

**Bibliography of
Articles and Studies
Related to
Labyrinth Research**

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Revised October 2008**

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1. Abdallah-Baran, R. (2002). Ohio labyrinth encourages powerful spiritual practice. *Clinical Journal of Oncology Nursing*. 6(6), 319-320.

Abstract: This Letter to the Editor of the *Clinical Journal of Oncology Nursing* describes how, in 2000, a special team of northeast Ohio physicians, nurses, administrators, art therapists, and chaplains formulated an innovative and comprehensive model for cancer care. Patients have access within one building to high-quality cancer care that incorporates radiation therapy, medical oncology, and the Center for Body, Mind, and Spirit, an integrative health program that includes healing gardens and a labyrinth.

2. Abdallah-Baran, R. (2003). Nurturing spirit through complementary cancer care. *Clinical Journal of Oncology Nursing*. 7(4), 468-470.

Abstract: This article describes how, at the Ireland Cancer Center in Elyria, Ohio, complementary and integrative therapies, including the labyrinth, in conjunction with conventional cancer treatment (e.g. surgery, chemotherapy, radiation, biotherapy), generate and promote a patient culture rooted in holistic healing. The article includes three examples of how two patients with cancer and a caregiver have incorporated holistic health care into their lives.

3. Bandiera, N. A. (2006). The medieval labyrinth ritual and performance: A grounded theory study of liminality and spiritual experience. Unpublished doctoral dissertation, University of Texas at Austin, Austin. (ProQuest Digital Dissertations database. Publication No. AAT 3221357).

Abstract: To explore the concept of the medieval labyrinth as a spiritual tool generating the phenomenon of transformational spiritual experience as found in the Reverend Dr. Lauren Artress' Theater of Enlightenment, seven labyrinth ritual performances were created and thirty-two participants were interviewed. The central argument is that ritual and performance both share the concept of spirit---a developing consciousness towards self-knowledge, which is the journey to wholeness. Explaining the what, why, where, and how of phenomena occurring in performance is the work of performance studies. Situating the labyrinth as liminal performance, the phenomena of transforming spiritual experiences are explored. Chosen to generate theory, grounded theory methodology involved: developing categories and themes inductively rather than imposing classifications on the data; analyzing interview narratives of subjects' spiritual experiences; and formulating a set of relational statements as labyrinth ritual performance theory.

Using an outdoor medieval labyrinth and an indoor portable canvas labyrinth modeled after the Chartres labyrinth and built by artisans from Artress' nonprofit, Veriditas, thirty-one subjects perceived they had spiritual experiences: (1) relating to the Divine: God, Goddess, Jesus, the Holy Spirit, Spirit, Essence, or the Universe; (2)

finding Self ---inner knowing, inner Self, life-force, or center of Self; (3) walking a sacred space ---demarcated space for meditation, design of ancestral tradition, or historical Christian tradition; (4) gaining meaning ---intellectual and emotional clarity of events, life-plans, problems, or situations; and/or (5) creating intention (co-creation with energy forms or the natural world). The three stages of the labyrinth path mark where change occurs while emotions, appreciations, motivations, values, and attitudes mark what changes.

How change occurs involves contextual, causal, and intervening conditions; actions/interactions; and consequences that parallel the continuum of Krathwohl's taxonomy in the affective domain. Individual stories emerge around themes of spiritual, personal, and/or social development. This study contributes to performance studies in exploring what ritual does to the performer by way of thought, action, emotions, the senses, space, time, embodiment, and agency. Implications suggest the field of performance studies deal with the concept of Spirit in performance and research.

4. Bardusch, R., Jr. (2006). Embodied learning and Christian identity formation. D.Min. dissertation, Drew University, New Jersey. (ProQuest Digital Dissertations database. Publication No. AAT 3222096).

Abstract: A project in four New Member classes centered on the issue of evil, but explored the method of using experiential devices for identity formation. Each New Member class used at least one experiential tool for learning, but some classes used more than one. These experiential devices included drawing, games, and videos. The goal was to increase self-identification of the New Members with the Anglican Tradition. Discussion of the Anglican Tradition was incorporated into the evening's programs as secondary material. There was a significant amount of data obtained regarding the demographics of St. John's, Union City as well as interviews of participants in the New Member classes. The data were extensively analyzed and used to support the thesis of the paper, but were interesting in their own right. Also, included in the project was a broad cultural analysis of an urban church as it reinvents itself from being at the point of almost extinction. This was helpful to the project as it established a broader context for the project.

This project also included speculation and exploration of the use of liturgy as a device for identity formation. Examples of innovative liturgical practices such as healing services and Labyrinths were discussed and included in the analysis of the thesis. Historical examples such as signing of the cross and kneeling were explored as examples of embodied learning. Moreover, the project contained an examination of the Theology of Embodiment as it could be used in a formation process. Situations in which experiential worship had been used to increase the growth of a church were used as points of reference for embodied learning. This thesis is especially useful in liturgical churches like the Episcopal Church because it uses as a resource the Catechumenal Process.

Finally, the thesis is a significant resource for anyone interested in an innovative Christian ministry in Union City, New Jersey. Because a history and the demographic context of St. John's is provided in the thesis, it can function as a starting place for further research into churches in urban settings, especially in Anglo-Hispanic cultures.

5. Barton, G. K. (1994). *Negotiating the labyrinth: Semiotics and the making of meaning*. Unpublished doctoral dissertation, The Claremont Graduate University, California. (ProQuest Digital Dissertations database. Publication No. AAT 9422477).

Abstract: Semiotics, or the science of signs and their interpretation, is both helpful and relevant for those interested in gaining insight into the meaning-making process. Because the study of signs addresses every form of meaning relevant to classroom learning, an understanding of semiotics provides a valuable tool for examining the way students create meaning. It can accommodate an investigation of linguistic and non-linguistic symbol systems, and the social aspects involved in producing and interpreting these symbols.

This dissertation begins by summarizing behaviorist, constructivist, and phenomenological approaches to the creation of meaning. It then analyzes the meaning-making process from several related semiotic approaches. The paper undertakes a summary of De Saussure's work on the relationship between the signifier and the signified. It next proceeds to a discussion of Lamb's ideas regarding stratificational linguistics and cognitive semiotics, emphasizing the importance of relational networks in the creation of meaning. The study then analyzes Eco's work in descriptive semiotics, and demonstrates its linkages and similarities to Lamb's theories. All of these ideas are related to the social and functional creation of meaning, through tracing their connections to Halliday's ideas on language acquisition, and Berger and Luckman's theories on the social construction of reality.

The intent of this study is to improve our understanding of the complex processes involved in the creation of meaning through a re-analysis and synthesis of existing semiotic theory. Helping students create meaning requires more than modified teaching methodologies. It involves a labyrinth of interpretations, demanding non-linear, or divergent, approaches to thinking in relation to experience. Through understanding the complexities involved in creating meaning, we will begin to provide classrooms which recognize the indeterminate nature of meaning and actively encourage students to negotiate the processes of their own thought in order to arrive at personal understanding.

6. Bloos, I. D. & O'Conner, T. S. (2002). Ancient and medieval labyrinths and contemporary narrative therapy: How do they fit? *Journal of Pastoral Psychology*, 50(4), 219-230.

Abstract: This article describes the ancient and medieval labyrinth as present in a variety of cultures and religions, and discusses similarities and differences between the labyrinth and contemporary narrative therapy and how the labyrinth might be used in a narrative therapeutic context. The labyrinth in Chartres Cathedral, France, is presented in diagram and description, and contemporary narrative family therapy as developed by M. White and D. Epston is summarized. It is suggested that while there are differences between the labyrinth and narrative therapy, there are enough similarities that both can be used together in pastoral counseling.

7. Bosbach, S. (1998). Mind mirror measurements at the Levi Labyrinth. *Mid-Atlantic Geomancy*, 12

Abstract: Using a dual electroencephalograph ("Mind Mirror"), the author compared brain wave shifts of five subjects before and after walking the Levi Labyrinth, a 60 foot diameter, classical seven-circuit labyrinth near Austin Texas. The author reports that, "In five subjects tested, two men and three women, four out of five had a significant right dominance brain wave shift following a single walk through the Levi Labyrinth. Measurements were made at a resting pulse rate before walking the labyrinth and again after walking the labyrinth when pulse rate had returned to a resting rate." Although the author acknowledges that these results are very limited, he believes this to be the first time the effects of the labyrinth have been studied by examining brain wave output.

8. Carnes, V. B. (2001). Walking the labyrinth to peace. Not-for-profit report, *Nursing Homes Long Term Care Management* 50(10): 41-42.

Abstract: This report describes the acquisition and use of a five-circuit medieval labyrinth at the Alexian Brothers Valley Residence (ABVR) in Chattanooga, Tennessee. ABVR is center for early-to-mid-stage Alzheimer's residents. The author reports observations that the labyrinth-walking ritual "provides benefits such as short-term calming, relaxation, and relief from agitation and anxiety in otherwise fragmented lives. The restorative and calming value of the walk can last from two to three hours, or longer." (Carnes, pg.42) As longer studies are completed, the staff hopes to gather evidence "that the walks result in less disruptive and/or agitated behavior, reducing the need for crisis intervention by staff." (Carnes, pg. 42)

9. Carpeneto, G. R. (1997). Walking the midlife labyrinth: A phenomenological study of the embodiment of spirituality in women during the middle years. University of Maryland, College Park.

