Concepts: Organization of Nursing Work and the Psychosocial Experience of Nurses

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Abstract

In this chapter, the intuitive link between balanced, healthy, and supportive psychosocial work environments and a variety of vitally important patient, nurse, and organizational outcomes is discussed with reference to a number of clearly defined and well-researched concepts. Among the essential concepts that ground the rest of the book is the notion of a bundle of factors that provide a context for nurses' work and are known collectively as the *practice environment*. Landmark studies that focused specifically on nurses' experiences of their work environments in exemplary hospitals examined so-called Magnet hospitals, leading to a framework that describes the practice environment and its linkage with professional well-being, occupational stress, and quality of practice and productivity. Many ideas and models have obvious connections to the notion of practice environment such as Job Demand–Control–Support model, worklife dimensions and burnout, concepts related to burnout such as compassion fatigue, and work engagement as a mirror image concept of burnout, as well as notions of empowerment and authentic leadership. These concepts have been chosen for discussion here based on critical masses of evidence pointing to their usefulness in healthcare management and specifically in the management of nursing services. Together all of these concepts and supporting research and scholarship speak to a common point: intentional leadership approaches, grounded in a comprehensive understanding of nurses' psychosocial experiences of their work, are essential to nurses' abilities to respond to complex patients' needs in rapidly changing healthcare contexts and socioeconomic conditions.

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2.1 Introduction

In this chapter, the intuitive link between balanced, healthy, and supportive psychosocial work environments and a variety of vitally important patient, nurse, and organizational outcomes is discussed with reference to a number of clearly defined and well-researched concepts. Among the essential concepts that ground the rest of the book is the notion of a bundle of factors that provide a context for nurses' work and are known collectively as the *practice environment*. Landmark studies that focused specifically on nurses' experiences of their work environments in exemplary hospitals are described. This work on so-called Magnet hospitals was the basis of the American Nurses Credentialing Center Magnet Recognition Program® in the United States and internationally. Magnet hospitals are believed to attract and retain professional nurses and achieve favorable patient outcomes through excellence in the management of nursing services and notably through the promotion of positive practice environments.

The Magnet Hospital framework describes the practice environment and its linkage with professional well-being, occupational stress and quality of practice and productivity. Many ideas and models have obvious connections to the notion of practice environment such as Karasek and Theorell's Job Demand–Control–Support model, Maslach and her colleagues' work on worklife dimensions and burnout, concepts related to burnout such as compassion fatigue (Kelly and colleagues), and work engagement (Schaufeli and Bakker) as a mirror image concept of burnout, as well as Kanter's notions of empowerment and authentic leadership (Laschinger and colleagues). These concepts have been chosen for discussion here based on critical masses of evidence pointing to their usefulness in healthcare management and specifically in the management of nursing services. Indeed, most of these ideas have been discussed in the nursing literature for some time. Together all of these concepts and supporting research and scholarship speak to a common point: intentional leadership approaches, grounded in a comprehensive understanding of nurses' psychosocial experiences of their work, are essential to nurses' abilities to respond to complex patients' needs in rapidly changing healthcare contexts and socioeconomic conditions.

2.2 Practice Environment: An Empirically Supported Concept

2.2.1 Early Research Initiatives to Understand and Anticipate Cycles of Nurse Shortages

Recurring nurse shortages in the United States and other Western countries have plagued hospitals and other healthcare organizations for over a century. In the early

1980s, the American Academy of Nursing (AAN) appointed a task force of leading administrators and researchers to contribute fresh ideas on this problem, which affects nurses, hospitals, and ultimately patients. *Magnet hospitals: Attraction and Retention of Professional N*urses, (the orginal study), first published in 1983 (McClure et al. 2002), was the first publication from that work and spurred many research initiatives in the United States, Canada, and beyond. At the core of the original Magnet research was the observation that despite nurse shortages, some hospitals were consistently more successful in attracting and retaining staff nurses than neighboring hospitals; there were some hospitals that in fact appeared to be immune to cyclical nurse short-ages (Aiken 2002). The first study sought to identify (1) important variables in hospi-tals and nursing services that attracted and retained professional nurses and (2) the particular combination of variables that produced model(s) of hospital nursing prac-tice where nurses experienced high professional and personal satisfaction that pro-moted recruitment and retention of qualified staff (McClure and Hinshaw 2002). Further, as the authors stated: "This work was expected to yield a variety of successful approaches that could be reviewed, adopted, and/or modified by other institutions eager to resolve their nurse shortages" (McClure et al. 2002). The promise of translat-ing the learnings from the research project on a wider scale was ultimately fulfilled in the early 1990s with the development of the American Nurses Credentialing Center (ANCC) Magnet Nursing Services Recognition Program® (Urden and Monarch 2002). In tandem with the growth of the program later called Magnet Recognition Program® and somewhat independently of it, researchers began to study the organiza-tional context of nursing practice and the impact on outcomes such as job satisfaction, nurse attraction and retention and nurse-assessed quality of care, and nurse burnout and on patient outcomes such as mortality and surgical complications (Aiken et al. 2008; Estabrooks et al. 2005; Friese et al. 2008; Tourangeau et al. 2007).

The original Magnet hospital study identified relevant factors for future study, such as management style and leadership, organizational structure, staffing, person-nel policies, quality of patient care, teaching, image of nursing, professional devel-opment, orientation, and career development. Forty-one hospitals were identified as the *original (reputational) Magnet hospitals* after 165 hospitals in 8 designated regions of the United States were initial nominated by Fellows of the American Academy of Nursing and were ultimately selected after interviews with staff nurses and directors of nursing.

The interviews in the original Magnet hospital study revealed that the directors of nursing in Magnet hospitals were clear about their *philosophy and the value sys-tems* in terms of *high-quality care* for patients in their hospitals (McClure et al. 2002). They were aware of the institution's *mission* and the need to get the message across the nursing staff as well as the importance of programs and practices to meet needs for *adequate and competent staff*, *career development*, and consideration of *personal lives*. From the staff nurses' point of view, the directors were on target in terms of their high level of concern for actual nursing practice. Staff nurses identi-fied specific factors that reflected the operationalization of a philosophy and value system such as *adequate numbers of competent colleagues*, *flexibility in scheduling*, educational programs for *professional growth*, and *recognition as individuals*. Moreover, staff nurses credited *supportive administrators and middle managers* for

the positive climate in their hospital, leaders' work to support personal and professional goals alongside organizational ones as well as *collegial and collaborative* relationships. Directors of nursing in these hospitals expected to participate fully in management decisions at the executive level in all matters pertaining to patient care and the role of nurses in the institution. The roles of nursing in these facilities were conceived as increasingly autonomous and multifaceted including *teaching* and *coordination of care*. Staff nurses expected workers in auxiliary services to provide support for the work instead of substitute for them. Staff nurses were keen to be treated as career-oriented *professionals* and were convinced that nursing as a profession was important for the benefit of patients as well as hospitals. Certainly, these hospitals were not stress-free, but staff nurses experienced support from administrators in issues such as medical dominance that might have been anticipated in the face of expanding competencies among staff nurses. Ultimately, both staff nurses and nursing leaders, with the director of nursing at the summit, were advocates for high-quality patient care. In these hospitals, some ongoing shifting of power in favor of nurses was noted. The combination of elements put in place by administrators, leaders, and staff nurses as just described created a positive and supportive practice environment for nurses.

These findings, published in 1983 or almost 35 years ago, were visionary at the time and are still fresh and inspiring. Much research speaks to their continuing relevance for the profession and for leaders and clinicians in nursing. As mentioned earlier, in 1993 a formal program, the ANCC Magnet Recognition program®, was established as a voluntary form of external professional nurse peer review available to hospitals and nursing homes based on established standards of nursing care and nursing service administration (Aiken 2002). Recognition was available first in the United States and later internationally. Meanwhile research began to study the hospitals designated under the new criteria and explore whether and how they had organizational traits and outcomes comparable to those identified in the original Magnet study (Aiken et al. 2000).

Directly from this report, a 65-item questionnaire, the Nursing Work Index (NWI), was developed based on Korman (1971) work and Locke (1973) need fulfillment theory proposing that job satisfaction and productivity are the products of the presence of various attributes and the relative importance of those attributes to individuals' work-related and personal needs (Kramer and Schmalenberg 2004). The NWI contained items describing various workplace characteristics described in the original Magnet study (Kramer and Hafner 1989). The NWI was tested on a random sample of Magnet hospitals and nurses. Magnet hospitals were compared with excellent companies; data were used to test a causal model for outcomes of job satisfaction and nurse effectiveness, to describe attributes of nurses working in hospitals with different external systems, and to ascertain impact of congruence in values on nurse job satisfaction and effectiveness (Kramer and Schmalenberg 2002). Nurses were asked to rate their agreement–disagreement that various elements/characteristics were (1) present in their current job situation, (2) important to their job satisfaction, and (3) important in quality of care on 4-point scales. The Nursing Work Index was further adjusted to the 37 most chosen items by 4000 staff

nurses over a 17-year study period, and in an additional study, staff nurses of 14 Magnet hospitals were asked to list the 10 characteristics/items that were most important to provide quality patient care (productivity). A causal model study showed that both recruitment and retention are highly correlated with job satisfaction and that more than 80% of nurse job satisfaction is attributable to being able to give quality patient care. They therefore eliminated the nurse job satisfaction component and focused only on quality care productivity (Kramer and Hafner 1989). Eight items were selected by two-thirds of the 279 staff nurse respondents and identified as the Essentials of Magnetism (Kramer and Schmalenberg 2002, 2004) (Box 2.1).

Box 2.1 Eight Essentials of Magnet Hospital
1. Working with other nurses who are clinically competent.
2. Good nurse—physician relationships and communication.
3. Nurse autonomy and accountability.
4. Supportive manager and supervisor.
5. Control over nursing practice and practice environment.
6. Support for education.
7. Adequate nurse staffing.
8. Concern for the patient is paramount in this organization.

The authors developed further a multi-item 8 Essentials of Magnetism (EOM) tool generated from participant observations and interviews, and psychometric properties were established with staff nurses of 16 Magnet and 10 non-Magnet hospitals that evaluate what is essential for productivity of quality of care and work environments that attract and retain nurses or a *healthy work environment* (Kramer and Schmalenberg 2004). Follow-up studies with 10,514 staff nurses in 34 hospitals (18 Magnet hospitals and 16 comparison hospitals) showed an adapted valid and reliable measure (EOMII) of the quality of work environment from a staff nurse perspective. Differences in ratings of the Magnet essentials and outcome variables such as job satisfaction and nurse-assessed quality of care have been noted, where Magnet hospital staff nurses report the most productive work environments (Schmalenberg and Kramer 2008). Kramer and Schmalenberg have argued that the 65-item Nursing Work Index is outdated, originated as a tool designed for use with individuals rather than aggregated unit level data, lacked a theoretical basis, and measured the presence of attributes without regard to the steps or components of the processes or the respondent's definition of the underlying concepts (Schmalenberg and Kramer 2007). They argue that the EOM tool measures both the components of the work environment and the composite work environment because 90% of the items are written from a clinical unit perspective and the remaining 10% are organizational and unit based. Overall, the EOM is a process measurement instrument that assesses the health of the unit work environment. A healthy, productive unit work environment is one that enables nurses to engage in the eight processes/professional

practices identified by nurses in Magnet hospitals as most essential to delivery of quality patient care (de Brouwer et al. 2014).

