us to conclude that the time allocation patterns used may have been conducive to "burnout." Therefore, to facilitate professional growth, we recommend that priorities be set and followed and also that role definitions be adhered to more strictly.

Johnson, C.B. & Deitz, J.C. (1985). Time use of mothers with preschool children: a pilot study. *The American Journal of Occupational Therapy*, 39, 578-583.

This pilot study describes and compares the time use for physical child care of two groups of mothers--those with physically handicapped preschoolers (N = 16) and those with normal preschoolers (N = 21). Each mother completed a questionnaire on the time she spent in three categories of physical child care activities. These activities included feeding, personal care, and transportation for physical care. Investigators collected data on both frequency and duration.

They reported descriptive data for all categories separately and combined. The results of the study show that the mothers of the physically handicapped preschoolers spent significantly more time engaged in physical child care activities than did the mothers of normal preschoolers. Results also show a high correlation between frequency and duration data for physical child care. The results strongly suggest that the mothers of physically handicapped preschoolers spend significantly more time in physical child care than do the mothers of normal preschoolers. They also suggest that frequency data alone could be collected in further studies in this area without appreciably reducing the accuracy of the results.

Neville, A., Kreisberg, A. & Kielhofner, G. (1985). Temporal dysfunction in schizophrenia. *Occupational Therapy in Mental Health*, 5(1), 1-19.

Persons diagnosed as schizophrenic present with a number of temporally related dysfunctions. The model of human occupation is used as a way of organizing and understanding the multifactoral nature of temporal dysfunctions in schizophrenic disorder. A case vignette illustrates these temporal problems. Temporally-oriented assessment and treatment strategies are presented. Finally, research questions are suggested to further explore the temporal dimension in schizophrenic individuals.

Shapiro, M.A. (1985). *Use of time and morale in women of advanced age*. Los Angeles, CA: University of Southern California.

No abstract available for this record

Talty, P.M. (1985). Time management in clinical practice. *Occupational Therapy in Health Care*, 2(4), 95-104.

Organizing one's time to accomplish the tasks that bombard an occupational therapist each day is imperative to personal and professional survival. Clinicians have more and greater responsibility than ever before, but are not able to quantitatively increase the number of clock hours to handle the increased workload. The answer lies in managing one's allocated time more effectively. Clinicians can fall into the same "time traps" as everyone else. They can waste time by not concentrating on one task at a time, or through procrastination. It is not unusual for a clinician to attempt to see as many patients as possible without a clear system of priority setting. This article outlines ways of applying time management principles to the unique demands of clinical practice. Specific methods of increasing a clinician's time management skills are presented through the Clinical Time Log, the System of Clinical Prioritization, applications of Pareto's Rule, and specific suggestions for better time management in clinical practice.

Rosenthal, L.A. & Howe, M.C. (1984). Activity patterns and leisure concepts: a comparison of temporal adaptation among day versus night shift workers. *Occupational Therapy in Mental Health*, 4(2), 59-78.

Occupational therapy has operated with the philosophy that activities can affect the gratification of man's basic needs and can serve as agents for learning and growth. The focus on human performance should not only be on the engagement in tasks, but should also extend to the temporal dimensions of human adaptation. This research presents a comparison of the activity patterns and leisure concepts of day and night shift workers within the framework of temporal adaptation. The survey data was obtained from a sample of production line employees in a small manufacturing firm. Results showed that there were real differences in activity patterns

and concepts of leisure between day and night shift workers. Night shift work tended to affect temporal adaptation.

Trujillo, S. (1983). Editorial: a framework for time management decision making. *The Australian Occupational Therapy Journal*, 30, 85-88.

No abstract available for this record

Merrill, S.C. (1983). *Juvenile rheumatoid arthritis and adolescence: three case study descriptions of daily occupations and self-satisfaction*. Los Angeles, CA: University of Southern California.

Purpose of the Study: The purposes of this study were to: 1. Describe the functional performance of customary daily tasks and the use of time in two female adolescents with JRA and one female adolescent who is able-bodied as they live in the community. 2. Describe behavioral patterns of two female adolescents with JRA and one female adolescent without JRA and the extent to which the patterns meet the developmental challenges of adolescence and young adulthood. 3. Describe the feelings and attitudes about life quality held by all three adolescents. 4. Generate questions regarding the implications such descriptive information has for: a) possible differences in social and personality development in the adolescent with JRA and able-bodied adolescents, b) occupational therapy evaluation and treatment of this population. 5. Explore the use of qualitative methodology as a tool in occupational therapy research.

Scaffa, M.E. (1981). *Temporal adaptation and alcoholism*. Richmond, VA: Virginia Commonwealth University.