Abstract: In this study, the researcher explores the phenomenon of embodied spirituality, as this is experienced in the lives of women who are in the middle years of the lifespan. Through a series of individual conversations, group meetings, and massage/bodywork sessions, four participants and the researcher attempt to answer the question, "What is this experience like in our lives?" The ancient practice of walking a labyrinth to gain spiritual insight serves as metaphor for the midlife journey we explore in this study. As we walk the labyrinthine path, themes are brought forward, and we reflect on the interweaving of spirituality in all aspects of our lives, but most especially in our being-bodily. We find that we experience time differently in our middle years, gaining a sense of open-endedness that we had not had before. We talk about our bodies, as they open into space in a way we had not known before, giving us a vastly different sense of spatiality and motility. In particular, we reflect on the experience of touch that seems to have brought the felt-experience of spirituality to the surface for us in our middle years. We look at the experience of suffering and brokenness in our lives, as we explore the

deep, existential meaning this has for us. The theme of ineffability weaves its way throughout our journey, as we come to realize we are often powerless to put words on what we now know is the experience of Being. We find our spirituality most tangibly felt when we are in question--living in paradox, ambiguity, and tensionality. We reflect on the meaning of "both/and" in those polarities that have begun to riddle our middle years--immanence/transcendence, spirit/matter, being/doing, sacred/profane, then/now, brokenness/wholeness, speech/silence. In this study, the researcher uses the hermeneutic phenomenological mode of inquiry to reveal the nature and structure of the experience of embodied spirituality, as these have been brought forward by the voices of women journeying through their middle years.

10. Charles, M. (2002). Through the unknown, remembered gate: journeys into the labyrinth. *Psychoanalytic Review* 89(1): 79-99.

Abstract: The author uses the metaphor of the maze, which is referred to as a "labyrinth" in the article, and the case study approach to describe the ongoing interplay between therapist and client. This metaphor is further enhanced by the use of the metaphors of the "hero" (Theseus) and the "monster" (Minotaur). According to the author, "The image of the journey into the labyrinth is a poignant and powerful one for the analyst. Each new individual – each new encounter – takes us further into reciprocal journeys as the path of the other intersects our own. This interplay often has the feel of a multi-dimensional palimpsest, in which I am continually reworking the enigmas encountered by my patients through my own being." (Charles, p. 79)

11. Compton, V. J. (2007). Understanding the labyrinth as transformative site, symbol, and technology: An arts-informed inquiry. Unpublished doctoral dissertation, University of Toronto, Canada. (ProQuest Digital Dissertations database. Publication No. AAT NR27922).

Abstract: The unicursal labyrinth was first inlaid in the pavement of the Cathedral of Notre Dame de Chartres in France in 1200 CE, coincident with the flowering of the School of Chartres, where the *Ars Liberales* curriculum formalised dialectic inquiry, technologies of the imagination, and recursive spiritual development. Reclaimed in recent years for walking meditation, the labyrinth functions, in the context of post-structural, holistic and aesthetic education, as a site of experiential learning and a technology for guiding the imagination into transformative patterns of thought. Its image symbolizes the order-versus-confusion binary characteristic of the integrative processes of personal development. This research project focuses on understandings drawn from existing literature on the historical, mythological, and mathematical labyrinth, the accounts of individual seekers and practitioners, and the author's personal experience from five years as labyrinth "keeper" in an urban parish church in Canada. Three personal essays document this involvement with the labyrinth from the dramatic first encounter, through intellectual quest and personal pilgrimage, to responsibility for installation and maintenance as public sacred art in a host community. The inquiry includes an extensive literature review of the historical site and the many avenues of approach to understanding the interaction between place, identity, and learning that occurs in the labyrinth.

Grounded in hermeneutic aesthetics and the methods of auto-ethnography, phenomenology and arts-based research, the inquiry investigates the connection between this ancient, mathematically significant site, the experience of reflective engagement with it, and contemporary interpretations of pilgrimage conceptualised as intentional seeking in the developmental process of self. Implications for education lie both in the labyrinth's symbolic function as a public art form demarcating and validating ritual space for care of the self, and in its capacity to activate the incubation of individual and collective imagination, bring about shifts in perception, restore personal equilibrium and perspective, and access tacit knowledge and inner wisdom. The medieval designers intended that users experience the characteristic sense of integrated consciousness and heightened imaginative function, a heritage that is to be welcomed at this historical juncture.

12. Compton, V. J. (2001). Experience and meaning in the cathedral labyrinth pilgrimage. Unpublished masters thesis, University of Toronto, Toronto, Canada. (ProQuest Digital Dissertations database. Publication No. AAT MQ58781).

Abstract: A medieval design based in Sacred Geometry principles, this unicursal path through concentric circles is a metaphorical container for spiritual journeying. Contemporary practice, as reflexive walking meditation, encourages personal transformations, notably physiological, emotional, spiritual, and cognitive events including release of tension, increased sense of well-being and communion, triggered early memories with related insights and conflict resolution, often revealed through symbolic imagery.

Reasons for site-specificity of such events are examined through phenomenological and arts-informed inquiry into the engagement with sacred spatial "technology," referencing elements of classical mythology, Christian mystical practice, and analytical psychology. Walking the labyrinth activates pre-Modern, "whole brain" patterns of consciousness, leading to an alternative, authentic, holistic perceptual standpoint. Using the labyrinth myth as a conceptual model of the individuation process, and the walk as embodied experiential learning, creates the opportunity to restore the balance in the relation between self, soul, society, and world, thereby "re-enchanting" contemporary life.

13. Connolly, D. K. (1998). Imagined pilgrimage in gothic art: Maps, manuscripts and labyrinths. Unpublished doctoral dissertation, The University of Chicago, Chicago. (ProQuest Digital Dissertations database. Publication No. AAT 9832131).

Abstract: Maps and the related manuscripts by the thirteenth-century English artist and chronicler Matthew Paris provide a case study of the use of medieval images for imagined pilgrimage. Neither these maps--his itineraries and mappamundi--nor imagined pilgrimage have received any full length study.

Chapter 1 defines the meditational contexts in which such forms of pilgrimage took place. The itineraries were designed to encourage their readers to internalize the maps and to project their embodied responses into their workings, where viewers and maps cooperated in the construction of an imagined pilgrimage.

Chapter 2 identifies local, practical contexts by which the brethren of St. Albans would have understood these constructions.

Chapter 3 explores how liturgical manipulations of time and space informed medieval mappaemundi, especially in the itineraries' different depictions of an apocalyptic Jerusalem. The unique design of Paris' mappamundi also encouraged embodied access to Jerusalem and is explained by its reference to the shape of other mappaemundi as a chlamys--an imperial and liturgical garment.

How the itineraries shaped the geography of the world as a history of the Divine Plan is explored in Chapter 4. The foundational myths of London, Rome and Jerusalem, the seven page format of the itineraries, and the different associations of history with both liturgy and the Divine Plan taught the monks to read the itineraries as a meditative aid to the recollection of sacred history.

Chapter 5 expands the corpus of materials that can be explained under the rubric of imagined pilgrimage to include the labyrinth pavements of the Gothic cathedrals surrounding Paris. Medievals often paired mappaemundi with labyrinths as parallel depictions of the world. Both labyrinths and mappaemundi were organized around two vantages: a stationary, exterior position, and a mobile, interior perusal. The external vantage point is one that properly belonged to God and which devolved to kings and emperors as a sign of their right to rule. The production of a "presentation copy" of Matthew Paris' mappamundi for King Henry III, implicated that form of vision as another apparatus of Henry's program of state decoration in his chambers at Westminster.

14. Danielson, K. J. (2004). The transformative power of the labyrinth. Unpublished masters thesis, Sonoma State University, California.

Abstract: The purpose of this study is to explore the psychologically transforming effects of walking a labyrinth, which is an ancient symbol of transformation. This study explores its history, resurgence, current uses, and discusses the psychological benefits associated with its use. I examine my continually deepening relationship with the labyrinth and include interviews with labyrinth experts and questionnaire response on the labyrinth-walking experience.

My method of research encompasses techniques from two transpersonal approaches of inquiry: heuristic and depth. Through the heuristic method, I engaged in a self-searching investigation into the effects of labyrinth-walking on my life, using a process of total immersion into my experiences with the labyrinth. To determine the effects of the labyrinth on the lives of others, I interviewed four people who are regarded as experts on the labyrinth I facilitated labyrinth walks for small groups and received questionnaire responses from the participants exploring their experiences. Woven into my research are depth inquiry techniques of dream work and active imagination with dream images.

I found through my research that the labyrinth does indeed have unique transformative power. Its transforming energy is thought to come from its design based on the ancient science of sacred geometry. Walking the winding path creates a calming meditative state that opens one up to one's intuitive, nonrational, creative nature, and allows for a shift in consciousness. My relationship with the labyrinth deepened throughout my journey over the past year. Over the time of my work with the labyrinth, I

have experienced greater awareness, more focus, and a deeper connection with my spirituality.

The labyrinth creates a safe container that promotes introspection and self-discovery. It is a metaphor for the journey through life, the journey towards wholeness, through psychological transformation. As a result of my experience with the labyrinth, I have become dedicated to its advancement. My mission is to promote the building of labyrinths for others to experience its extraordinary power.

15. Diaconis, L. K. (2001). Changing directions: The lived experience of registered nurses who return to school for a baccalaureate degree in nursing. Unpublished doctoral dissertation, University of Maryland, College Park.