2.2.2   Studying Nurse Practice Environments with Adapted Versions of the Nursing Work Index

Further initiatives have been taken to generate evidence regarding why the original Magnet hospitals, and later the ANCC designated Magnet hospitals, offer a very promising model for the development of nurse professional environments in the United States and internationally. As the ANA research initiative started to understand and prevent cyclical hospital nurse shortages over time, the research on nurse workforce shortages has been integrated with research on hospital organization and its impact on nurse and patient outcome by the Center for Health Outcomes and Policy Research at the University of Pennsylvania (Aiken 2002) and later other US and international research initiatives. The center was eager to identify strategies to study how modifiable organizational traits of hospitals affect patient and nurse outcomes. As Aiken and colleagues noticed in a rapidly changing healthcare system, there are ample opportunities to make use of targets of possibilities or natural experiments in which a number of hospitals have various organizational elements that can be studied in comparison with conventionally organized hospitals (Aiken et al. 1997). The original Magnet hospitals and later the ANCC Magnet hospitals were a logical platform for studying differences in hospital organizational traits as well as the organizational context of nursing practice associated with better outcomes for patients and nurses (Aiken et al. 2000). In addition, two natural experiments in hospital organizational reform—the unfolding AIDS epidemic as well as the rapid spread of hospital reengineering in the 1990s—provided important opportunities to study to what extent and how hospital organizational characteristics affect nursing practices and in turn nurse and patient outcomes. Interestingly, through the AIDS epidemic, nurses had in a number of US urban hospitals the discretion and opportunity to redesign general medical units into dedicated AIDS units driven by the basic principles of professional nursing practice as well as organizational traits common to Magnet hospitals. Meanwhile in the 1990s, a wave of reengineering initiatives in US hospitals emerged based on fundamental rethinking and radical redesign of business processes. It was originally hoped that these initiatives would achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service, and speed (Walston et al. 2000). These changes in the organizational context of hospitals were often associated with rigorous cost-cutting, rightsizing, and downsizing and were a special target of the Institute of Medicine's (IOM) report *To Err is Human: Building a Safer Health System* (Kohn et al. 2000). The report described many structural flaws in health systems resulting from poor management practices, including underestimating the importance of professional nursing practice (Page 2004). The document ultimately became the founding documents for a powerful international patient safety agenda that continues to this day. Besides heightening awareness of potential flaws of healthcare professionals that are inevitable consequences of the human condition, the report called attention to the disconnect between frontline workers at the sharp end of patient safety

and management levels identified as the blunt end and the risks created by this divide in terms of healthcare that produces bad patient outcomes.

The University of Pennsylvania's Center for Health Outcomes and Policy Research led an unprecedentedly large research project examining the attributes and outcomes of a large representative group of hospitals in five countries with different organized and financed healthcare systems: the United States, Canada, England, Scotland, and Germany (Aiken et al. 2001). US and international research on hospital organizational context of nursing practice received an important boost from the development of the *Nursing Work Index Revised (NWI-R)* and later the *Practice Environment Scale of the Nursing Work Index (PES-NWI)*. Aiken and colleagues used the original NWI to study professional nurse practice environment in hospitals (Aiken 2002). However, instead of examining job satisfaction by comparing nurses' ratings of the importance of various elements with the same nurses' ratings of the presence of those elements in their current jobs, in the NWI-R, nurses only rate their agreement or disagreement regarding *the presence of various organizational features* on a 57-item modified version of the scale (Aiken and Patrician 2000). Conceptually and empirically derived subscales were developed to measure various core organizational attributes identified in literature as characterizing an environment supportive of professional nurse practice (Baggs et al. 1992; Grindel et al. 1996; Hoffart and Woods 1996; Knaus et al. 1986): (1) *autonomy*, (2) *control over the work environment*, (3) *relationship with physicians*, *and* (4) *organizational structures*. Because of the modification of the NWI to a revised instrument, the NWI-R, that evaluates the hospital organizational context instead of job satisfaction and quality patient care, additional nurse-reported constructs such as job satisfaction and quality of care were added. Moreover, inspired by concern about difficulties to attract and retain qualified staff in dedicated AIDS units because of the stresses inherent in caring for young adults with a fatal and potentially communicable disease, additional measures such as nurse burnout (Maslach Burnout Human Service Survey or MBI-HSS) and turnover intentions were also added in research designs (Aiken 2002). Furthermore, former experiences with administrative discharge data analyses on mortality and comorbidity (Needleman et al. 2002) inspired the development of the *failure to rescue concept* or death that occurs after a patient develops a complication in the hospital that was not present on admission (Silber et al. 2000). Clarke and Aiken (2003) applied practice environment ideas to the failure to rescue concept, hypothesizing that surveillance of patients' conditions by nurses would be affected by staffing adequacy,

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Box 2.2 Nursing Work Index Revised or NWI-R and Practice Environment Scale of the Nursing Work Index or PES-NWI

- NWI-R: 57 items and 4 subscales—(1) nurse autonomy, (2) nurse control over the work environment, (3) nurse relations with physicians, and (4) organizational structures.
- PES-NWI: 31 items and 5 subscales—(1) nurse participation in hospital affairs; (2) nursing foundations for quality of care; (3) nurse manager ability, leadership, and support of nurses; (4) staffing and resource adequacy; (5) collegial nurse–physician relations.

- One approach to scoring draws upon the item ratings of 1 for general disagreement to 4 for general agreement. When the mean item scores across all of the nurses in an institution and all of the items in a subscale are higher than the scale midpoint (2.50), that subscale is considered to be positively rated. The work environments of organizations or organizational subunits are considered unfavorable if scores are ≥2.50 on only one or no subscales, mixed if scores ≥2.50 on two or three subscales, and favorable if ≥2.50 on four or five subscales.
- Nurses in Magnet hospitals rate practice elements more highly than nurses working in non-Magnet facilities, suggesting that organizational characteristics that support nursing practice are present to a greater extent in Magnet hospitals. These higher subscales mean scores are related to empowering characteristics in the work environment, trust in management, and ultimately professional well-being through job satisfaction, lower turnover intentions, and lower feelings of burnout measured and analyzed with study populations in the United States and Canada.
- Study results show that nurses reported more positive job experiences and fewer concerns with care quality, and patients had significantly lower risk of death and failure to rescue in hospitals with better care environments measured with PES-NWI.

administrative support, and nurse–physician relations and that practice environment features should be important explanatory factors for differences between hospitals in patient rescue rates (Box 2.2).

Lake (2002) presented a parsimonious set of 31 items from the NWI grouped into 5 subscales derived from factor analyses that she called the Practice Environment Scale (PES): (1) *nurse participation in hospital affairs*; (2) *nursing foundations for quality of care*; (3) *nurse manager ability, leadership, and support of nurses*; (4) *staffing and resource adequacy*; and (5) *collegial nurse–physician relations.* Reference values for original Magnet hospitals are available for both the NWI-R and PES-NWI sets of subscales. Lake defines the nursing practice environment as the organizational characteristics of a work setting that facilitate or constrain professional nursing practice such as the nature of relationships with managers and physicians and the status of nurses within the hospital hierarchy. Given the complex, unpredictable nature of nurses' work, Lake argues that a professional model, also known as the goal-centered model, emphasizes individual qualifications and collegial control systems and is preferable to a bureaucratic model, also known as the task-centered model which emphasizes control exercised through hierarchical authority and formal rule enforcement. The author preferred to develop, based on an existing real-work set, the NWI, instead of new set with theoretically relevant organizational characteristics. A composite measure, in addition to subscales representing distinct domains of the nursing practice environment, was presented based on factor analyses. The PES-NWI is an organizational measure, but a target level of

organization, either the hospital or the nursing unit, has not been explicit. The author noticed that empirical evidence may reveal at what level nurses interpret some items or subscales. The construct validity showed significant higher mean scores of nurses in Magnet hospitals compared with those of the non-Magnet hospitals. However, as the author mentioned, differences in hospital size and ownership between the Magnet and non-Magnet hospital samples may account for some of the observed difference in practice environment scores. Lake and Friese (2006) later described a three-level classification, *favorable, mixed, and unfavorable*, that sorts hospitals according to how many subscales have scores suggesting agreement of the nurses that characteristics related to an underlying construct are present in the facility. A fairly generous standard was used to identify favorable ratings: values above 2.50—the theoretical midpoint—were considered favorable because they were on the side of agreement that the features were present in the current job situation. Hospitals where nurse ratings were above 2.50 on only one or no subscales were classified as having unfavorable practice environments, on two or three subscales as mixed practice environments, and on four or five subscales as favorable. The following study of 156 Pennsylvania Hospitals (Lake and Friese 2006) shows that the nurse practice environments of the small samples of Magnet hospitals were superior to those of the Pennsylvania sample. About 17% of the hospitals had favorable practice environments, and hospitals with better practice environments had higher RN-to-bed ratios. However, hospitals within the favorable category of practice environments had a wide variation in staffing that supports the thesis that staffing and practice environment are distinct concepts. Practice environment differences were not associated with hospital characteristics; however, at the time the data analyzed were gathered, Magnet hospitals tended to be large institutions with intensive medical education missions that were located in urban areas.

2.2.3 Research Insights Regarding Hospital Nurse Practice Environments

Various studies use the NWI-R or PES-NWI to evaluate nurse work environments comparing Magnet hospitals, the original and ANCC designated, and non-Magnet hospitals and the extent that Magnet hospital characteristics are presents in the United States and Canada. Aiken et al. (2000) compared 7 ANCC Magnet hospitals with 13 original Magnet hospitals. Study findings confirmed that ANCC Magnet hospital designation identified hospitals that provided practice environments that were as good as or better than those at the original Magnet hospitals in terms of professional nursing practice (autonomy 3.01 vs 2.86, $p < 0.001$; control over the practice setting 2.95 vs 2.65, $p < 0.001$; and nurse relations with physicians 3.03 vs 2.98, $p = 0.10$) and nurses' assessment of the quality of care delivered to their patients (rated as excellent 43 vs 21%, $p < 0.001$). Nurses in ANCC Magnet hospitals were more satisfied with their jobs (rated as very satisfied 33 vs 22% and dissatisfied 16 vs 28%, $p < 0.0001$) and less likely to suffer from job-related burnout (rated burned out from their job 20.4 vs 29.9%, $p < 0.001$, and emotionally drained

from their work 42.2 vs 52.9%, $p < 0.001$). In addition, nurses in ANCC Magnet hospitals had significant higher educational preparation as well as nurse-to-patient ratios than in original Magnet hospitals. The authors mentioned that the original Magnet hospitals are not immune to changes in the health system. Some have been adversely affected, but many have, despite vast organizational change, continued fostering elements of professional practice that distinguish them from non-Magnet hospitals. Havens compared in her study 19 ANCC Magnet hospitals with 24 non-Magnet hospitals based on chief nurse executives' (CNEs) reports (Havens 2001). Both hospital groups were comparable with the general hospital characteristics in the United States dealing with the same health system and socioeconomic context. CNEs were invited to serve as organizational informants, and results of their reports suggested that the two hospital groups were characterized by different nursing infrastructure organization, leadership features, and support for the hospital structures. The ANCC Magnet hospitals had far more likely a discrete nursing department as part of the organizational structure, which may indicate certain value and respect for nursing as a vital and distinct clinical discipline. The ANCC group of CNEs reported that nursing was visible as a distinct professional clinical discipline in their hospital and that nurses had control over nursing practice and the nursing practice environment more than a comparison group of CNEs. The two groups of CNEs reported differences in the nature and extent of the implementation of restructuring and reengineering strategies within the previous 5 years. Interestingly, the ANCC hospitals implemented more changes to expand the CNE role than the comparison hospitals. The authors concluded that organizational structure provides the framework in which nurses' practice appears to contribute to the total ambiance of the hospital. Thus, if the role of the CNE is to develop and maintain the context in which care is delivered, then it is not surprising that the variance in the role, power, and position of the role of the CNE and the nursing department in the organization is associated with variance in reports of quality of the practice environment and patient and staff outcomes. In a mixed design including a quantitative survey study and a qualitative study based on interviews with nursing leaders (Upenieks 2002), comparing two Magnet hospitals with two non-Magnet hospitals, clinical nurses of the first had more autonomy (3.10 vs 2.64, $p < 0.001$) and control over their practice (2.79 vs 2.34, $p < 0.001$), characterizing their work environment as one support from administration and their organizational structures (2.93 vs 2.40, $p < 0.001$) with favorable physician relations (3.13 vs 2.78, $p < 0.01$) more often than nurses of the latter settings. Factors that influenced nurse leader effectiveness included a strong commitment to nursing, recognition of professional nursing practice, leadership visibility, and support of an autonomous climate.