No abstract available for this record

Sheffer, M. & Thompson, T. (1980). Time utilization analysis research. *Occupational Therapy in Mental Health*, 1(2), 45-46.

No abstract available for this record

Neville, A. (1980). Temporal adaptation: application with short-term psychiatric patients. *The American Journal of Occupational Therapy*, 34, 328-331.

This paper begins with a literature review to investigate temporal dysfunction and its relationship to psychopathology and to adaptation. A specific program begun in a short-term hospital with psychiatric patients is then described. This program uses temporal adaptation as a framework for assessing patients' use of time and for developing methods to increase productive use of time.

Kielhofner, G. (1979). The temporal dimension in the lives of retarded adults: a problem of interaction and intervention. *The American Journal of Occupational Therapy*, 33, 161-168.

This paper describes an ethnographic study of temporality among a group of 32 mentally retarded adults. Data were collected by participant observers over a period of 18 months. The findings indicate that retarded individuals may experience and employ a notion of time that

varies substantially from that of mainstream American time. This results in problems of interaction and intervention between professionals and these retarded adults. Sociological concepts are proposed for understanding these interactional problems.

Kielhofner G. (1977). Temporal adaptation: a conceptual framework for occupational therapy. *The American Journal of Occupational Therapy*, 31, 235-242.

The concept of temporal adaptation was introduced into the field of occupational therapy early in its development; however, it has not been developed as part of the theoretical backing of the field. This paper re-introduces the theme and provides both a general prospective for the clinician in thinking about patients' temporal behavior and a preliminary framework for application. Temporal adaptation when applied in clinical practice should add a wider perspective to existing clinical interventions. It is proposed as a generically applicable theoretical perspective appropriate across all dysfunctional categories of patients. Two case histories are presented to demonstrate the application of the theoretical framework to intervention.

Larrington, G.G. (1970). An exploratory study of the temporal aspects of adaptive functioning. Los Angeles, CA: University of Southern California.

No abstract available for this record

Seaman, C., Pierson, W. & Aker, A. (1968). A survey: how occupational therapists utilize time in a psychiatric setting. *The American Journal of Occupational Therapy*, 22, 278-281.

As part of the educational requirements for their psychiatric affiliation, a research project was undertaken by two students. Information was obtained regarding the use of time by registered occupational therapists holding staff therapist positions in large psychiatric hospitals. By employing a questionnaire, it was found that many occupational therapists spend a large per cent of their time involved in sub-professional activities that could be done by other people under the direction or supervision of an occupational therapist. This article brings to light the constant need for the registered therapist to maintain high standards for utilizing professional training to best serve and treat the patient.

In reviewing my retrieval for the search on time, I noted that I had a group of rather dated books on the topic, and upon closer inspection of the records discovered that all of them were part of the Dr. Mary Reilly collection that is housed in the library. Wilma West and Mary Reilly were contemporaries and friends, and Wilma had asked Dr. Reilly to donate her books to the library. She agreed to part with some of the older ones. It is a fascinating collection, as Dr. Reilly read in many disciplines.

Fraser, J.T. (1975). *Of time, passion, and knowledge*. New York, NY: George Braziller.

Cottle, T.J. & Klineberg, S.L. (1974). *The present of things future: Explorations of time in human experience*. New York, NY: The Free Press.

Lakein, A. (1973). *How to get control of your time and your life*. New York, NY: Peter H. Wyden, Inc.

Anderson, R.C. & Dobyms, L.R. (1973). Time: the irretrievable asset: with a special section on the art of delegation. Los Gatos, CA: Correlan Publications.

Lynch, K. (1972). What time is this place? Cambridge, MA: MIT Press.

Luce, G.G. (1971). Body time: physiological rhythms and social stress. New York, NY: Bantam, Books.

Alexander, S. (1966). Space, time, and deity: the Gifford Lectures at Glasgow, 1916-1918, Volume II. New York, NY: Dover Publications, Inc.

Fraisse, P. (1963). The psychology of time. New York, NY: Harper & Row Pubs., Inc.

DeGrazia, S. (1962). Of time, work and leisure. Garden City, NY: Anchor Books. Double Day & Co. Inc.

Smigel, E.O. (Ed.). (1960). Work and leisure: a contemporary social Problem. New Haven, CT: College and University Press.

Selye, Hans. (1952). The Story of the Adaptation Syndrome (Told in the Form of Informal, Illustrated Lectures). Montreal, PQ: Acta, Inc.

You are right in thinking you did not see any Reilly references in the above list. When you look closely at the older references, you do see publications by USC colleagues and students with whom Dr. Reilly probably interacted. I have no idea if this is a valid observation, but I find it as interesting a coincidence as the Meyer article.

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