Abstract: This study is an exploration of the lived experiences of registered nurses who return to school for a baccalaureate degree in nursing. Narrative approaches such as reflective journals, autobiographies, one-on-one conversations, and a group conversation with seven registered nurses in their first semester of a RN to BS course provide text for understanding and interpretation. In this hermeneutic phenomenological inquiry, I use van Manen's (1990) framework of six research activities, grounded in the phenomenological philosophies of Hans-Georg Gadamer and Martin Heidegger as well as others. Journey is the overarching metaphor that comes forward for students and myself as we reflect on the meanings that students make about their experiences of returning to school. Stories and literature from nursing, education, mythology, and poetry open up new ways of thinking about the lived experience. Storytelling and listening help us find our way back home to a place of belonging. Registered nurses identify themselves as feeling embarrassed, intimidated, and lonely without a baccalaureate degree. They fear failing in school and not being able to balance time among family, work, and school. Strength comes from various sources, allowing them to experience returning to school as coming home. Returning to school is a way of renewing and restoring (restory-ing) themselves. Transformation occurs for both students and teacher as we walk a labyrinth, both in class and metaphorically. The labyrinth is a tool for changing directions as we let go of the past, find illumination at the center, and exit with transformative gifts for teaching, curriculum development, and researching nursing education. Living with RN to BS students in the tensionality of voice and silence, expression of oppression, tact and testing, and relevance and redundancy is a way of being-in-the-world as teacher and mentor. Being with nurses who return to school for a baccalaureate degree in nursing is sharing a heroic journey of discovery.

16. Dockendorf, M. E. J. (1995). Within the labyrinth: Facilitating teacher research groups. Unpublished masters thesis, Simon Fraser University, Canada. (ProQuest Digital Dissertations database. Publication No. AAT MM06636).

Abstract: The purpose of this research study is to examine my four year role as a facilitator of twelve teacher research groups throughout British Columbia. I examined facilitated teacher research groups as one pathway to engendering educational reform. My thesis is that, without the external voice of the facilitator, contexts for pedagogical dialogue have the possibility of becoming nothing more than a retelling of incidents that

occur consistently in the dailiness of teaching. Without the external facilitator, teacher research groups may become rooted in process at the expense of substance. The rigorous conversations and the rethinking of practice may be in jeopardy of being replaced by sessions in which teachers are emotionally and socially supported, yet changes in practice are not viewed as vital.

This research study focuses on problematic aspects, tensions, and perplexing questions that emerged in my practice as a facilitator for teacher research groups. These dilemmas included grappling with the colleague/expert dichotomy, "contrived" collegiality, unexamined practitioner constructions of knowledge, and prodding practitioners to move beyond the seductive peril of retelling of their own stories to take action towards rethinking and subsequently changing their own practice. Teachers viewed my role as facilitator as important because it contributed an external perspective which focused practitioners on what made a difference to student learning. As a facilitator I needed to create a framework for teacher research groups which provided teachers with time to talk and work collaboratively in a trusting environment and to ensure teachers' process of inquiry began in the action of their practice. The facilitator ensures practitioners also face their dilemmas of practice, otherwise the possibility exists that change may not be framed around the needs of learning and the learner. Without the external voice, provided by the facilitator, teacher research groups might not connect to educational reform, nor might they have any focused impact on student learning.

17. Drapes, D. E. (1998). *The myth of Theseus and individuation: An archetypal study of the labyrinthine psyche*. Unpublished doctoral dissertation, Pacifica Graduate Institute, California. (ProQuest Digital Dissertations database. Publication No. AAT 9839599).

Abstract: In the archetypal literature of psychology there is limited reference to the Greek myth of Theseus. In this study the myth and the symbol most synonymous with Theseus, the labyrinth, are examined in-depth. The fields of mythology, art, anthropology, literature, and religious studies have been examined in order to achieve a comprehensive view of the Theseus myth. The significance of the myth and the symbol were applied to Jungian psychological constructs. Jung's concept of individuation was compared with both the myth and the symbol. The study showed how the myth encompassed and reflected all of the major constructs of Jungian psychology. The myth proved to be a fitting representation of individuation throughout the lifespan. The study followed the chronology of the life of Theseus and selected images of labyrinths. Clinical case material was used to connect the story and image to the psychotherapy process. Suggestions were given for incorporating the myth and the individuation process into the dynamics of psychotherapy. The role of the psychotherapist was seen as an Ariadne's thread for the patient lost or dead-ended in the maze of life. The path of the hero and the labyrinth as a container were used to suggest a new vision of the psyche. The vision imagined is both subjective and objective, labyrinthine and mandalic. This new vision was proposed as an aid for successful navigation of the labyrinthine path of life, especially when dealing with psychological dead-ends which can deflate the needed heroic ego. The dynamic aspect of the hero was viewed as a compliment to the static aspect of the labyrinth. Together the two compromise a wholistic, curative map of the

transcendent function in which the unconscious becomes conscious and illuminates the way.

18. Dunphy, M., Borsdorf, L. & Chambliss, C. (2000). *Educational applications of wellness techniques: An experimental investigation of the effects of labyrinth walking*. (Report No. RC-021-290). Collegeville, PA: Ursinus College (ERIC Document ReproductionService No. ED 440 330)

Abstract: The focus of this paper is to expand the evidence in support of the use of labyrinths as effective wellness tools. Interest in labyrinths and other ancient religious practices has increased as interest in spirituality has risen. This is in conjunction with better understanding of the mind/body relationship and the impact of stress on the immune system. This study, which incorporates use of a control condition for comparative purposes, is an extension of previous research that supported the use of labyrinth walking as a means of enhancing wellness. The present study, conducted at a liberal arts college in Pennsylvania, assesses whether walking an eleven-circuit labyrinth can be truly beneficial to the wellness of individuals, and also if focused non-labyrinth walking has similar or different effects on individuals' wellness. Results of the study failed to find a significant difference between groups on the overall measure of wellness, raising questions about the specific efficacy of labyrinth walking. Both types of directed walking were associated with significant improvement on the overall wellness index. A brief history of labyrinths and their therapeutic and educational uses is included.

19. Evans, D. D. (1992). *Labyrinths in medieval churches: An investigation of form and function*. Unpublished masters thesis, The University of Arizona, Arizona. (ProQuest Digital Dissertations database. Publication No. AAT 1347786).

Abstract: This thesis analyzed the designs of a select group of labyrinths set into the pavements of Gothic churches in northern France. The designs of these labyrinths and their possible meanings and functions were examined. Existing information on the labyrinths, including oral traditions associated with them were considered. A study of earlier medieval church labyrinths and illustrations of labyrinths in medieval manuscripts was made. In addition, medieval philosophy and history were considered. The various meanings and functions scholars have proposed for the labyrinths were critically reviewed. It was possible to draw some conclusions as to the labyrinths' original meanings and their functions and to trace the evolution of these meanings and functions during the Middle Ages.

20. Fairbloom, L. (2003). *Walking the labyrinth: Its impact on healthcare professionals in a hospital setting*. Unpublished masters thesis, University of Toronto, Canada. (ProQuest Digital Dissertations database. Publication No. AAT MQ84321).

Abstract: SWCHSC was the first Canadian hospital to install a permanent labyrinth. This qualitative study focused on exploring the impact of walking the labyrinth on healthcare professionals in their workplace setting. Eleven participants were interviewed. Results included positive and negative experiences. Not all participants' expectations were met;

however, the majority deemed the labyrinth to be beneficial. Participants found it offered "time out" in a hectic workplace environment and created opportunities to "re-energize," "re-focus," "reduce stress," "seek clarity," "facilitate calm," and "nurture the soul." It was believed to assist in teaching healthcare providers to better care for themselves at work and improve their coping mechanisms in a demanding and stressful workplace environment. All participants expressed interest in walking the labyrinth again and would recommend it to others based on their experience. Methods to improve the utilization and potential benefit of the labyrinth in this setting were identified and future research directions suggested.

21. Feller, R. A. (1994). *Multicursal labyrinths in the work of Brian Ferneyhough*. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign, Urbana-Champaign. (ProQuest Digital Dissertations database. Publication No. AAT 9512357).

Abstract: The labyrinth is a symbol which has at one time or another occupied most of the world's cultures. As a sign of complexity and difficult process, the excessive and meandering path of the labyrinth emphasizes the need for perseverance in spite of an ever-changing terrain. Of the two primary structural types--unicursal and multicursal--only the latter embraces error and failure through its employment of retracing, multiple paths and dead-ends.

In this dissertation the importance of the labyrinthine in Brian Ferneyhough's notational and compositional practice is explored through a detailed analysis of *Terrain*, a recent chamber piece for nine instruments. Ferneyhough's music is characterized by a high level of difficulty, due in large part to his utilization of notational and compositional complexity. His works are also distinguished in regards to their ability to comment on themselves. Ferneyhough often uses non-musical sources which function as metaphorical and structural models for his compositions. In *Terrain* he utilized the writings of Robert Smithson and a poem by A. R. Ammons. The multicursal complexity inherent in Ferneyhough's notational practice suggests various ways for the performer to interpret the music in non-habitual ways which are particular to the given work. The interpretation required is one which partakes in meaningful, context-specific, and necessarily partial solutions to the various problems raised by each piece. The performer's interpretive gesture is both 'heroic' in the sense of having to struggle, and 'anti-heroic' because of the inevitability of failure.

22. Fillmore-Taylor, S. (2003). *The image in the labyrinth: An artist's symbolic journey from cancer towards wholeness*. Unpublished doctoral dissertation, Pacifica Graduate Institute, California. (ProQuest Digital Dissertations database. Publication No. AAT 3119799).

Abstract: Traumatized and dismembered by ovarian cancer and the removal of my internal female organs, I followed a healing path that took me from the deep darkness of loss to a healing consciousness, through drawing and painting the images in my dreams. This heuristic production-type dissertation is divided into two parts. The first part presents a theoretical discussion of how a person may respond to a diagnosis of cancer, or any other serious, life-threatening illness. I explored the journey to healing by attending

closely to the images emerging from my unconscious in dreams and in active imagination. Subsequently, I investigated and searched further into these images and symbols as drawings and paintings, presented to me as gifts from the unconscious. In this work, I discuss these images and symbols from Jungian, alchemical, and mythic perspectives, while I investigate how my roles as artist and feminist have shaped my experience. In addition, I pay close attention to what the medical community, both allopathic and alternative, have suggested on the subject of healing from serious illness. The second part of this work consists of an illustrated memoir, a retelling of the autobiographical events that are the foundation of this story. I illustrate eighteen archetypal symbols from my dreams and search out their meaning during their emergence, as well as in analysis, throughout the writing of this dissertation, and into the present as they continue to unfold as living presences. My journey through the unconscious presents for consideration the very real possibility, in fact the likelihood that the remnants of ancient mythologies lie buried within the images revealed in the unconscious. Further, I propose that the discovery of the myth each of us is living can be a cathartic, life-saving event.