Kanter's structural theory of organizational behavior (Kanter 1993) asserts that certain work empowerment structures have the potential to explain differences in individual responses to situations in the work environment: structural access to sufficient information; support of subordinates, peers, as well as supervisors; and opportunities to learn and develop. This would suggest that nurses in an empowering work environment have the ability to mobilize all necessary resources, both human and material, to support the best care for their patients. Furthermore, they

have access to the information they need and that they have opportunities for learning, which stimulates their personal development and fosters supportive relationships with supervisors, peers, and subordinates. Moreover, informal and formal networks of alliances within the organization provide such nurses with opportunities to achieve their goals and ensure professional discretion and visibility. The revised Conditions for Work Effectiveness Scale assesses empowerment, power, and opportunity components of Kanter theory. Upenieks (2003a) used the CWEQ-II scale (mean scale scores ranging from 1 or low to 5 or high) in another study using the same design. She found that clinical nurses in Magnet hospitals experienced higher levels of empowerment due to greater access to work empowerment structures in their work environment such as opportunity, information, and resources compared with clinical nurses of non-Magnet hospitals. Differences in leadership effectiveness between Magnet hospitals and non-Magnet hospitals accounted for the differences in empowerment scores (3.55 vs 2.63, $p < 0.001$). Moreover, Magnet hospitals encompass nurse leaders who are people-oriented, visible, and empowering and that this type of leadership style is conducive to creating an environment that is supportive, autonomous, and collaborative among other leadership traits (Upenieks 2003b).

Laschinger et al. (2001a) performed a study with a stratified random sample of nurses who worked on medical and surgical hospital wards in Ontario, Canada. The study tested a model positing that if nurses perceived their work environments, afforded a high degree of autonomy, control over the practice environment, and strong collaborative nurse–physician relationships (measured with the NWI-R), they would have high levels of trust in management (assessed with the 12-item Interpersonal Trust at Work Scale) and low levels of burnout (measured using MBI-HSS) and ultimately would report high levels of job satisfaction and positive evaluations of the care delivered in their work setting. Study results confirmed that both trust in management and emotional exhaustion were important mediators of job satisfaction and assessed quality of care. The authors concluded that high levels of organizational trust are inevitable when employees feel that their managers have created work conditions that make them confident in their ability to act based on their expert judgment. Moreover, in a secondary analyses of data from three studies—two with staff nurses ($n = 496$) and one with nurse practitioners ($n = 55$)—in Ontario hospitals, Laschinger et al. (2003) showed that access to empowering work conditions (measured with the CWEQ-II scale) and Magnet hospital characteristics (measured with the NWI-R) together were predictive of nurses' satisfaction with their job.

In 2003, 13,000 Ontario nurses were surveyed to explore how they evaluated their hospital work environments using the NWI-R and experienced their positions (Tourangeau et al. 2005). Medical and surgical nurses evaluated their professional practice environments as poor. Nurses rated foundations for quality of care and nurse–physician relationships most favorably, although there was significant room for improvements for both these areas. The lowest-rated aspects of the nursing practice environment were adequacy of staffing and other resources required to provide patient care and managers' ability and support. Authors suggested that

administrators could actively consult with nursing staff to obtain frontline perspectives of the amounts and kind of staffing and other resources considered adequate to meet patient care needs. Overall, nurses reported that their managers were not effectively leading and managing within their hospitals and that they did not provide adequate support, leadership, praise, or recognition. The authors suggested that nurse managers may not have adequate management and leadership knowledge and skills. Moreover, certain hospital organizational structures, such as large span of control, impede a manager's ability to provide adequate leadership and support to nursing staff. Further analyses of these data revealed that nurse intention to remain employed was predicted by job satisfaction, personal characteristics of nurses, work group cohesion and collaboration, and organizational commitment of nurses (indicated by the NWI-R scale of nurses' participation in hospital affairs). The authors suggested that nurse burnout and nurse managers' ability and support have a direct effect on job satisfaction and through the latter an indirect effect on intention to remain employed.

2.2.4   Hospital Nurse Practice Environments and Comorbidity, Failure to Rescue, and Mortality

In the same study, Tourangeau et al. (2007) investigated also hospital administrative discharge data to answer the research question: what are the nursing-related determinants of risk-adjusted 30-day mortality for acute medical patients of 19 hospitals in the Ontario province of Canada. A 30-day mortality is identified as the occurrence of death within 30 days of admission and preferable to inpatient mortality as there can be a lag time between hospital admission and deleterious effects of care (Chassin et al. 1989). Lower 30-day mortality rates were associated with higher % of registered nurses (RNs) and higher % of baccalaureate-prepared nurses in the staff mix, lower nursing staff dose (total inpatient clinical nursing worked hours—all categories) per weighted patient case, higher nurse-reported adequacy of staffing and resources, higher uses of care maps or protocols to guide patient care, and higher nurse-reported quality of care. Results suggest that certain structures or *having the right things* and processes or *doing the right things* of hospital care are relevant, explaining variances in patient outcome such as mortality. Interestingly, lower nurse-reported adequacy of manager ability and support and higher nurse burnout (emotional exhaustion) were also predictors of lower 30-day mortality. Overall, nurses across study hospitals rated their support from the nurse managers as low, and authors suggest that managers in low-mortality hospitals may have focused their energies on enabling other hospital structures and processes, such as securing resources or promoting patient care initiatives that supported lower mortality than providing direct support to nursing staff. Likewise, higher levels of nurses' emotional exhaustion could act as motivator enabling nurses to detect and intervene promptly with serious patient complications that could have led to unnecessary patient death if left unattended or detected too late. These factors explained 45% of variance in risk- and case-mix-adjusted 30-day mortality.

Estabrooks et al. (2005, 2011) investigated variations in 30-day mortality in 49 hospitals in the Canadian province of Alberta. Adjusted for individual patient characteristics and comorbidities and other institutional characteristics, higher proportion of baccalaureate-prepared nurses, a richer skill mix of nursing staff (RN to non-RN ratio), better nurse–physician relationships, and lower casual and temporary employment were associated with lower patient mortality. The institutional and hospital nursing characteristics explained 36.9% of variation in hospital mortality. Both studies performed in Canadian hospitals suggested (albeit in inconsistent forms) that organizational context of nursing practice is not only potentially relevant for nurses' professional well-being but also for quality of patient care and patient outcomes. Various study limitations explain these inconsistencies, and later studies provided broader insights.

Friese et al. (2008) investigated the effect of nursing practice environment on outcomes of hospitalized cancer patients undergoing surgery of 164 hospitals in the US state of Pennsylvania. Nurse staffing (nurse-to-patient ratio), educational preparation (the proportion of baccalaureate-prepared nurses), and the PES-NWI were calculated from a survey of nurses, aggregated to the hospital level, and analyzed as predictors for 30-day mortality, complications, and failure to rescue. PES-NWI subscales were categorized as described by Lake and Friese (2006) as *unfavorable* (mean subscale score ≥2.50 on 0 or 1 subscale), *mixed* (mean subscale scores ≥2.50 on 2 or 3 subscales), and *favorable* (mean subscale scores ≥2.50 on 4 or 5 subscales). Failure to rescue defined as death within 30 days of hospital admission for patients who have experienced a postoperative complication is more highly associated with hospital characteristics than 30-day mortality and complication rates (Needleman et al. 2002). Complications were identified using a set of 21 secondary diagnosis codes and procedure codes and conditions not identified in prior admission (Silber et al. 1995). Adjusted for patient and hospital characteristics, unfavorable nurse practice environments had significantly increased odds of death and failure to rescue. The study confirms significant variation in nurse practice environments and patient outcomes across acute care hospitals. The relationship between nurse practice environments and outcomes persists after adjusting for differences in patients and hospitals. Authors found it quite striking that distinct but related concepts such as staffing, education, and practice environment remained significant predictors of 30-day mortality when estimated simultaneously. Moreover, one in five hospitals had favorable working conditions according to nurse assessments, meaning that four out of every five hospitals studied appeared to show room for improvements within the control of hospital administration. In over 7% of studied hospitals, nurses reported caring for eight or more patients on their last shift, and fewer than 25% of hospitals had a majority of baccalaureate-prepared nurses. Authors noticed that these organizational characteristics are modifiable and strongly associated with better outcomes.

Aiken et al. (2008) investigated 168 Pennsylvania hospitals in the United States to analyze the net effects of nurse practice environments on nurse and patient outcomes after accounting for nurse staffing and education. Outcomes included nurse job satisfaction, burnout, intent to leave, and reports of quality of care, as well as

mortality and failure to rescue in patients. Nurse staffing was measured as the mean number of patients assigned to staff nurses who reported caring for at least 1 but less than 20 patients on their last shift. The educational profile of staff nurses in each hospital was calculated as the percentage of baccalaureate-prepared staff nurses. Three of the five PES-NWI subscales that did not overlap empirically with the selected nurse staffing and education measures were chosen for the analysis: nursing foundation for quality of care; nurse manager ability, leadership, and support; and collegial nurse–physician relations. Hospitals above the median on all three subscales, on one or two subscales, and on none of the subscales were classified as having *better, mixed*, and *poor* care environments. Six nurse survey measures that were analyzed as outcomes included job satisfaction, burnout (MBI-HSS emotional exhaustion scale), and intent to leave their job within the next year and three questions related to nurses' perceptions on quality of care. Patient deaths within 30 days of hospital admission and failure to rescue among patients with complications were included as patient outcomes. Study results show that nurses reported more positive job experiences and fewer concerns with care quality, and patients had significantly lower risk of death and failure to rescue in hospitals with better care environments. Authors conclude that care environment elements must be optimized alongside staffing and education to achieve high quality of care and that nurse leaders have at least three major options for improving nurse retention and patient outcomes: improving RN staffing, moving to a more educated nurse workforce, and improving the care environment. All of this work points to higher levels of characteristics associated with Magnet hospitals associated with better patient outcomes.