This dissertation demonstrates how a fascination with mythology and depth psychology can become a practical tool for discovery and recovery from serious illness when a mythopoetic interpretation, a significance, is given to the events in one's conscious and unconscious life.

23. Francisco, J. (2006). *Into the labyrinth: Excursions and applications for creative process*. Unpublished masters thesis, Buffalo State College, State University of New York, Buffalo, New York.

Abstract: This project surveyed, analyzed, and organized implicit references to creativity in labyrinth literature to assess the validity and context within which the labyrinth could be used as a creativity tool to facilitate creative change. The work discovered explicit links to the creativity concepts, processes/tools, models, and outcomes required to facilitate creative, transformational change. Implications for future studies suggest the opportunity to qualify and quantify the increased effect on creative production when Creative Problem Solving techniques are applied to the labyrinth experience; the ability to generate "in-the-moment" benefits of incubation; and the placement of the labyrinth within the full repertoire of tools available within the seven thinking skills evident in the Creative Problem Solving Thinking Skills Model.

24. Goode-Harris, L. (2001). *What matters to the heart?: Exploring the psychological significance of the labyrinth*. Unpublished doctoral dissertation, Institute of Imaginal Studies, Petaluma, California.

Abstract: The purpose of this qualitative research was to explore the psychological significance of the labyrinth, especially in regard to the relevance of the life-long process of individuation with particular attention to the transitional period of adolescence. Ten adolescents walked the labyrinth while contemplating two images in response to: "What matters to the heart?" and "What is the opposite of your heart's yearning?" Art-making and interviewing were employed as means of documenting the experiences of the

subjects before walking the labyrinth, during the labyrinth walk, and during follow-up meetings. Data analysis showed that the first two art-making images from each subject revealed opposites, obstacles, and a conflict, or a tension, existing between the images. The third, new image of each subject discovered in the labyrinth, contained something of the first two images, either in content or through shape, color, or form, and expanded each subject's awareness of self. Furthermore, the language of all participants showed that each found a way to: a) express through a new image, as well as verbally, an ability to tolerate and explore the tensions found in their first two images; b) find an integration of those opposites as expressed in a third image; and c) articulate those findings to me, the researcher, to the program directors/art therapist interns (when they were available), and to each other in a small group of peers. Ten adolescents took this opportunity to step into the unknown of the labyrinth and to express their hearts' desires and life struggles both imaginally and verbally. The implementation and results of this research are discussed in regard to implications for treatment and rehabilitation, and further research with other populations.

25. Griffith, J. S. (2001). Labyrinths: A pathway to reflection and contemplation. *Clinical Journal of Oncology Nursing*, 6(5). 295-296.

Abstract: In this article, the author proposes that oncology nurses are in a unique position to become knowledgeable about labyrinths and how they may help their cancer patients. It describes labyrinth walking as a form of psychoneuroimmunology that can be a component of an integrated approach to providing health care. The article identifies the labyrinth as yet another tool available to oncology nurses to assist patients in achieving a contemplative and transformational state of mind.

26. Harris, N. (2002). Effective, short-term therapy: Utilizing finger labyrinths to promote brain synchrony. *Annals of the American Psychotherapy Association*, September/October 2002. 22-23.

Abstract: For many centuries, unicursal labyrinths have promoted a greater sense of group cohesion, self-awareness, and spiritual growth among its users. Today labyrinths are used at hospitals, schools, churches, prisons, and private practices. It is believed that they serve a holistic function, namely to bring more balance to our lives. In the past few years, thanks in part to the development of the Intuipath (a two-person finger labyrinth design), finger labyrinths are finding their way into therapeutic settings. Their influx into these settings is largely due to their effectiveness in facilitating relaxation and brain synchrony, which can result in a more rapid establishment of trust, greater creativity, and learning capability. This can foster enhanced interpersonal and intra-personal communication, leading to swifter and more complete issue resolution. This article reviews related literature related to this topic and reports the results of a case study compiled by the author.

27. Herrmann, T. and Janzen, G. (2000). Detours in labyrinths. *Sprache & Kognition* 19(1-2): 57-70.

Abstract: The researcher investigated, in six experiments carried out in a closed labyrinth, what different kinds of detours subjects choose around an obstacle. Subjects were 120 university students (60 males, 60 females; mean age 24 yrs) in Germany. Subjects were equipped with a head-mounted display and in five of six experiments were shown standard routes through virtual labyrinths with a variable city-block structure. After three presentations of the route, subjects had to navigate the route themselves with a joystick. In all experiments, subjects were told they would encounter an obstacle and had to find the shortest way from the obstacle to the final position. The results show differing reactions to the obstacle depending on the topographical characteristics of alternative detours and the visual perspective subjects had during navigation. Under default conditions (walking perspective, rectangular structure of the area), subjects chose neither the shortest path around the obstacle (strategy of minimal detouring) nor the direct path to the final position (vector strategy), but a city-block strategy. The results of the six experiments show that, under default conditions, using a city-block strategy, subjects avoided making an insecure estimation of oblique angles, preferring a longer path to the final position.

28. Hnaraki, M. (2002). Into the labyrinth: Unraveling Ariadne's thread, Cretan music identity and aesthetics. Unpublished doctoral dissertation, Indiana University, Indiana. (ProQuest Digital Dissertations database. Publication No. AAT 3076048).

Abstract: Cretan music identity is shaped according to local and sociocultural conditions on the island of Crete, Greece. Cretans are an amalgam of many influences (specifically, Arabic, Turkish, Venetian, and, in more general terms, Middle Eastern and Mediterranean). To show that, I follow a multidisciplinary approach by looking into the history, the literature, and the arts on the island of Crete, as well as the impact they have had and still have on Cretan music.

In my study, individual performers and their performances are central. I judge my goal to show how Cretans express themselves through singing and dancing as very important, because both songs and dances are something common to all cultures and all individuals. Therefore, all people should sing and dance for a better understanding of the world. Particularly, I expect to contribute to a better understanding and knowledge of my Cretan culture, because song and dance are also ways of confirming cultural identity. In a sense, we are what we sing and what we dance.

29. Hull, S. B. K. (2007). The labyrinth as a leadership learning tool. Unpublished M.A. dissertation, Royal Roads University, Canada. (ProQuest Digital Dissertations database. Publication No. AAT MR27211).

Abstract: This research explores what role a reflective process of walking the labyrinth can play in enhancing leadership capacity to solve challenging problems and what implications this may have for change in organizations. The literature supports the proposition that rapid change is having greater consequences than ever before, and there is an increasing need to take time to think critically and creatively of proposed solutions to problems. This study involved fifteen volunteers in leadership positions, who participated in an action research project using qualitative methods to research if the

labyrinth could enhance the ability to solve challenging problems. The results of this research have been shared with Lauren Artress, President of the sponsoring organization, Veriditas. The research was conducted following the Royal Roads University (2004) guiding principles for ethical research.

30. Kallai, J., Karadi, K. , et al. (2007). Spatial exploration behaviour in an extended labyrinth in patients with panic disorder and agoraphobia. *Psychiatry Research 149*(1-3): 223-30.

Abstract: Finding one's way through a labyrinth is both stressful and panicogenic for individuals suffering from panic disorder with agoraphobia (PDA), whilst normal subjects experience no stress. In this study the spatial exploratory behaviour of 15 subjects suffering from PDA, together with 15 patients with generalised anxiety disorder (GAD) and a further 15 normal control subjects - all female - was analysed during a walk through a labyrinth-like basement in an attempt to find the exit. The study covered behavioural variables, i.e., anxiety levels whilst route-searching and exploration-related movements (the frequency and intensity of trunk and head rotation, touching oneself and folding one's arms across the chest) and also physiological variables (blood pressure, heart rate) before and after the labyrinth walk. Data obtained in the PDA subjects were compared with those of the GAD and control subjects, and it was found that the PDA subjects' high blood pressure was associated with disturbed exploratory activity, which restricted their contact to the environment. As a consequence, they did not detect navigation signals to find the right route to the labyrinth exit. The interpretation focused on the analysis of the structure of human extraterritorial fear.

31. Kyle, B. L. (2002). Leading from the inside out: Incorporating the labyrinth as a leadership tool in organizations. Unpublished masters thesis, Royal Roads University, Canada. (ProQuest Digital Dissertations database. Publication No. AAT MQ77742).

Abstract: not available

32. Laishley, B. L. (2004). Labyrinths in American contemporary religion: Rituals that engage a sacred cosmos. Unpublished doctoral dissertation, University of Pittsburgh, Pennsylvania. (ProQuest Digital Dissertations database. Publication No. AAT 3139693).