2.2.5 Scientific Framework of ANCC Magnet Recognition Program®

A national *Magnet Recognition Program*® in the United States was initiated in 1993 by the American Nurses Association (ANA) guided by the groundbreaking 1983 study on Magnet hospitals and organized by the American Nurses Credentialing Center (ANCC). Since the incorporation in 1991, ANCC has provided formal systematic mechanism whereby individuals and organizations may voluntarily seek credentials that recognize quality in professional practice and continuing education (Urden and Monarch 2002). The Magnet Recognition Program® is an integral division of the ANCC. The ANCC has both an *accreditation* division that validates whether an organization meets established continuing educational standards and a *certification* division that validates if an individual RN possesses the requisite knowledge, skills, and abilities to practice in a defined specialty. *Recognition* is a third credentialing process to evaluate an organization's adherence to excellence-focused standards. The forces of magnetism gleaned from the original study (McClure et al. 2002) were those elements that contributed to an organizational culture that permitted patients to receive excellent care from nurses practicing in an excellent healthcare environment (Urden and Monarch 2002). The *Nursing Administration: Scope and Standards of Practice* (ANA 1996) was a foundational

document from the outset of the program, along with the subsequent versions of the Magnet Manual that guide organizations to their eligibility for recognition, evaluation methods for all criteria as well as acceptable sources of evidence for each force. The recognition process starts with an application, followed by written documentation within a year, a site visit, and finally a decision of the Commission on Magnet (COM) that recognizes each hospital that meets all criteria for Magnet recognition for a period of 4 years. (Redesignation is possible after 4 years.) In 1998 and 2000, the program was expanded to include long-term care facilities and accommodated applications from international healthcare organizations, respectively. After 25 years, the term *Magnet hospitals* has been equated with *excellence*. At that time almost 300 hospitals were designated facilities, and applications had grown 32% per year on average for the previous 5 years (Triolo et al. 2006; Wolf et al. 2008).

In 2004 the COM launched a comprehensive evaluation of the Magnet Recognition Program®. Guided by recommendations for changes, a new model was developed to bring greater clarity to how the forces worked systematically, to reinforce and synergize excellence in nursing practice, and to reduce redundancy to provide greater focus and simplify the application process for organizations. A multivariate structural analysis was performed on 164 sources of evidence rated by 2–4 appraisers of 147 Magnet facilities. Factor and cluster analyses reveal seven domains or clusters of evidence: (1) leadership, (2) resource utilization and development, (3) nursing model, (4) safe and ethical practice, (5) autonomous practice, (6) research, and (7) quality processes (Wolf et al. 2008). Although the forces had served the program well, evidence showed that 7 domains could capture the 14 forces, a breakthrough finding. The COM proposed an additional domain dedicated to outcomes because Magnet designation was until then primarily focused on structure and processes, with the assumption that outcomes will follow. The designation process lacked specific, minimal criteria for evaluating outcomes. Thirty experts reviewed the new Magnet domains and examined sources of evidence that supported these domains. Ultimately, the COM adopted a model that comprises five components:

(1) *Transformational leadership* or leading people to where they need to be to meet the demands of the future, by listening, challenging, influencing and affirming as the organization makes its way into the future, giving birth to new ideas and innovations in practice environments that need to be stable though transforming.

(2) Structural empowerment or operationalizing the mission, vision, and values and achieving the necessary outcomes; staff needs to be developed, directed, and empowered to accomplish the organizational goals and achieve desired outcomes; once the structure has been established and hardwired into place, good outcomes should result.

(3) Exemplary professional nursing practice or understanding the independent and dependent role of nursing, the application of that role with patients, families, communities, and the interdisciplinary team and the application of new knowledge and evidence; the goal is more than the establishment of a strong professional practice, it is what that professional practice can subsequently achieve.

(4) *New knowledge, innovations, and improvements* or systems that are constantly evolving and therefore must be redesigned and redefined to be successful in the future; organizations in designation cycle should reinforce structure and process focusing on outcomes that are tracked, trended, and improved over time as well as benchmarked against high-performing organizations.

Box 2.3 From the Forces of Magnetism to the Magnet Model (Wolf et al. 2008)

- 14 Forces of Magnetism:

  (1) Quality of leadership, (2) organizational structures, (3) management style, (4) personnel policies and programs, (5) professional models of care, (6) quality of care, (7) quality improvement, (8) consultation and resources, (9) autonomy, (10) community and the hospital, (11) nurses as teachers, (12) image of nursing, (13) interdisciplinary relationships, and (14) professional development

- Magnet Hospital Model:

  (1) Transformational leadership

  Domain of evidence: (1) leadership
  Forces of magnetism: (1) nursing leadership and (3) management style

  (2) Structural empowerment

  Domain of evidence: (2) resource utilization and development
  Forces of magnetism: (14) professional development, (12) image of nursing, (2) organizational structure, (4) policies and programs, and (10) community

  (3) Exemplary professional nursing practice

  Domains of evidence: (3) professional practice model, (4) safe and ethical practice, and (5) quality processes
  Forces of magnetism: (5) models of care, autonomy, (13) interdisciplinary relations, (8) resources and consultations, and (11) nurses as teachers

  (4) New knowledge, innovation, and improvement

  Domain of evidence: (7) research
  Force of magnetism: (7) quality improvement

  (5) Empirical quality outcomes

  Domain of evidence: (8) outcomes
  Force of magnetism: (6) quality of care

(5) *Empirical quality outcomes* categorized into clinical outcomes, patient and family outcomes, and organizational outcomes, collected routinely and quantitatively benchmarked; the report card of a Magnet organization will demonstrate graphically to what extent the organization is on track (Wolf et al. 2008) (Box 2.3).

Wolf and Greenhouse (2006) published a study that indicates the primary and secondary priority forces of Magnet needed to achieve high-performing nursing teams. The authors argue that nursing staff perceives their practice environment differently, depending on the developmental level described by Nelson and Burns (1984). These authors define organizational traits in terms of teams being *reactive*, *responsive*, *proactive*, *and high performing*. Their High-Performance Programming Model provides the hallmarks of each level supporting managers and team members to identify their own work environments. Reactive teams are described as having a crisis mentality, minimal teamwork, small cliques, and a focus on survival, paranoia, distrust, and pessimism. In a responsive team, staff exhibits an ability to handle most situations effectively, supported by staff cohesiveness and, where team members follow rules, is focused on achieving near-term goals with a feeling of health. A proactive team can anticipate and handle difficult situations, where team members see the future as a choice to be made, within a strong shared vision and values and begin to use innovative and creative approaches. Finally, a high-performance team has a high level of synergy among team members with high energy and spirit, high creativity, and innovation, where staff is capable of going beyond expectations. Through surveys (the American Nurses Association Magnet survey) completed by nurses at six hospitals in Pittsburgh (US) as well as categorizing hospital units by hospital executives of patient care, three forces of Magnet were significantly different between reactive teams and responsive teams: organizational structure, management style, and interdisciplinary relations. Between responsive and proactive teams, six Magnet forces were significantly different: policies and programs; professional models of care; quality of care, consultation, and resources; autonomy; and interdisciplinary relations. Achieving an organizational context that supports excellent nursing practice and outcomes is complex and will take years of dedication and perseverance grounded on strong fundamentals primarily to begin with and to evaluate the

Box 2.4 Road Map for Creating a Magnet Work Environment (Wolf and Greenhouse 2006)
- Primary Priority Forces of Magnet in High-Performing Teams
  - Organizational structures are flat; unit-based decision-making prevails; there is strong nursing representation in the organizational committee structure.
  - Hospitals and nursing leaders use a participative management style, incorporating feedback from staff at all levels of the organization; feedback is encouraged and valued; nursing leaders are visible, accessible, and committed to communicating effectively with staff.
- Interdisciplinary relationships or characterized as positive; mutual respect is exhibited among all disciplines.

- Secondary Priority Forces Magnet in High-Performing Teams
    - Personnel policies and program or salaries and benefits are competitive or creative, and flexible staffing models are used; staff is involved in personnel policies; significant clinical promotional opportunities exist.
    - Professional models of care or transformational model gives nurses the authority and responsibility for patient care; nurses are accountable for their own practice; nurses are the coordinators of care.
    - Quality of care or nurses perceive they are providing high-quality care; providing quality care is seen as an organizational priority.
    - Consultation and resources; experts, especially advanced practice nurses, are available and used; peer support is given within and outside the nursing division.
    - Autonomy or nurses are permitted and expected to practice autonomously, consistent with standards; independent judgment is expected within multidisciplinary approach to care.

organizational structure, the existing management style, and current the interdisciplinary relationships, and secondarily other forces such as proposed in this study will be the next priority (Box 2.4).

2.2.6   Practice Environment: A Core Concept in the Organizational Context of Nursing Practice Internationally

Originally developed in the United States to better understand nurse turnover and why certain hospitals appeared immune to shortage, practice environment has become a core concept. More than 30 years of research shows that nurse practice environments have a very important role, distinct from but related to the concepts of nurse staffing and nurse education mix and other variables in the broader category of the organizational context of nursing practice. Nursing practice is potentially complex and unpredictable and vulnerable to resource structures and fluctuations, especially to human resources and how these resources are organized. International researchers were also interested in the concept and eager to investigate in what extent the ideas and instruments could be adopted in other socioeconomic context and health systems. The NWI-R and PES-NWI were replicated first in the United States (Choi et al. 2004; Erickson et al. 2004; Li et al. 2007) and Canada (Estabrooks et al. 2002), and soon translated versions of the instrument have been tested and used, among others, in Canada, Iceland, Switzerland, and Belgium (McCusker et al. 2004; Gunnarsdóttir et al. 2009; Schubert et al. 2007; Van Bogaert et al. 2009a, b). Most of these studies find consistent but not identical clustering of items under common themes. These themes or subscales showed that in comparison with the US

Magnet hospitals, nurses' agreements of statements were rather moderate or poor and predicted various outcomes such as job satisfaction, intention to leave the current employer and the nursing profession, work-related injuries, nurse burnout, nurse-reported quality of care, nurse reports of wrong medication, nosocomial infections, complaints of patients and families, and verbal abuse. These studies make it clear that across countries with different cultures and histories, nursing and healthcare leaders face similar issues with respect to workforce supply, quality of care, and financial constraints (Clarke and Aiken 2008). Using common research protocols to investigate structures, processes, and outcomes of variables in hospital nursing across countries, studying the aspects of practice environments most important to patients and nurses in large numbers of hospitals will be a window of opportunity to provide more insights and knowledge. Soon international studies were set up such as RN4CAST in Europe.