Abstract: This dissertation is an examination of current trends in American religion as seen through rituals performed on the labyrinth. Using an ethnographic approach I have documented labyrinth rituals by people with diverse religious beliefs and spiritual practices including those of Christian, Buddhist, Jewish and Pagan in a wide variety of settings including hospitals, churches, backyards, and beaches. I argue that this diversity is possible because the geometric form of the labyrinth--a circle with a path to the center--acts as a template upon which people overlay their beliefs of the spiritual world and engage in these beliefs through ritual. Since the beliefs that have been enacted in labyrinth rituals expand beyond the confines of institutional religion, I have referred to them as beliefs in a 'sacred cosmos.' A sacred cosmos is a socially constructed framework that explains and justifies the seen and unseen world and provides order, placement, and

meaning. Beliefs in a sacred cosmos range along a continuum from highly complex theories articulated in doctrines, to general ideas found in folklore, to personally negotiated worlds of meaning. Using Christian liturgical rituals of Advent, Epiphany, Ash Wednesday, and Holy Week I examine how the eleven-circuit Chartres labyrinth is used to purposely construct the sacred Christian cosmos. But many Americans, especially the baby boomer generation, are searching for a spiritual life outside of institutional religions. I observe this segment of spiritual seekers using Wade Clark Roof's (1993, 1999) proposal of a "quest culture" and Robert Fuller's (2001) discussion of those "spiritual but not religious." To demonstrate that meaningful ideas of a sacred cosmos can exist outside of institutional religion, I explicate rituals performed in nature on the seven-circuit Classical labyrinth using Catherine Albanese's (1990, 2002) concept of "nature religion." Ideas of time and space are central to any notion of a sacred cosmos and are examined fully as a method for people to establish a rhythm and place in the world. Ron Williams and James Boyd's (1993) theory of Virtual time/space is utilized to show how participating in ritual allows people to feel "as if" their sacred cosmos were real.

33. La Torre, M. A. (2004). Integrated perspectives: Walking: An important therapeutic tool. *Perspectives in Psychiatric Care* 40(3): 120-122.

Abstract: In this column, the author focuses on walking as a therapeutic process, and suggests ways in which walking can be incorporated into the therapeutic setting. The use of the labyrinth, a spiral circular path that guides the walker into the center and out again, is discussed, and it is suggested that walking a labyrinth for client and therapist can be a powerful activity as the movement itself around the circular path provides a connection and can lead into deeper relationship. Two clinical examples are provided in which therapeutic walking and walking the labyrinth were used.

34. Mariscotti, J. & Texter, L. (2003, October). *Using the labyrinth with those experiencing life-changing illness: Research and practice*. Presentation at the Labyrinth Society Annual Gathering, Hunt Valley, MD.

Abstract: A total of 84 participants from five participant groups (hospice staff, bereavement counselors, social work professionals, etc.) responded to a 17-question, self-administered survey instrument before and after a labyrinth walk. Twenty-seven respondents reported feeling "peaceful" following the walk compared to no participants reporting feeling "peaceful" prior to the walk; 27 respondents reported feeling "serene" following the walk compared to one participant reporting feeling "serene" prior to the walk; and 11 respondents reported feeling "calm" following the walk compared to three participants reporting feeling "calm" prior to the walk. The labyrinth was found to be "extremely or very useful" personally for 76.5% of respondents and "extremely or very useful" professionally for 66.7% of respondents. According to the researchers, this study provides support for the usefulness of the labyrinth for personal and professional renewal for caregivers and the potential for use with their clients.

35. Mariscotti, J. & Texter, L. (2004, October). *Do you have research to support that?* Presentation at the Labyrinth Society Annual Gathering. Camp Courage, MN.

Abstract: This study employed a pretest/posttest design in which a total of 165 participants responded to the Jonathan Smith relaxation inventories to explore the similarities and differences in reported responses and levels of relaxation among three groups of participants: (1) those who walked a labyrinth while listening to music [83 participants total, 21 of whom walked a seven-circuit labyrinth and 62 of whom walked an 11-circuit labyrinth]; (2) those who only listened to music and did not walk [31 participants] and (3) those who walked without following a set path and without listening to music [51 participants]. Using the states measured by the Smith relaxation inventories, those participants who only listened to music reported higher levels of sleepiness, disengagement, physical relaxation and mental relaxation as well as lower levels of somatic stress and worry. Those participants who walked without following a set path and without listening to music reported higher levels of sleepiness, mental quiet and physical relaxation. Of the participants who walked a labyrinth while listening to music, those who walked a seven-circuit labyrinth reported higher levels of physical relaxation, mental quiet, and timelessness or joy, as well as lower levels of somatic stress and worry. Those who walked an 11-circuit labyrinth reported higher levels of disengagement, physical relaxation, mental quiet, peace, and love and thankfulness as well as lower levels of somatic stress, worry, and negative emotions. According to the researchers, this study is part of the important process of establishing empirical evidence to support that walking the labyrinth leads to many of the relaxation benefits of other accepted relaxation techniques and that the labyrinth also is useful for spiritual exploration and growth.

36. McMorris, M. D. (1998). *Subjects in a classical labyrinth: Tradition, speech and empire in English-language poetry*. Unpublished doctoral dissertation, Brown University, Rhode Island. (ProQuest Digital Dissertations database. Publication No. AAT 9830491).

Abstract: This dissertation, "Subjects in a Classical Labyrinth: Tradition, Speech and Empire in English-Language Poetry," seeks to re-open the question of English literary tradition in anglophone poetry from the perspective of the recent history of decolonization. Framed around the established and continuing presence of Greco-Latin material in U.S. and Caribbean poetry since World War II, the dissertation argues that influential 20th-century accounts of tradition rely upon an array of tropes of continuity in blood and family, territorial consolidation, and imperial dominion to regulate the meaning of the Greeks and the Romans to modern literature in English. Against this rhetorical background the poem that displays the marks of the accumulated prestige of the antique corpus appears to be a participant in a diminishing or diminished tradition, one that is at odds with conceptions of poetry as speech-based, culturally-determined expression reflective of a locality, nation, or national subject. Tightly structured by the ironic opposition between tradition--"the western tradition has been Latin, and Latin means Rome"--and speech-- "no art is more stubbornly national than poetry"--as we meet it in Eliot's essays of the forties which I discuss at length, my thesis goes on to treat texts by poets from the Caribbean and the U.S. (centrally, Kamau Brathwaite, Derek Walcott, and Louis Zukofsky) as sites where the long history of the politicized transmission of the learning preserved, extracted, and formulated from the antique corpus, as Western heritage--or as Fanon says, "the Greco-Latin pedestal" collides with the commitment of

the poem to maintaining a close relationship to the indigenous colloquial idiom of the poet's own cultural environment. The thesis of Greco-Latin tradition as a force of contention is historically grounded by one chapter devoted to the rhetoric of empire that informs the prosodical dispute in writers of the English Renaissance.

37. Muller, M. H. (2000). The classical seven-circuit labyrinth as transcultural phenomenon. Unpublished masters thesis, The University of North Carolina at Asheville, Asheville, North Carolina. (ProQuest Digital Dissertations database. Publication No. AAT 1400430).

Abstract: In Chapter One, I begin by studying the function of the classical seven-circuit labyrinth motif as a cosmological symbol. In particular, I focus on the Hopi who dwell in the southwest of North America. In Chapter Two, I examine the prevalence of classical labyrinths in the Scandinavian area and their geographical distribution. In particular, I explore the solar mythology that appears to be linked to the labyrinth tradition of this region. In Chapter Three, I look specifically at examples of the classical seven-circuit labyrinth as it appears historically on the island of Crete. In Chapter Four, I investigate the classical seven-circuit labyrinth in terms of its function as a dance template or diagram and identify some geographical areas where it occurs in this way. In Chapter Five, I trace prehistoric origins of the labyrinth pattern and function. In Chapter Six, I examine the classical seven-circuit labyrinth as it appear protective or magical field pattern in a number of diverse traditions. In Chapter Seven, I investigate how the classical seven-circuit labyrinth pattern occurs as an image of contemplation and reflection, particularly in the traditions of India and of Ireland. (Abstract shortened by UMI.)

38. Peel, J. M. (2004). The labyrinth: An innovative therapeutic tool for problem solving or achieving mental focus. *The Family Journal* 12(3): 287-291.

Abstract: The labyrinth is an ancient symbol that works well as a therapeutic tool to encourage mental focus through meditation or prayer, which can be instrumental in releasing mental and physical tension. Many recognize the labyrinth as a metaphor for the path we walk through life and as an appropriate symbol that creates sacred space for enhancing psychological and spiritual growth. As a therapeutic tool, the labyrinth provides willing clients an opportunity to examine problems, questions, or issues from various perspectives while also affording time and space for personal reflection before making a decision. The inward labyrinth journey becomes a time for examining a question, whereas the return journey allows time for examining a possible solution, any of which the client might explore further in therapy while working toward implementation of a satisfactory solution. Because it is both kinesthetic and introspective, the labyrinth walk functions as a complete mind-body integrative activity.

39. Porter, L. K. (2006). The road to Jerusalem: The labyrinth in western culture from the middle ages to the present day. Unpublished master's thesis, Southern Illinois University at Carbondale, Carbondale. (ProQuest Digital Dissertations database. Publication No. AAT 1440155).

Abstract: Throughout the eleventh and twelfth centuries, unicursal, serpentine, and often times circular labyrinth designs were inlaid into the floors of several European cathedrals, including Notre Dame of Chartres, Ravenna, and Amiens. The labyrinth's re-emergence into popular culture through a new spiritual movement began in the early 1990's in California. The labyrinth pattern borrowed from Medieval European cathedrals has been recreated across North America in various mediums, including inlaid stone, painted concrete, and even portable canvas. This movement has spread across North America to large metropolitan areas and small communities alike.

Today, the people of the twentieth and twenty-first centuries are again following in the footsteps of those who have walked in ages past. The labyrinth form popular today, the Chartres-type labyrinth, was adopted by the Christian church in the Middle Ages in Europe. How is it that a symbol popular almost a millennium ago and on a continent an ocean away can be revived here and now? I believe that is has to do with what the labyrinth represents---that the motif of the labyrinth has remained unchanged in almost a thousand years. The motif of the New Jerusalem, represented in the symbol of the labyrinth, has been handed down through Western culture for over a thousand years. In this paper I will describe and illuminate this motif as it is carried through Western culture for the past millennium.