RN4CAST was one of the largest nurse workforce studies conducted in Europe that will add accuracy of forecasting models and generate new approaches to more effective management of nursing resources in Europe (Sermeus et al. 2011). A multi-country, multilevel, cross-sectional design studied forecasting models including how features of hospital work environments impact nurse recruitment, retention, and patient outcomes using 4 data sources such as nurse, patient, and organizational surveys as well as routinely collected hospital administrative discharge data in 12 European countries. The main results suggested that deficits in hospital care quality were common to all countries (Aiken et al. 2012). Nursing staffing and the quality of the hospital work environment measured with the PES-NWI were significantly associated with patient satisfaction, quality and safety care, and workforce outcomes. Whether patients rated their hospital as excellent or would recommend their hospital was significantly associated with nurses' ratings of their hospital work environment and reports of nursing staffing. Consequently, the authors suggested that managers' skepticism regarding nurses' complaints around objective clinical observations of care quality might need to be tempered since nurses' assessments concur with those made independently by patients. Moreover, nurses in every country indicated lack of confidence that hospital management would solve identified problems in patient care. Aiken et al. (2012) mentioned that the United States has recently implemented several high-profile initiatives to achieve safe nurse staffing and improve work environments. At that time more than 20 US states had enacted or were considering legislation to regulate nurse staffing. They also cited Magnet Hospital Recognition®, which promotes improved work environment to almost 400 or 7% of US hospitals. Magnet status is internationally recognized in Australia, New Zealand, and Singapore, among others. However, Europe does not have a single Magnet hospital or an equivalent recognition of nursing excellence. The authors of the RN4CAST study concluded that improvement of hospital work environments is necessary for improving safety and quality of hospital care and to increase patient satisfaction. Moreover, further results showed associations between nursing staffing and bachelor-prepared nurses with inpatient dying within 30 days of admission (Aiken et al. 2014). Patient mortality data were obtained focusing on postoperative patients discharged from study hospitals in the year most proximate to the nurse

survey for which data were available. Nurse staffing was calculated from survey data by dividing the number of patients by the number of nurses that each nurse reported were present on their ward on their last shift. Low ratios suggested more favorable staffing. Nurse education was calculated by the % of all nurses in each hospital that reported that the highest academic qualification they had earned was a bachelor's degree or higher. These results show that variation in hospital mortality is associated with differences in nursing staffing levels and educational qualifications.

Another paper from the RN4CAST study analyzed data from 11 countries, 352 hospitals, and more than 2000 nursing units, and almost 23,500 nurses showed associations between unfavorable nurse perceptions of their work environments (in terms of managerial support for nursing care, good physician–nurse relations, nurse participation in decision-making, and organizational priorities on care quality) and nurse burnout at both the nursing unit and the hospital levels (Li et al. 2013). The authors concluded that nurse work environment dynamics are related to nurses' burnout experiences at both the *nursing unit and the hospital level*. The correlation structure among the three burnout outcomes varies across countries but is stable between hospitals within countries and between nursing units within hospitals. These findings provide a motivation for nurses and physicians within nursing units to partner up and for nurse leaders from bedside to boardroom to further develop their managerial skills. Moreover, there is a clear need toward an integrated vision on promotion of care quality in tune with the workforce according to these RN4CAST researchers.

Just about the same period when the research on nurse shortages and the organizational context of nursing practice was set up, research on burnout was developed and provides until now numerous studies and rich insights and knowledge on determinants associated to employers' professional well-being and productivity relevant for nursing practice and healthcare.

2.3 Burnout, Compassion Fatigue, and Work Engagement: Cycles of Loss and Gain

2.3.1 Development of the Burnout Concept and Empirical Findings

The Nurses' Early Exit or NEXT-Study, conducted in the first decade of this millennium, investigated the reasons, circumstances, and consequences surrounding premature departure from the nursing profession. It was carried out across Europe in Belgium, Finland, France, Germany, Great Britain, Italy, the Netherlands, Poland, Sweden, and Slovakia. Of particular interest in this study were the consequences of the decision to leave as a nurse, their healthcare institution, and the healthcare system (www.next.uni-wuppertal.de). Burnout was found to be one of the most important risk factors for leaving nursing along with poor quality of teamwork. Intention to leave the nursing profession in the coming year increased twofold to threefold in nurses with high burnout scores. The authors identified in addition that patients

receiving care within units having adequate staff, good administrative support for nursing care, and good relations between physicians and nurses, perceived by the nursing staff, were more than twice as likely, compared with other patients, to report high satisfaction with their care and their nurses reported significant lower burnout (Estryn-Béhar et al. 2007). The six-item scale Copenhagen Burnout Inventory (CBI) was chosen to measure *personal burnout*. Item examples are: Do you feel tired?, do you think "I can't take it anymore?," and do you feel weak and susceptible to illness? The CBI originally consists of three parts, namely, personal burnout, work burnout, and client burnout. According to Borritz and Kristensen (2001), personal burnout is a state of prolonged physical and psychological exhaustion.

A recently published systematic review concluded that the majority of the articles included revealed high levels of work-related stress, burnout, job dissatisfaction, and poor health are common within the nursing profession supported by studies suggesting that nurses experience longer working hours as well as frequent direct, personal, and emotional contact with a large number of patients in comparison with other health professionals (Khamisa et al. 2013). After Aiken (2002), hearing concerns about difficulties recruiting and retaining qualified staff for dedicated AIDS units where young adults were treated for a fatal and potentially communicable disease, added burnout along with turnover intentions to their study design, nurse burnout became an important study variable in research related to the organizational context of nursing practice. Leiter and Maslach (2009) studied the mediating role of burnout between areas of worklife and nurse turnover intentions. Mediation refers to situations where variables have an intermediate position between predictors and outcome variables. Study results confirm the relationship among the three burnout dimensions: emotional exhaustion predicts depersonalization or cynicism, which predicts reduced personal accomplishment or efficacy. Areas of worklife such as the extent nurses experience limited value congruence predict all three burnout dimensions, while perceived workload and lack of fairness just emotional exhaustion and depersonalization, respectively. The extent nurses experience lack of control predicts other areas of worklife such as lack of fairness and the latter limited value congruence. Burnout predicts turnover intentions directly by depersonalization or cynicism and indirectly by the remaining burnout dimensions. The study reveals burnout as a critical mediator for nurses' intentions to leave their job.

The most frequently used instrument to measure burnout was developed by Maslach et al. (1996), the Maslach Burnout Inventory Human Service Survey or MBI-HSS, and defined *burnout as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment*. These authors consider *increased emotional exhaustion as key aspect of burnout where emotional resources are depleted; workers feel they are no longer able to give of themselves at a psychological level. A second aspect of the burnout syndrome is depersonalization as negative, cynical attitudes and feelings about one's client. A third aspect of the burnout syndrome, reduced personal accomplishment, refers to the tendency to evaluate oneself negatively, particularly with one's work with clients. The consequences of burnout are potentially very serious for workers, their clients, and the larger institution in which they interact*. Authors' initial research on the burnout syndrome involved

interviews, surveys, and field observations of employees in a wide variety of human service professions including healthcare, social services, mental health, criminal justice, and education between 1977 and 1985. The MBI-HSS is designed to assess the three aspects of the burnout syndrome as separate subscales or dimensions. The emotional exhaustion subscale assesses feelings of being emotionally overextended and exhausted by one's work. The depersonalization subscale measures an unfeeling and impersonal response toward recipients of one's services, treatment, or instruction. The personal accomplishment subscale assesses feelings of competence and successful achievement in one's work with people. The frequency, which with the respondents experience feelings related to each subscale, is assessed using a 7-point Likert scale ranging from *never* to *everyday.* Burnout is conceptualized as a continuous variable ranging from low to moderate to high (Maslach et al. 1996, pp. 4 and 5), and research contributed to the establishment of demographic norms as well as occupational specific norms although norms vary across cultures, work settings, and occupational groups (Maslach et al. 1996, p. 35). Initial research began in the United States and Canada and later internationally with many translations of the MBI-HSS showing similar psychometric properties across cultures but differences in average levels of burnout. For example, Europeans show lower average scores in comparison with average scores of North Americans (Schaufeli and Enzmann 1998).

The authors developed a second version of the Maslach Burnout Inventory General Survey or MBI-GS to measure burnout in occupational groups without direct personal contact with service recipients or with casual contact with people. The MBI-GS measures respondents' relationship with their work, not necessarily as a crisis in one's relationship with people at work. It has three subscales: exhaustion or references to fatigue, cynicism reflects indifference or distant attitude to work, and professional efficacy encompasses social and nonsocial aspects of accomplishments. The MBI-GS measures respondents' relationship with their work on a continuum from engagement to burnout. Engagement is an energetic state in which one is dedicated to excellent performance of work and confident of one's effectiveness. In contrast, burnout is a state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's capacity to perform (Maslach et al. 1996, pp. 20 and 21).

Maslach and her coauthors developed a structural model of burnout that incorporates various predictors of burnout such as demands and workload, interpersonal conflict among colleagues, ineffective coping styles, low social support from coworkers and supervisors, and limited autonomy and decision involvement. These predictors are all associated with feelings of exhaustion, cynicism, and diminished efficacy and in turn reduced organizational commitment, increased turnover and absenteeism, and physical illnesses (Maslach et al. 1996, pp. 36 and 38). In addition, drawing on the long-standing notion that stress results from a misfit between the individual and the job, Maslach and colleagues proposed the greater the mismatch within six areas, the greater the likelihood of burnout. These areas of worklife are *workload*, *control*, *reward*, *community*, *fairness*, and *values congruence* (Maslach et al. 1996, p. 42). Experiences of workload and the extent of control, the first two areas of worklife, are key aspects of the Demand–Control model of job stress (Karasek and Theorell 1992), and reward calls upon the power of

reinforcement to shape behavior (Leiter and Maslach 2009). Community refers to social support and interpersonal relationships as resources, while fairness refers to equity and social justice in organizations, and finally value congruence refers to the cognitive–emotional power of agreement between personal and organizational goals and expectations (Leiter and Maslach 2009).

Research shows that jobs can be categorized in terms of job demands and job control (Karasek and Theorell 1992; Van der Doef and Maes 1998, 1999). Four groups of jobs can be identified: low demand/low control, low demand/high control, high demand/high control, and high demand/low control. The latter job subgroup has a potential risk for high job strain, psychological distress, and illness. The first two subgroups have a potential risk for decreased motivation and low strain, respectively. High-demand and high-control jobs are potentially challenging an increase in motivation and learning. Study shows that job control acts as a buffer for the negative consequences of high job demands (Ibrahim and Ohtsuka 2014; Adriaenssens et al. 2017).

Research over 25 years has revealed the complexity of the construct and places the individual prolonged stress experience within a larger organizational context of people's relation to their work (Maslach et al. 2001). The focus on engagement, the positive antithesis of burnout, gave new perspectives on interventions to alleviate burnout, and the social focus of burnout and its specific ties to the work domain make a distinct and valuable contribution to people's health and well-being. Schaufeli and Buunk (2003) describe a clear difference between job stress and burnout. Job stress occurs when job demands do not match the person's adaptive resources, while in contrast burnout can be considered as a final stage in a breakdown in adaptation that results from the long-term imbalance of demands and resources, from prolonged job stress. Burnout includes the development of negative attitudes and behaviors toward recipients, the job, and the organization, whereas job stress is not necessarily accompanied by such attitudes and behaviors. Authors notice that anybody can experience stress, while those who entered their careers enthusiastically with high goals and expectations can only experience burnout. In addition, some personal characteristics such as anxiety, neuroticism, and lack of hardiness seem to be associated with burnout.

A later study of Maslach and Leiter (2008) using the MBI-GS and the Areas of Worklife Scale or AWS (Leiter and Maslach 1999) in a longitudinal design had the basic premise that if an individual is experiencing some early signs of burnout (exhaustion only or cynicism only), then that information is sufficient for consideration of actions to prevent burnout and build engagement. People's psychological relationships to their jobs have been conceptualized as a continuum between the negative experience of burnout and the positive experience of engagement with three interrelated dimensions: exhaustion—energy, cynicism—involvement, and inefficacy—efficacy. Authors argue that the practical significance of this burnout—engagement continuum is that engagement represents a desired goal for any burnout interventions. Study results show that engagement is the more normative experience in the workplace, and occupational problems are likely to be temporary and more easily resolved if the person maintains a good relationship with the job. In this study, lack of fairness (one of the areas of worklife) such as favoritism, unjustified

inequities, or cheating turns out to be the critical incongruity or tipping point to develop into burnout over time. Lack of fairness is also associated with depersonalization in a nurse population studying a mediation model describing the impact of areas of worklife that predicts nurse turnover through burnout as described above (Leiter and Maslach 2009).

2.3.2 Development of the Concept of Work Engagement and Empirical Findings

Another group of researchers have proposed work engagement as an independent, distinct (albeit related) concept negatively correlated with burnout, rather than representing the opposite of the three burnout dimensions of emotional exhaustion, depersonalization, and personal accomplishment (Schaufeli and Bakker 2003). Engagement scholars believe that work engagement is a positive and fulfilled work-related state of mind characterized by vigor, dedication, and absorption and have developed tools to measure it such as the Utrecht Work Engagement Scale (UWES). Bakker et al. (2011a) argue that measures of work engagement should capture both positive and negative aspects of psychological state, and response anchors should be designed to accommodate both short-term and longer-term time frames. However, it has been argued that burnout and work engagement are not inverses of each other (although they can coexist to some extent), and thus the Maslach Burnout Inventory and the Oldenburg Burnout Inventory are not valid measures of work engagement (Schaufeli and Salonova 2011).

A recent systematic review of the engagement literature revealed a need for a conceptually consistent definition and measurement of work engagement to permit the study of organizational behavior, including work performance and healthcare organizational outcomes (Simpson 2009). Several conceptual papers discussed the concept of work engagement and summarizing research on its most important antecedents (Bakker et al. 2011a, b; Schaufeli and Salonova 2011). In particular, job demands and job resources have shown associations with job strain and motivational processes, respectively (Bakker and Demerouti 2007; Salanova and Schaufeli 2008; Schaufeli et al. 2009; Bakker et al. 2011b). Increases in job demands such as work overload, emotional demands, and work–home interference and decreases in job resources such as social support, autonomy, opportunities to learn, and feedback predict burnout. Unbalanced job demands and job resources were identified as part of *a strain process or loss cycle*, and increases in job resources were found to predict work engagement in *a motivational process or gain circle*. Similarly, a longitudinal study of Finnish healthcare personnel confirmed that job resources were better predictors of work engagement, especially vigor and dedication, than job demands (Mauno et al. 2007). A study performed in long-term facilities' work shows that engagement measured by vigor, dedication, and absorption has a mediating relationship between service climate and patient-centered behavior (Abdelhadi and Drach-Zahavy 2012). Of the three dimensions of work engagement, absorption

plays a pivotal role in the relationships here. The latter finding is in contrast with the results of an earlier qualitative study suggesting that absorption may not affect nurses' turnover intentions (Freeney and Tiernan 2009). The authors of that paper argue that nurses leave certain specialties because of difficulties detaching themselves emotionally from their work; they proposed that absorption would be related to turnover rather than retention. A study investigating the association between nurses' individual characteristics, job features, and work engagement found that job satisfaction, quality of working life, lower social dysfunction, and lower stress associated with patient care predicted vigor and dedication. The authors suggested that organizational strategies to reduce stress associated with patient care and to improve social and communication skills might enhance nurses' vigor and dedication (Jenaro et al. 2011). Another study showed positive associations between nurses' role, stress, and feelings of burnout as well as negative associations on work engagement after controlling for personal resources (optimism, hardy personality, and emotional competence) and social and demographic variables (Garrosa et al. 2011). Both these studies are consistent with Bakker et al. (2011b) hypothesis that when employees perceive that their organizations provide a supportive, involving, and challenging climate that accommodates their psychological needs, they are more likely to be engaged. The authors argue that work environments can facilitate climates for engagement and in addition can be interpreted as collective engagement (Salanova and Schaufeli 2008). In a cross-sectional survey design using the UWES, work engagement was studied in a representative test group of hospital-based ward teams, who had recently commenced the latest phase of the national "Productive Ward" (PW) initiative in Ireland and compared them to a control group. The findings demonstrate how quality improvement activities that support nurses' capacity to provide more direct patient care eliminating waste and activities without added value for patients, as integrated by the PW program, appear to positively impact the work engagement (the vigor, absorption, and dedication) of ward-based teams. The use and suitability of the UWES as an appropriate measure of "engagement" in quality improvement interventions were confirmed. The authors argue that engagement of nurses and frontline clinical teams is a major component of creating, developing, and sustaining a culture of improvement (White et al. 2014). In a longitudinal study design with a large population of health employees, Armon et al. (2012) found that changes in the levels of job demands, job control, and social support over time predicted subsequent certain changes in levels of vigor over time. The growth of interest in work engagement is potentially a reflection of widespread recognition that is making effective use of employee skills and knowledge with proper support and resources and is imperative in rapidly changing economies and organizations (Leiter and Bakker 2010). Laschinger and colleagues' empirical studies showed that nurses perceptions of sufficient support (e.g., peers and supervisors) and sufficient resources needed to do the job, in accordance with opportunities to be involved in joint decision-making, are linked with job satisfaction, commitment, engagement, productivity, and quality of care (Laschinger et al. 2004, 2009; Laschinger and Finegan 2005).

2.3.3 Balancing Effort and Reward and Recognition as Predictors of Compassion Fatigue and Compassion Satisfaction

Kelly et al. (2015) study the impact of meaningful recognition on compassion fatigue and compassion satisfaction in a Magnet-designated 700-bed teaching hospital. Compassion fatigue has been defined as a state of physical or psychological distress in caregivers, which occurs as a consequence of an ongoing and snowballing process in a demanding relationship with needy individuals (Coetzee and Klopper 2010). Compassion fatigue is a concept that combines burnout described by three dimensions such as emotional exhaustion, depersonalization, and personal accomplishment and secondary trauma stress. Secondary trauma stress identified by Stamm (2010) occurs from pressure, anxiety, and various negative feelings that are linked with caring for people who have directly experienced a traumatic situation, in particular, nurses and other healthcare workers who provide direct care, have frequently prolonged, continuous, and intense contact with patients and families, and are undergoing stressful life changes with a potential risk of compassion fatigue and in turn undermining relationships with patients and their families (Coetzee and Klopper 2010). Compassion fatigue has been associated with a "helper syndrome" that results from continuous disappointing situations and leads to moral distress (Figley 1995; van Mol et al. 2015). Compassion fatigue was described for the first time in the early 1990s as the loss of compassion in result of repeated exposure to suffering during work and, later, defined as secondary traumatic stress resulting from a deep involvement with a primarily traumatized person, because of the *more friendly framing*. From this time on, compassion fatigue has interchangeably been referred to as secondary and posttraumatic stress or vicarious trauma (Figley 1995; van Mol et al. 2015).

Instead of compassion fatigue, compassion satisfaction, however, encompasses nurses' pleasure and gratitude that develops from caregiving for patients through activities that help strengthen their passion for caring for patients (Simon et al. 2005) as a gain circle. The authors studied the impact of the DAISY Award. This award formally recognizes nurses for their extraordinary contributions and is offered through the nonprofit organization the DAISY Foundation (https://www.daisyfoundation.org/daisy-award). The foundation was formed after cofounders Mark and Bonnie Barnes experienced an extended hospitalization and loss of their 33-year-old son to an autoimmune disease (Kelly et al. 2015). In hospitals that participate in the program, patients and colleagues can nominate nurses to be honored. Nurses who are nominated receive their nomination form, as well as recognition from their employer. From the nominees, a single awardee is selected and honored in front of his or her colleagues. At the study hospital, nominees receive a DAISY pin and their nomination form from their direct supervisor, and awardees are recognized on their unit in front of their colleagues. To date approximately almost hospitals participate in the DAISY recognition program in 15 countries (Kelly et al. 2015). Compassion fatigue and compassion satisfaction were measured in the study by a well-known instrument the Professional Quality of Life Scale (ProQOL) (Stamm 2010). The study results show that the younger generations of nurses are experiencing burnout

and secondary trauma stress, potentially contributing to their decision of leaving the positions and possibly the profession. Fortunately, the research shows that meaningful recognition through the DAISY Award and increasing satisfaction have the potential to combat compassion fatigue by increasing compassion satisfaction. The authors expressed their worries that nurses who gain experience are more likely to have higher compassion fatigue and compassion satisfaction and could be a major cause for turnover and lack of retention. Meaningful recognition provided by the DAISY Award is linked with lower compassion fatigue and higher compassion satisfaction even when nurses are nominated. Authors refer to other beneficial meaningful recognition initiatives such as peer and supervisor feedback.

These study findings are in line with the findings of the European NEXT study. A prospective study with 1-year follow-up showed that high effort—reward imbalance at the baseline, measured with a dedicated instrument, has an elevated risk of intention to leave the profession (Li et al. 2011). The study assumption is based on the postulate that unbalanced reciprocity in transaction results in a stressful experience. Therefore, a balance between what nurses give (effort) and what nurses receive (reward) is preferable and necessary to monitor. Reward implicates financial reward as well as esteem, recognition, and career opportunities including job security. Besides extrinsic efforts, intrinsic effort was measured as a component of overcommitment, a personal pattern of excessive coping with work demands. The discrepancy between high efforts spent and low reward received in turn is what matters most. Nurses experiencing high level of overcommitment are expected to exaggerate their efforts beyond levels usually considered, in combination with increased susceptibility to reward frustration as described in a theoretical assumption (Siegrist et al. 2004). The authors conclude that a comprehensive approach combining both individual and organizational directed interventions would be a promising way to promote healthy workplace and job performance. In addition, results of studies guided by social exchange theory suggest that burnout often develops in organizations where nurses are in emotionally charged and unbalanced relationships with patients in terms of costs and benefits or investments and outcomes (Schaufeli and Buunk 2003; Schaufeli et al. 2006). This studied lack of reciprocity or disturbed balance between give and take confirmed that burnout develops when nurses perceive an unbalanced relationship with colleagues and the organization as well. Emotional exhaustion appears to be related to lack of reciprocity at all three levels: in contact with patients and colleagues as well as toward the institution.

A systematic review on the prevalence of compassion fatigue and burnout among healthcare professionals in intensive care units selected 40 of the 1623 identified publications, which included 14,770 respondents, which met the selection criteria (van Mol et al. 2015). Two studies reported the prevalence of compassion fatigue as 7.3 and 40%; five studies described the prevalence of secondary traumatic stress ranging from 0 to 38.5%. The reported prevalence of burnout in the ICU varied from 0 to 70.1%. A wide range of intervention strategies emerged from the recent literature search, such as different work schedules, educational programs on coping with emotional distress, improved communication skills, and relaxation methods. The authors conclude that policy-makers should introduce interventions to prevent the

negative consequences of emotional distress suggesting to perform longitudinal experimental studies to examine the emotional distress among ICU professionals in relation to their communication skills and educational sessions on stress.