40. Radford, B. (2004). Labyrinths and "alternative" medicine. *Scientific Review of Alternative Medicine* 8(2): 74-8.

Abstract: A by-product of the New Age movement, labyrinths are achieving a height of popularity. While many adherents use the mazelike patterns as merely meditation tools, others claim therapeutic and medical benefits. Despite absence of evidence of labyrinth medical effectiveness, labyrinths have been integrated into dozens of hospital and medical care facilities. Though generally harmless, labyrinth use can lead to delusions and hallucinations, and provides no benefit beyond that of meditation.

41. Read, L. (1994). The journey to the center of the labyrinth. Unpublished masters thesis, Institute of Transpersonal Psychology, California. (ProQuest Digital Dissertations database. Publication No. AAT EP15306).

Abstract: The focus of "The journey to the center of the labyrinth" is the writing and testing of a self-help manual, which is aimed at introducing transpersonal psychological concepts in everyday language for the lay person. The main premise is that there is an inner, integrating center within every person, which can be accessed in a practical way to increase self-awareness. The first part of the thesis is an extensive literature review, including transpersonal self-help books and material relating to the inner center, to dream work, to the personal shadow, to transpersonal concepts of the body, and to one theory of relationships. The manual, itself, which is written in a mythological format, presents background theory and practical exercises on working with dreams, with shadow material, with the body, and with relationships. The manual concludes with an explanation and exercises based on the underlying concepts, and the mythological symbolism of the journey to the center of the labyrinth. This manual was tested by

volunteers over a two month period, after which written evaluations were submitted and are described in detail. Each participant noted changes in self-awareness during the test period, confirming that it is possible for people with little previous background to understand the concepts of the inner process and to apply them in their lives. The thesis ends with a general discussion of possible changes to the manual and to the method of its testing.

42. Rhodes, J. W. (2004, October). *Incorporating action research into labyrinth events with minimal intrusion*. Presentation at the Labyrinth Society Annual Gathering, Camp Courage, MN.

Abstract: This presentation presents the concept of "action research" as it is applied to inquiry in fields such as the social sciences and education. It identifies action research as a type of inquiry that is well suited and appropriate to labyrinth research. The presentation identifies and describes simple action research designs that will enable facilitators of labyrinth events to collect research data at their labyrinth events with little or no intrusion on the labyrinth experiences of the event participants.

43. Rhodes, J. W. (2006, November). *Perceived effects of labyrinth walking on a variety of physical and emotional traits*. Presentation at the Labyrinth Society Annual Gathering, New Braunfels, TX.

Abstract: This study reports the results of using a questionnaire developed by the author to assess the effects of walking the labyrinth on ten physical and emotional traits. The questionnaire asks the respondent to respond using a five-step Likert Scale to several questions, including the following primary question: "Comparing how I felt before I walked the labyrinth with how I feel now, after walking the labyrinth, I feel ..." In summary, from 59% to 75% of the respondents reported that they felt "much more" or "more" relaxed (74%), clear (59%), peaceful (74%), centered (75%), open (64%), quiet (68%), or reflective (74%) following a labyrinth walk than before a labyrinth walk. Additionally, from 58% to 68% of respondents reported that they felt "much less" or "less" anxious (63%), stressed (68%), or agitated (58%) following a labyrinth walk than before a labyrinth walk. A factor analysis of the data identified two different components (factors) that contribute to the differences in the scores. The primary factor appears to relate to a physical dimension while the second factor appears to relate more to a "state of mind" dimension. One possible interpretation of these results suggested by the author, based on the two factors identified and the order of the factors, is that walking a labyrinth can enable a set of physical responses (relaxed, unstressed, etc.) that allows for the emergence of a set of "state of mind" responses (reflective, centered, clear, etc.) that contribute to the frequently reported "labyrinth effect." The questionnaire also gives respondents an opportunity to provide and rate other words that describe their labyrinth experience and to rate the impact of various environmental factors on their overall labyrinth experience. The study compiles and reports the results from 160 respondents across seven labyrinth events and 16 labyrinths of various designs.

44. Rhodes, J. W. (2007). A context for labyrinth research. *Labyrinth Pathways. First Edition*, May 2007, 22-29.

Abstract: This article sets a context for the emerging field of labyrinth research. It suggests a set of basic assumptions to guide labyrinth research. These basic assumptions relate to **authenticity** of the research to the labyrinth and labyrinth experiences, **intrusiveness** of research on subjects' labyrinth experiences, and **interpretation** of research results, particularly with regard to predictability and generalizability. The article also puts forth a seven-stage Framework for Labyrinth Research. It is suggested that the Framework could serve as:

- a guide as the different types of labyrinth research that have already been done are identified and categorized;
- an aid as types of labyrinth research that are needed are identified and appropriate research designs and methodologies are developed; and
- a catalyst for identifying types of labyrinth research that could be done.

The article concludes with a set of considerations to serve as a catalyst for further discussion and future articles.

45. Rhodes, J. W. (2007, November). *Perceived effects of labyrinth walking on a variety of physical and emotional traits: Additional results*. Presentation at the Labyrinth Society Annual Gathering, Lee's Summit, MO.

Abstract: This study reports additional results using the questionnaire developed by the author (Rhodes, 2006) to assess the effects of walking the labyrinth on ten physical and emotional traits. The questionnaire asks the respondent to respond using a five-step Likert Scale to several questions, including the following primary question: "Comparing how I felt before I walked the labyrinth with how I feel now, after walking the labyrinth, I feel ..." In this analysis of 122 respondents across nine labyrinth events, using the same instrument, from 62% to 88% of the respondents reported that they felt "much more" or "more" relaxed (88%), clear (62%), peaceful (87%), centered (81%), open (72%), quiet (85%), or reflective (80%) following a labyrinth walk than before a labyrinth walk. Additionally, from 69% to 80% of respondents reported that they felt "much less" or "less" anxious (73%), stressed (80%), or agitated (69%) following a labyrinth walk than before a labyrinth walk.

46. Rhodes, J. W. (2008). Commonly reported effects of labyrinth walking. *Labyrinth Pathways, Second Edition*. July 2008, 31-37.

Abstract: Sixteen action research and/or empirical studies that report research into the effects of walking or otherwise interacting with labyrinths were used in preparation for this article. Results of these action research and/or empirical studies form a base of research into the so-called and often-reported "labyrinth effects."

Collectively these studies report the impact of the labyrinth on 38 physiological, psychological, mental, and dispositional traits (see the "Matrix of Topics Addressed by Selected Labyrinth Research Studies" on the Research Page of the Labyrinth Society's Website, <http://www.labyrinthsociety.org>). Of these 38 topics, 15 topics have been

addressed by two or more research studies. What the research says at the present time about these 15 topics is summarized in this article. Because of the action research nature of most of the studies summarized in the article, care must be exercised in making generalizations and/or predictions beyond the samples studied. However, the results of these studies, taken together, do appear to lend support to a two-part theoretical construct that might be helpful in understanding the so-called "labyrinth effect."

47. Rice, A. S. (2004). The use of the labyrinth in the treatment of alcohol and substance abuse problems. Unpublished masters thesis, California State University, Long Beach, California. (ProQuest Digital Dissertations database. Publication No. AAT 1421589).

Abstract: Substance abuse has been recognized as a major problem in social work. However, very little empirical research has included effective methods of treatment, and minimal research has included demographic variables and their effect on substance abuse treatment. This exploratory study examined the association between demographic variables (gender, ethnicity, and employment) and level of relaxation, contentedness, health, and friendliness among 85 participants in a substance abuse treatment program. Walking the labyrinth was used as a treatment method to induce relaxation. The labyrinth is a large schematic pathway drawn on a folding map, designed for the participant to walk on the designated path. Several independent sample t tests demonstrated that gender, ethnicity, and employment did not significantly impact relaxation, contentedness, health and friendliness at $p < .05$. Using a control group with random assignment could increase the ability to make causal inferences. A longitudinal study could demonstrate treatment maintenance.

48. Richardson, R. (2007, November). Grief walking in the labyrinth - Hospice Palliative Care: at a crossroads. Westin Harbour Castle Hotel, Toronto, Ontario, Canada. *Journal of Palliative Care* 23(3): 219.

Abstract: not available

49. Rutland, T. W. (2005). Through the labyrinth: Identity as spatial practice. Unpublished masters thesis, Dalhousie University, Canada. (ProQuest Digital Dissertations database. Publication No. AAT MR08449).

Abstract: This thesis explores the mutual constitution of self and space through the everyday practice of being in space. It argues, first, that knowledge is a practice; it accrues to a particular someone situated somewhere and, so, is necessarily embodied, contextual, and partial in all its guises. It argues that personal identity too is a practice; it is not someone one "has" but something one "does." Finally, it contends that space is more than a passive container; it is apprehended as practices, and this apprehension makes space a powerful shaping force in social life, an ingredient to personal identity, and a political entity of some importance. The principal argument of this thesis is that personal identity is a spatial practice. It concludes by considering the implications of this

argument for three issues that mark contemporary life, the theory and practice of international development, and the possibilities of "ethical" spatial practice.

50. Sandor, M. K. (2005). The labyrinth: a walking meditation for healing and self-care. *Explore-The Journal of Science & Healing* 1(6): 480-3.

Abstract: not available

51. Sandor, M. K., & Froman, R. D. (2006). Exploring the effects of walking the labyrinth. *The Journal of Holistic Nursing*. 24(2), 103-110.