2.3.4   Coping and Prevention of Burnout: What Do We Learn from Intervention Studies

Le Blanc et al. (2007) conducted an intervention study on 29 oncology wards to evaluate the effect of a team-based burnout intervention program combining a staff support group with a participatory action research approach. The first intervention was to organize regular meetings during which care providers had the opportunity to share personal work-related experiences and feelings with colleagues in a supportive and nonjudgmental environment. The authors argued that social support is crucial in the care provider adaptation in working with cancer patients. Empathic concern and active care from one's coworkers can reduce greatly the effects of accompanying stress and help prevent burnout. The second intervention was focused on the participation and experience of care providers of the oncology wards (participatory action research) and aimed to take users' local contexts as a starting point for the research and share control over the research and knowledge generation process with the nursing staff. It would thus appear that a better understanding of work stress in a local context can be developed and translated into effective interventions. The ultimate goal in work stress intervention in this study was building an organization's capacity to solve self-identified problems. Study findings showed that subjects in the experimental group felt significantly less exhaustion and depersonalization than care providers in the control group immediately after the program ended as well as 6 months later. The authors argued that the intervention not only had an impact on reducing arousal addressing perceptions of job demands, preventing further energy depletion or exhaustion, but also had positive effects on perceptions of job resources—such as job control and within-team interpersonal support relationship—which have found to be related to motivational outcome measures such as depersonalization. The authors concluded that shared responsibility for the quality of work environment and mutual support are effective means of maintaining staff morale among professionals in highly demanding, specialized occupations.

Awa et al. (2010) performed a review of burnout intervention programs evaluating 25 primary intervention programs. Seventeen (68%) were person-directed interventions, among them cognitive behavioral training, adaptive coping, relaxation therapy, and psychosocial skill and communication training. Two (8%) were organization-directed and six (24%) were a combination of both intervention types such as cognitive behavioral and management skill training and social support. Eighty percent of all programs led to a reduction in burnout. Person-directed interventions reduced burnout in the short term (6 months or less), while a combination of both person- and organization-directed interventions had longer-lasting positive effects (12 months and over). In all cases, positive intervention effects diminished in the course of time. The authors of the review proposed that positive effects can be extended by refresher courses at appropriate intervals after

the end of the initial program, and future studies should use better designed and evaluated randomized controlled trials, with comparable participants, appropriate baseline data, and at least two post-intervention measurement points. Nowrouzi et al. (2015) performed a literature review of workplace interventions aiming to create healthy work environments and improve nurses' quality of worklife by managing occupational stress and burnout prevention. The authors noted that the studies included in this review were all based in workplaces and focused mainly on individual strategies. Occupational stress research often lacks a comprehensive theoretical framework that includes both individual and organizational factors. In addition, these Canadian authors argue that any nurse retention strategy should be linked to organizational structures and functions to take advantage of existing partnerships and increase efficiencies. For example, health policy should be directed at upgrading health facilities and improving the work environment as part of a national health facility expansion plan. Furthermore, management style, incentives and career structures, educational opportunities, salary scales, and recruitment and retention practices were some of the organizational factors that can influence the geographic distribution of health resources. As Schaufeli and Buunk (2003) mention, almost every author on the subject acknowledges that a combination of individual and workplace approaches is likely the most effective; the vast majority of burnout interventions have been conducted on the individual level. Therefore, Awa et al. (2010) propose properly planned intervention programs that include aspects of both person-directed and organization-directed prevention measures. Nowrouzi et al. (2015) conclude that future studies should incorporate random assignment to treatment and control groups and report the results of all outcomes. In addition, the continued use of meta-analytic techniques to synthesize research findings should be pursued. As more primary studies are conducted, systematic reviews should be updated to reassess results.

The concepts of burnout, compassion fatigue, and later work engagement provide broad insights about the organizational context of nursing practice and in addition provide nurses and leaders with keys to better understand what is happening to them, their teams, and institutions as well as their patients. Leadership is therefore essential to open opportunities and capacity to create healthy and productive work environments.

2.4 Empowerment and Authentic Leadership: To an Adaptive Healthy Work Environment and Productivity

2.4.1 Development of Empowerment Concept and Empirical Findings

Organizational empowerment, a construct based on Kanter (1993) model of structural or workplace empowerment, has been empirically applied in several research projects. Structural empowerment, described as nurses' access to relevant information, support, and resources needed to do the job, and opportunities to learn and grow are linked with job satisfaction, commitment, productivity, and burnout

(Kanter 1993; Laschinger et al. 2001b, 2003; Laschinger and Finegan 2005). Kanter described workplace social structures that enable employees to mobilize human and material resources to accomplish meaningful work, and sources of empowerment will determine the extent to which employees have developed an organizational network of alliances (e.g., development of informal power), and jobs that have a large degree of discretion are visible and important to organizational goals (e.g., having formal power). Kanter's theoretical framework defines structural empowerment as the following work characteristics: formal and informal power, access to information, opportunities to learn and personal development, and supportive relationships (e.g., superiors, peers, and subordinates).

A Canadian study found that staff nurses' perception of empowerment, supervisor incivility, and cynicism most strongly predicted low job satisfaction and job commitment. Furthermore, emotional exhaustion, cynicism, and supervisor incivility most strongly predicted nurse turnover intentions (Laschinger et al. 2009). Kanter thus described empowerment structurally, whereas Spreitzer (1995) considered it a psychological response to conditions within the practice environment that lead nurses to experience a certain degree of *meaning* (I value my work)*, competence* (I make a difference at work)*, self-determination* (I have control over my work), *and impact* (I am confident/competent that I can do my work well), essential motivational aspects of nurses' worklife and productivity (Dahinten et al. 2014). Various studies have described the effect that conditions for nurse structural empowerment have on the experience of empowerment linking nurse structural and/or psychological empowerment with job satisfaction, commitment, engagement, and spirit at work, as well as work effectiveness, unit effectiveness, and quality of work (Laschinger et al. 2004; Wagner et al. 2013; Laschinger et al. 2014; Yang et al. 2013; Eo et al. 2014; Wang and Liu 2015).

A cross-sectional survey conducted among nurses in the Netherlands demonstrated the impact of structural and psychological empowerment on innovative behavior; informal power and the extent of impact were found to be the most relevant determinants in the latter study (Knol and Van Linge 2009). Similarly, another survey-based study of mental health staff members found that structural conditions such as opportunity and resources were important for creating support for evidence-based practice (Engström et al. 2015). Lethbridge et al. (2011) conducted an integrative literature review and described links between structural empowerment, psychological empowerment, and reflective thinking as means of assisting undergraduate nursing students to become effective professionals in both their academic and future practice careers. A Korean study of staff nurses showed that empowerment mediated the relationship between job characteristics, transformational leadership, and work effectiveness (Eo et al. 2014), while a Canadian study (Wagner et al. 2013) showed the impact of resonant leadership and individual empowerment on spirit at work (e.g., nurses' individual experiences that energized their work), job satisfaction, and organizational commitment. Wong and Laschinger (2013) confirmed the mediating role played by nurse empowerment through authentic leadership in nurse

performance and job satisfaction. Authentic leadership has been described as "a pattern of transparent and ethical leader behavior that encourages openness in sharing information needed to make decisions while accepting input from those who follow" (Avolio et al. 2009).

2.4.2 The Pivotal Role of Authentic Leadership

Clinical teams are prone to various negative factors that can undermine their capacity to perform their daily tasks well and to meet complex patients' needs as well as organizational goals. Referring to practice experiences and learning from a number of studies, nurse practice environments are complex to understand, and it is not always clear how to support clinical teams effectively. The introduction of new graduates in clinical teams requires careful attention because their transition to professional practice can be stressful, leading to early career burnout and decreased emotional well-being (Van Bogaert 2016). Laschinger's and colleagues' study (Laschinger et al. 2015) provides insights into new graduates' feelings about burnout and mental health status. The study tested a model linking authentic supervisor leadership with areas of worklife and occupational coping efficacy, predicting burnout and mental health of new nursing graduates. Moreover, the study introduced interpersonal strain as a third component of burnout alongside emotional exhaustion and cynicism. Authentic leadership was defined and measured as the extent to which new graduates evaluated their leaders as self-aware and transparent, as well as by acting through moral–ethical perspective and through balanced processes. Areas of worklife were measured as the extent to which respondents experienced workload, control, rewards, community and fairness, and valued congruence (Leiter and Maslach 2011). Previous insights linked authentic leadership to a positive fit between nurses' job expectations and actual levels of the six basic areas of worklife and found also that person–job fit among the six areas of worklife fully mediated the influence of authentic leadership on nurses' work engagement (Bamford et al. 2013). Study results show that authentic leadership had a positive effect on areas of worklife, and the latter, in turn, had a positive effect on occupational coping self-efficacy, resulting in lower burnout, such as lower levels of emotional exhaustion and cynicism as well as less interpersonal strain, which ultimately was associated with favorable new mental health of graduates. The study adds to previous studies around authentic leadership to support nurses' psychosocial and practice environment in the capacity to achieve excellent care as well as professional well-being (Wong and Laschinger 2013).

Laschinger et al. (2015) describe authentic leaders as positive, transformational, moral leaders who are true to themselves and aim to bring out the best in themselves and others. They communicate their genuine selves to others through four key behaviors: relational transparency and presenting themselves as who they truly are, balanced processing and considering differing points of view before making decisions, moral/ethical behavior and acting in accordance with internal moral and

ethical values, and self-awareness and having insight about self and influence on others (Avolio and Gardner 2005; Walumbwa et al. 2008). Importantly, authentic leaders foster the development of their followers' intrapersonal resources such as psychological capital or their sense of optimism, hope, resiliency, and self-efficacy. These positive psychological resources support followers' self-awareness and self-regulatory behaviors, contributing to positive self-development and confidence (Avolio and Gardner 2005). Authors argue that authentic leadership theory has gained empirical support in both the management and nursing literature. In nursing, nurses who perceive their leaders to engage in authentic behaviors feel empowered and supported in their jobs (Laschinger et al. 2012).

MacPhee et al. (2014) and Dahinten et al. (2014) evaluated a leadership program for novice first-line nurse leaders in Western Canada: the Nursing Leadership Institute. The leadership program consists of a 4-day residential workshop with didactic leadership content and interactive learning sessions; a year-long innovation project of relevance to the leaders' respective organizations; mentorship from senior nursing leaders; organizational supports, such as release time for project work; and an online knowledge network to facilitate connections among leaders (MacPhee and Bouthillette 2008; MacPhee et al. 2012). The program targets novice first-line nurse leaders with less than 3 years' experience because of their critical roles and responsibilities within healthcare facilities. Study results show in a first part (MacPhee et al. 2014) that the program was directly associated with leaders' perceptions of using more empowering behaviors based on sociopsychological theory (Conger and Kanungo 1988) and capture five major categories of leader-empowering behaviors such as meaningful work, participation in decision-making, facilitating goal accomplishment, autonomy, and removing bureaucratic barriers (Hui 1994). Leader-empowering behaviors were also associated with feelings of being structurally empowered, mediated through feelings of being psychologically empowered, although as the authors mentioned the source of empowerment needs further investigation. In a second part (Dahinten et al. 2014) study results show that the leaders' program participation was directly associated with greater staff organizational commitment 1 year after the program. Both program attendance and leader-empowering behaviors were found to act as independent catalysts for staff empowerment, with structural empowerment partially mediating the effects of leader-empowering behaviors on organizational commitment. But the results showed some unclear findings because of limited sample and variability in measurements. Authors identified a discrepancy between leaders' own assessment of empowering behaviors and staff nurse's assessment of leader-empowering behaviors. The authors refer to many unknown factors and processes that remain to be more fully explored, such as the antecedents to the leader empowerment process and the role(s) of psychological empowerment. Relational leadership is a social process influenced by many organizational factors. Moreover, the authors cite the work of Edmonstone and Western (2002) who argue that leaders cannot control or manipulate the culture of their organization but can only influence and shape its direction as it emerges (Dahinten et al. 2014).

Conclusion

In this chapter, we began with reviewing research attempting to explain nurse shortages that eventually led to the emergence of a concept, the *nurse practice environment*, measured with an instrument, the NWI-R, that evaluates the presence of certain organizational traits from the original Magnet hospital research which have been found to be predictive of various nurse and patient outcomes. We continued by presenting a concept, *burnout*, measured primarily using the MBI-HSS that describes the negative emotional and mental state of nurses providing care to their patients under chronically stressful conditions, reflecting the fit of six key areas of worklife with their needs and in turn predicting their health conditions, turnover intentions, and productivity in *a potential loss cycle*. A second concept related to burnout but almost its inverse*, engagement*, measured with the UWES, is a positive and fulfilled work-related state associated with certain resources such as social support, autonomy, and opportunities to learn and receive feedback: *a potential motivational process or gain circle*. Finally, an essential element for sustaining gain rather than loss cycles is *empowermen*t or the extent nurses have control and autonomy in decision-making as well as support of peers and supervisors and the impact of another concept nurse managers' and leaders' *authentic leadership* behavior on staff empowerment. Both concepts have a crucial and promising role in the various aspects that creates an organizational context of nursing practice to a healthy and productive work environment.

2.5   Further Research Initiatives

Based on these conceptual and empirical insights and specifically the work of Laschinger and Leiter (2006), Leiter and Laschinger (2006) and Kowalski et al. (2010), we developed two models: a burnout model and an engagement model in three phases.

The first phase was the development of preliminary burnout model tested in an acute care hospital population of staff nurses (n = 401) showing that feelings of burnout influenced by nurse practice conditions (determined by *unfavorable perceived* interprofessional relations with physicians, hospital management, and organizational support as well as the conditions within the unit or nurse management at the unit level) have subsequent effects on job dissatisfaction, turnover intentions, and unfavorable reported quality of care (Van Bogaert et al. 2009a, b) (Fig. 2.1).

In the next phase, two models were tested—a burnout model and a work engagement model developed with the same variables as the preliminary model. Additionally, a nurse-assessed workload variable was tested with a psychiatric hospital population of nurses and other healthcare workers such as licensed practice nurses/unregulated caregivers (n = 357). Findings in the burnout model showed that feelings of burnout were influenced by nurse practice conditions (determined by *unfavorable perceived* interprofessional relations with physicians, hospital management, and organizational support and the conditions within the unit or nurse management at the unit level) as well as *unfavorable* nurse-reported *workload* and
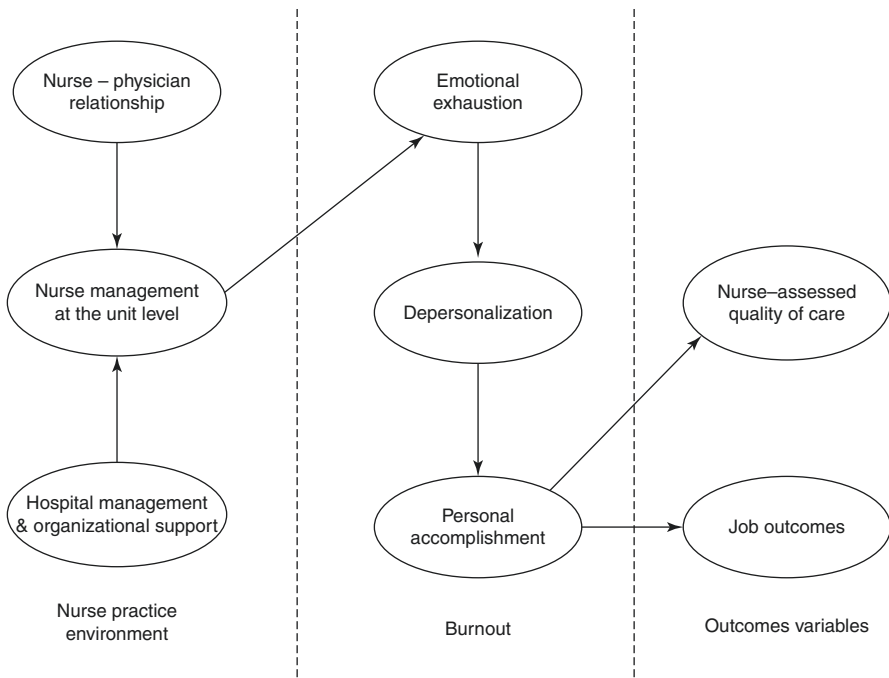
Fig. 2.1 Model preliminary phase (hypothesis)

subsequently had unfavorable effects on reports of quality of care. Although coun-
terintuitive, *unfavorable reported workload* had a direct positive effect on job satis-
faction and low turnover intentions as well as an inverse impact between hospital
management and quality of care.

Instead, in the work engagement model, feelings of engagement are influenced
by nurse practice conditions—determined by *favorable perceived* interprofessional
relations with physicians, hospital management, and organizational support and the
conditions within the unit (nurse management at the unit level)—and *favorable*
nurse-reported *workload*—consequently has a favorable effect on reported quality
of care. However, an inverse impact between hospital management and organiza-
tional support and nurse-reported quality of care was identified (Van Bogaert et al.
2013a, b) (Fig. 2.2).

In a final phase (Van Bogaert et al. 2013c, 2014), both the burnout model and the
work engagement model describe the organizational context of nursing practice using
six variables: three independent variables and three mediating variables (see Model 1
and Model 2 as described in the next chapter). The independent variables are captured
by the nurse practice environment dimensions: nurse—physician relations, nurse
management at the unit level, and hospital management and organizational support.
The nurse practice dimensions reflect two levels, the direct care context and frontline
leadership, as well as higher management and leadership level and structural support,
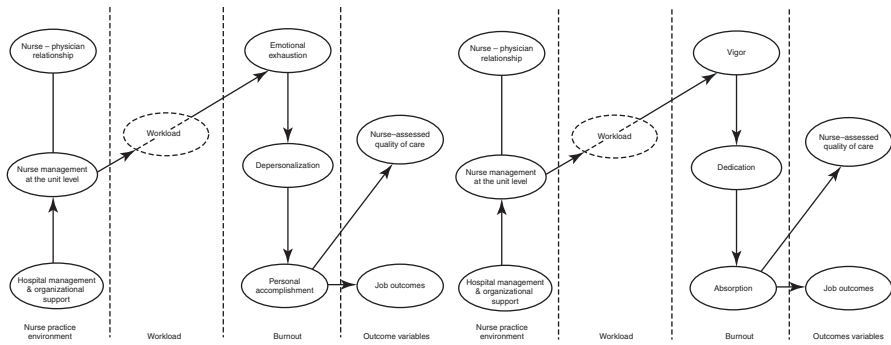and in addition the interprofessional relationship with physicians. We assume that

Fig. 2.2 Next-generation models (hypothesized)

both the higher management level and the interprofessional relationship will have an impact on the direct care context and frontline leadership. In the model, nurse management at the unit level plays a mediating and pivotal role to the three mediating variables, although direct pathways of the other two dimensions. The mediating variables or nurse work characteristics are related to the empowerment concept: how nurses assess workload and their extent of autonomy (decision latitude) and whether they collaborate and share values (social capital) within their team. Six variables describe the outcome variables with three mediating variables, the three burnout dimensions or the three work engagement dimensions (e.g., burnout model—work engagement model) and finally the outcome variables with job outcomes (job satisfaction and turnover intentions) and nurse reports of quality of care (at the unit, the last shift and the hospital). Again nurse management at the unit level plays a mediating role through the nurse work characteristics between independent variables and outcome variables as well as burnout or work engagement plays a mediating role between the six independent variables and the outcome variables.

In detail it means the following two models:

In our burnout model (see left hypothesized model (Fig. 2.3) and Model 1 in next chapter), independent variables of nurse practice environment predict the mediating variables of burnout dimensions, as well as job outcomes and nurse-assessed quality of care (dependent variables). In addition, workload, decision latitude, and social capital close to the concept of empowerment have a mediating position between the nurse practice environment and burnout dimensions. Nurse–physician relations and hospital management—organizational support impact nurse management at the unit level. Nurse management at the unit level has a strong direct impact on job outcomes and nurse-assessed quality of care as well as on decision latitude and social capital. Hospital management—organizational support has a direct impact on personal accomplishment and an indirect impact on the outcome variables through workload and burnout dimensions. Nurse–physician relations show an indirect impact on the outcome variables through decision latitude. Social capital has an inverse impact on feelings of emotional exhaustion, and decision latitude supports feelings of personal accomplishments. Personal accomplishment, impacts indirectly
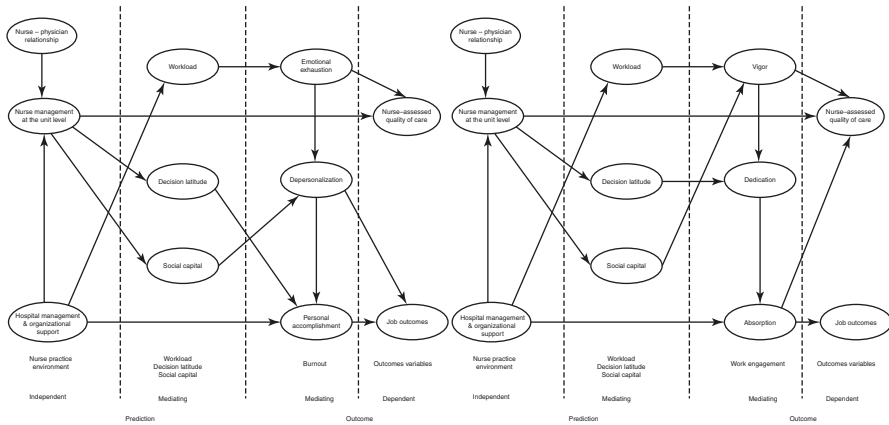
Fig. 2.3 Final phase models (hypothesized)

by emotional exhaustion and directly by depersonalization, has a direct impact on job outcomes and nurse-assessed quality of care (Fig. 2.3).

In our engagement model (see right hypothesized model (Fig 2.3) and Model 2 in the next chapter), the independent variables of nurse practice environment predict the mediating variables of work engagement dimensions, as well as job outcomes and nurse-assessed quality of care (dependent variables). In addition, workload, decision latitude, and social capital have a mediating position between the nurse practice environment and work engagement dimensions. Nurse–physician relations and hospital management–organizational support impact nurse management at the unit level. Nurse management at the unit level has a strong direct impact on job outcomes and nurse-assessed quality of care as well as on decision latitude and social capital. Hospital management—organizational support has an indirect impact on the outcome variables through workload and work engagement dimensions. Nurse–physician relations show an indirect impact on the outcome variables through decision latitude. Social capital impacts feelings of vigor, and decision latitude supports feelings of dedication. Absorption, impacts indirectly by vigor and directly by dedication, has a direct impact on nurse-assessed quality of care.

In the next chapter, we present the retest of the burnout model and engagement model with an acute hospital dataset and two nursing home datasets and qualitative findings that buttress findings of both models as well as descriptive and multilevel analyses. In addition, we present a longitudinal study with five measurement period evaluating hospital transformation process and the implementation of the Productive Ward Program in a university acute care hospital.

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