Abstract: "This pilot study examines the effects of walking a labyrinth. **Method:** A convenience sample of 25 community members participated in a four-group, repeated measures study to gather information about vital signs and affect before and after labyrinth walks. Because of the small sample size, results were inspected for effect size (ES) differences in pre- to postcomparisons. Mean postwalk scores were also compared to control group scores. **Findings:** Systolic and diastolic blood pressure showed essentially no ES differences pre to postwalk. The remaining ES comparisons showed .14 ES for pulse differences, .37 ES for respirations, and .22 and .56 ES differences for positive and negative affect measures, respectively. **Conclusions:** Comparisons of postwalk scores for walkers to nonwalkers showed mixed results in significance of differences. **Implications:** This pilot study shows the feasibility of the procedures for assessing the effects of labyrinth walking on basic parameters of health." (Sandor, p 103)

52. Savitz, C. (1991). Immersions in ambiguity: The labyrinth and the analytic process. *Journal of Analytical Psychology*, 36, 461-481.

Abstract: Uses the Cretan myth of the labyrinth (with its devouring minotaur at the center) as archetype and metaphor for describing the internal world of the schizoid personality. The schizoid person creates impenetrable and inextricable labyrinthine walls as protection from interpersonal violation and from the internal minotaur of intolerable suffering, memory, and anxiety. The imprisoned minotaur, split off and disavowed, begins to govern the personality, and the terrified ego flees to the periphery of the personality. Clinical material illustrates the implications for transference during analysis. False resolutions and escapes from the labyrinth through flights into meaning are considered.

53. Seward, J. (Ed.). (1980 – Ongoing). *Caerdroia – the journal of mazes and labyrinths*. Labyrinthos, Thundersley, Essex, England, UK. (Volumes 1 – 36).

Abstract: *Caerdroia* is an annual journal that provides a focus for the study of mazes and labyrinths. Founded in 1980, the journal acts as a forum for historical, archaeological and contextual labyrinth research, the publication of important archive material, and serves as a monitor of current developments in the field. Each issue contains illustrated papers, notes, news, and views on the latest discoveries, theories, and ideas from researchers and

enthusiasts worldwide. A comprehensive index of the contents of all volumes of *Caerdroia* may be found at <http://www.labyrinthos.net/articles.htm>.

54. Saward, K. L. (2003). *Ariadne's thread: The transformative potential of labyrinth walking*. Unpublished doctoral dissertation, Institute of Imaginal Studies, Petaluma, California.

Abstract: Labyrinth walking may provide a unique experience of direct interaction with an archetype and is an opportunity for engaging the imagination. This research explores the experience of labyrinth walking as it is expressed through imagery and story in order to address the question, How can walking the labyrinth potentially be transformative? Imaginal Inquiry was used to test the hypothesis that imagery reflective of the walker's core issues and deep values would be evoked by walking a labyrinth. Literature pertaining to the labyrinth was reviewed, first from historical and mythological perspectives, then by considering it as a cross-cultural symbol. The review subsequently focused on the experience of labyrinth walking before broadening the scope and considering imaginal perspectives on the labyrinth. Study participants, all of whom had prior experience with labyrinth walking, met twice to walk the labyrinth. Exploring their experiences through art and narrative, they reflected on the question, If you were to metaphorically step back and view your life as a huge and artistic story panel or mural, how would the imagery from your walk fit into that picture? Images generated were categorized and participants were invited to reflect on the themes. The major learnings, derived by reviewing journal entries, artwork, and interview transcriptions, indicate that 1) reflection on the labyrinth walking experience revealed the presence of collective experience and story; 2) a significant amount of imagery was evoked by labyrinth walking; 3) the collective imagery suggested a cycle of archetypal themes; 4) the imagery and stories presented by the participants reflected their core issues and deep values. Labyrinth walking was shown to be a psychologically significant practice. This study can serve as a foundation for future research on labyrinths in specific settings. It concludes by considering the viability of implementing the practice in both clinical and community settings.

55. Schock, W. (1999). *Labyrinth and minotaur--About the relationship of drive and spirit*. *Analytische Psychologie* 30(116): 124-139.

Abstract: Presents a religious-historical and psychological exposition of the concepts of the labyrinth and of the Minotaur myth. The labyrinth is an archetypal model in widespread use in cultural history that the author interprets as the essential relationship for the individuation of the internal and external world. With a brief look at the omnipresence of bull symbols in Ancient Cretan (Minoan) culture, he brings it into relationship with the dialectics of spirit and drive, in which reference to an early treatise by C. G. Jung on the libido theory is included. The latter, also in regard to the Minotaur story, is closely associated with the labyrinth motif at a certain point concerning the constellation of spirit and driven force or inner motivation. The Minotaur story is considered to be a transition phenomenon between Minoan and Greek consciousness, in which both cultural forms are interpreted as historical manifestations of primeval or archetypal history of mankind itself. Myths are forms of expression of primeval,

archetypal consciousness that extend beyond the areas and periods of time to which they belong and serve to indicate the general features marking the progress of humanity and possible wrong directions taken.

56. Sholem, J. (1999). *Listening to the labyrinth: An organic and intuitive inquiry*. Unpublished doctoral dissertation, Institute of Transpersonal Psychology, California. (ProQuest Digital Dissertations database. Publication No. AAT 9936945).

Abstract: This dissertation explored the experience of walking the labyrinth as a tool for self-reflection. The labyrinth, an archetypal pattern, is a unicursal, meandering spiral which winds into center and back out again. The study used the emerging qualitative methodologies of organic and intuitive inquiries, which consider the researcher the primary research instrument and utilize alternative ways of knowing to study subjective experience. In depth, semi-structured interviews were conducted with 8 middle-class women (ages 23 to 70; 7 white, 1 African American) who participated in ritualized labyrinth walk included in a conference focusing on compassion. All had a high level of psychological sophistication and were involved in spiritual development. Participants were asked about their experience in the earth labyrinth, the finger labyrinth (a wooden representation used at the onset of the interview to reinduct an earlier state of consciousness), and intervening related experiences.

Thinking (logical analysis), feeling (affective experience), creative (haiku), and intuitive (dreams and synchronistic experiences) methods were employed in editing the interviews into personal narratives and in generating personal and transpersonal themes. Edited transcripts of the interviews were returned to the participants for validation. Themes were presented in two categories: the trigger for the theme and the theme itself. A threefold model of pilgrimage (purgation, illumination, and union) was used to conceptualize the themes which included pain, trust, silence, mystery, dual consciousness, healing, relationship, and connection with the divine.

This study demonstrated the experience of walking the labyrinth as (a) a mirror reflecting inner process, (b) a container focusing attention and holding potential for accessing intuition, and (c) a trigger stimulating insight. It also substantiates this as a practice which connects body to spirit, induces altered states of consciousness, inspires transformation and enhances self-reflection. This study serves as foundation for future research on an experience which had been reported only anecdotally. Potential personal, political, and therapeutic uses are suggested.

57. Stevens, D. K. (2005). *Seeking God at the center of congregational life: A modified prayer labyrinth as context for transformative spiritual experience*. Unpublished doctoral dissertation, United Theological Seminary, Ohio. (ProQuest Digital Dissertations database. Publication No. AAT 3209461).

Abstract: The project evaluated the quality of spiritual growth experienced by a representative sample of congregants from an aging mainline congregation after a six week period of instruction about spirituality and the spiritual journey and praying in a modified prayer labyrinth. Pre-testing and post-testing, a spiritual awareness assessment, and weekly journal entries were utilized to evaluate spiritual maturity and awareness of

God. The project demonstrated that there is a need for attention to life long spiritual growth as a critical component of congregational revitalization, and that long time members of such congregations will participate and can grow through focused spiritual experiences.

58. Stone, V. (1998). Discovering the labyrinth as a tool for health & healing. *Journal of Healthcare Design* 10: 73-6.

Abstract: not available

59. Taylor, P. L. (2007). Healing pathways of faith, hope and creativity: The effects of finger labyrinths on pediatric oncology patients. Unpublished doctoral dissertation, Wesley Theological Seminary, Washington, D.C.

Abstract: This project explored the effects of using finger labyrinths with pediatric oncology patients, with artwork as a means of expression. Data was collected through observation, interviews, and images using the ethnographic method. The study addressed the emotional, psychosocial, and spiritual needs of children and adolescents with cancer as well as the historical and contemporary uses of the labyrinth. Five cancer patients were enrolled in the project with their assent and the consent of their parents. The project demonstrated that finger labyrinths provided a container for expressing emotions, dealing with the anxiety of life-limiting illness, and finding hope for the future.

60. Temple-Hoon, J. (2002). Returning to the labyrinth: The sacrificial body in Cartesian philosophy, phenomenology and the myth of Ariadne and Theseus. Unpublished doctoral dissertation, Pacifica Graduate Institute, California. (ProQuest Digital Dissertations database. Publication No. AAT 3065325).

Abstract: This dissertation traces a journey through Cartesian and phenomenological philosophy, depth psychology, and the Greek myth of Ariadne and Theseus. As though inside a multicursal labyrinth, the work follows a particular trajectory in Western thought that is rooted in ancient myth, emerged as philosophy in the sixth century BCE, and came to dominate Western culture through Cartesian philosophy from the seventeenth to the twentieth centuries. Whereas Cartesianism established the mind in opposition to the body and the world, phenomenology, which emerged from Cartesianism in the twentieth century, collapses Cartesian duality and radically revises Cartesian notions of reality, the body, and the world. By re-defining transcendence not as meaning beyond the world, but as meaning of the world, and by redefining the cogito not as disembodied consciousness, but as consciousness characteristic of and belonging to the world's body, phenomenology represents the mind of the West returning to the body and the world from which it emerged and which it abandoned at the beginning of Western culture.

The myth of Ariadne and Theseus provides evocative images from the beginning of the Western cultural story that are revelatory for where we are today and that provide a way to imagine a future beyond Cartesian duality. Following the path of depth psychology's return to myth and image, and guided by the thread of Maurice Merleau-Ponty's phenomenology, this dissertation returns to the mythic labyrinth and discovers in

the image of the Minotaur the denied body as a denial of death at the center of the Western cultural labyrinth. It imagines consciousness of the paradoxical unity of death and life as nurturing a re-birth of mind and consciousness into the flesh of the world.

61. Titus, K. M. (2004). Placing and using a labyrinth for fellowship, spirituality and outreach at The Congregational Church of West Medford. Unpublished doctoral dissertation, Hartford Seminary, Connecticut. (ProQuest Digital Dissertations database. Publication No. AAT 3160503).

Abstract: In the late 1990s, the spiritual practice of walking unicircular labyrinths was heralded in newspaper reports, magazine articles, and television segments. Internet sites and a labyrinth locator enabled people to learn about their Christian and pre-Christian history, to research contemporary use and efficacy, and to find resources for help. As positive experiences were shared, there was an ever wider use of labyrinths in churches, denominations, and retreat centers. When a portable eleven circuit labyrinth was made by the Women's Fellowship of a sister United Church of Christ congregation, arrangements were made to borrow it for a Lenten workshop and devotional at The Congregational Church of West Medford (CCWM), in Massachusetts. In 1998, after personally experiencing the labyrinth, and having studied the church's context and identity, members moved through congregational processes, and voted to place a permanent, indoor labyrinth on the floor of the Fellowship Hall. Theological and practical concerns were addressed, an engineer was hired to design and paint the labyrinth (in the form of the labyrinth in Chartres Cathedral in France, now used for over 800 years), and the labyrinth was dedicated in a worship service. A Labyrinth Support Group formed and planned a workshop and Lenten events; and church committees addressed issues of use, deciding to be invitational yet firmly grounded within a Christian context. The labyrinth is used for retreats, workshops, special services at Lent and Advent, and for private devotions. It provides a kinesthetic experience of meditation and prayer, and is particularly helpful for those facing dilemmas of mortality, broken relationships, and questions of meaning or futility. Users include patients and therapists, youth, teachers, retreat groups, a cancer support group, and fellowship groups. Church members or committees share planning for use of the labyrinth in spiritually focused events. Using the labyrinth fosters fellowship, encourages prayer and reflection, and provides a means of outreach, to invite others into the church for worship and fellowship. The labyrinth is now part of the fabric of the church, and provides another faith environment, in addition to the sanctuary and chapel.

62. Weigel, C, Fanning, L, Parker, G, & Round, T. (2007). The labyrinth as a stress reduction tool for nurse interns during the journey of their first year in practice. *Healing Ministry* 14(3), 19.

Abstract: It has been well documented that stress not only is detrimental to health, but also interferes with active learning and job satisfaction. Studies have also shown that new graduate nurses have the potential of experiencing high levels of stress during the introduction of their new role. This stress will cause approximately 35% to 65% to change places of employment within their first 12 months of graduating nursing school.

The purpose of this study was to investigate whether new graduate nurses, by walking the labyrinth and having times of reflection, would have a decrease in the amount of perceived stress, compared to nurses without this training. It was believed that this group not only would adapt better in their new role, but would also experience greater job satisfaction.

Thirteen of the incoming Nurse Graduates (Interns) for Mercy Hospital (Oklahoma City, OK) were randomized into two groups. Both received the same Intern training classes and preceptor experience within their assigned units. However, the experimental group also received training and guidance on using the labyrinth as well as times of self-reflection. Stress was measured by the “Index of Clinical Stress” scale (ICS). The “Index of Job Satisfaction” scale (IJS) was chosen to measure job satisfaction. The ICS was given to both groups at the start of the Intern program and every 90 days thereafter for one year. The IJS was given to both groups 90 days into the Intern program and every 90 days thereafter for one year.

Both groups were given the ICS to establish their baseline stress score and were re-tested again in 90 days (Test 2). The control group showed a marked increase in their stress scores (30.7 (baseline) - 41.2 (Test 2) = 10.5 increase). However, the Experimental group showed a decrease in their ICS scores (33.8 (Baseline) - 27.0 (Test 2) = 6.8 decrease). When comparing both groups ICS scores at the 90-day mark, there was a 14.2 difference between the groups. The scores for the first IJS showed a score of 77.9 for the control group and a score of 82.7 for the experimental group (a 4.2 difference in favor of the experimental group). Data comparisons from the 90-day mark forward showed a yearly mean stress score of 36.6 for the Control group vs. a yearly mean stress score of 24.1 for the Experimental group (difference of 12.5). The IJS showed a yearly mean difference of 1.4, slightly in favor of the experimental group.

With more new nurse graduates being placed into the hospital setting right out of school, it is imperative that issues related to stress be addressed with this group. What this study provided was a randomized trial that showed the amount of stress some new nurse graduates are feeling, and how another group of new nurse graduates, by walking the labyrinth, was able to keep their stress in check. Developing creative ideas concerning stress management should become a larger part of nursing research. Perhaps if hospitals were able to figure out a way to help these new graduate nurses deal with their stress, more would continue to practice in the hospital setting.

63. White, M. J. and Stafford, L. (2008). Promoting reflection through the labyrinth walk. *Nurse Educator* 33(3): 99-100.

Abstract: The authors report the results of a reflection study assigned to 25 registered nurse (RN) students returning to school to pursue the Bachelor of Science in nursing (BSN). The students were assigned to read an article about labyrinths, walk the outdoor labyrinth at the University of Texas Health Sciences Center, School of Nursing, in Houston, Texas, and reflect on the experience in a journal. In the reflection, they were asked to “evaluate the experience as useful or not and reflect on the possibility of this experience translating into practice.” (White and Stafford, pg. 99) The authors reported that “Twenty of the 25 students reported a favorable response to the assignment, 3 did not find it useful at all, whereas 2 had negative responses.” (White and Stafford, pg. 99)

Additionally, 20 of the 25 students reported that they could see an application of this experience to their work. Several students noted that environmental distractions (noise, the feeling of being watched, etc.) detracted from the effectiveness of their experience. The authors report anecdotal comments of the students and conclude that, "The labyrinth walk and/or other forms of reflective practice experiences should be an essential part of nursing education." (White and Stafford, pg. 100)

64. Wirth, J. (2005). Labyrinth stress reduction project. Unpublished research study, California.

Abstract: According to the researcher, this is a "casual" research project funded by a small grant to measure the effect of tracing a finger labyrinth on the stress levels of those who used it. An 18 inch wooden finger labyrinth was placed in the meditation room of the hospital where the researcher was health education director. A short survey and instructions were placed near the labyrinth. Thirty surveys were completed for this study. Of the 30 respondents, 28 (93%) reported "some" stress to "lots" of stress prior to tracing the finger labyrinth. After tracing the finger labyrinth, 28 (93%) reported that they were "more relaxed" to "very relaxed."

65. Wood, D. A. (2006). Wending toward wellness. *Nursing Spectrum magazine*. July 2006. Available at <http://community.nursingspectrum.com/MagazineArticles/article.cfm?AID=22647>.

Abstract: "Long ago labyrinths might be located on church grounds as a kind of walking meditation. Today's labyrinths, however, are finding a home on health care campuses. (p. 2)" This quote reflects the theme of the article which describes the use of labyrinths in health care settings in several states. The article quotes health care practitioners from Georgia, Florida, Oklahoma, and other states regarding the increasing use of labyrinths for patients, families, and staff of hospitals and medical centers. Included in the article is information about two research studies that have been conducted in Florida and Oklahoma.

At South Seminole Hospital in Longwood, Florida, Jeanne Miller-Clark, "conducted a study with 75 patients. She found that walking the curved paths increased patient's hope, decreased stress, and equalized their blood pressure. Patients with bipolar disorder showed the most improvement. (p.6)"

Chris Weigel conducted a study at Mercy Health Center in Oklahoma City, Oklahoma. According to the article, "The hospital has studied the effect walking the labyrinth has had on new nurses' stress levels. It randomized 18 new graduates into two groups. Both learned about the labyrinth and the care model during orientation. Researchers asked the intervention group to walk the labyrinth at least twice per month. They measured stress levels at baseline and at 90 days." "After three months, nurses in the intervention group showed less stress, while nurses in the control group exhibited a marked increase in stress. The intervention group also reported higher job satisfaction. (p.8)"

66. Yang, A. C. (2003). Walking the labyrinth: A tool of stress reduction for nurses. *Journal of Gynecologic Oncology Nursing* 13(3): 18-22.

Abstract: More studies are being conducted than previously on the health benefits of the labyrinth. This article relates the practice of walking the labyrinth for stress reduction to Herbert Benson's four elements needed to invoke a relaxation response (a quiet environment, a repeated word or phrase, a passive attitude, and a comfortable position). The author contends that the labyrinth contains all four of these elements, with the repeated word or phrase being the labyrinth pattern itself. The author summarizes anecdotal reports as well as the results of research studies related to labyrinths and stress reduction, labyrinths in health care settings, labyrinths in cancer-focused settings, and cancer patient experiences.

67. Zahourek, R. P. (2006). Commentary on "Exploring the Effects of Walking the Labyrinth." *The Journal of Holistic Nursing*. 24(2), 111-112.

Abstract: This commentary describes the pilot study, "Exploring the Effects of Walking the Labyrinth," by Drs. Sandor and Froman (*the Journal of Holistic Nursing*, 24(2)) as "a valuable beginning study on this 'supposed' healthy form of meditative exercise" (p. 111). According to the reviewer, it supports the need for a spectrum of research approaches in alternative, complementary, and integrative practice "to help us move from the 'supposed' position to one that is more confident in predicting positive outcomes" (p.111). The commentary suggests that the "study has numerous implications for holistic nurses in practice" (p. 112).

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