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1 ABSTRACT

2 Aim

3 To report a potential knowledge exchange between nursing studies and the results obtained from  
4 a study conducted into the attributes of embodied leadership.

5 Background

6 Leadership theories have been applied to evaluate, improve and train nursing practitioners in  
7 several previous studies. However, leadership research has entered a new phase where the focus  
8 is to produce sustainable leaders through authenticity and compassion, the same two  
9 characteristics identified as being of most success in emergent nursing practice. There are few  
10 studies that have indicated a knowledge exchange between the latest developments in leadership  
11 studies and nursing.

12 Design

13 An exploratory and qualitative study.

14 Method

15 Between February 2012 - July 2012, a focused sample of 14 medical care professionals was  
16 interviewed across a chain of hospitals. The aim was to evaluate embodied leadership  
17 characteristics and understand the factors that contribute to the manifestation of these  
18 characteristics. The transcribed interviews were analysed using thematic analysis.

19 Findings

20 Several factors that contribute to the characteristics of embodied leadership have been identified  
21 in the interviews as well as in subsequent literature searches on the characteristics and

1 contributing factors found to be associated with nursing research. These could prompt a  
2 knowledge exchange.

### 3 Conclusion

4 The results suggest common ground between nursing and contemporary leadership research in  
5 the exposition of behaviours; namely, being non-judgmental, listening actively, reflective  
6 practice and embracing uncertainty. Several implications can therefore be expected through the  
7 exchange of knowledge resulting from collaboration between researchers in the two disciplines.

8

### 9 KEYWORDS

10 Leadership, emotional intelligence, nurse education, care giving, nurse roles, nursing theory

11

## 1 SUMMARY STATEMENT

### 2 Why is this research or review needed?

- 3 • To explore the extent and usefulness of knowledge exchange between  
4 embodied leadership and nursing research.
- 5 • Leadership in nursing is recognized as a major factor in improving both  
6 patient care and staff relationships in the nursing community.

### 7 What are the key findings?

- 8 • Some factors implicit in embodied leadership have been identified in the  
9 medical care sector.
- 10 • There are several overlaps, in the area of compassionate care, between  
11 people in nursing and embodied leadership and other disciplines.

### 12 How should the findings be used to influence policy/practice/research/education?

- 13 • The findings could be introduced through continuing professional  
14 development programmes and professional mentoring undertaken by nurses.
- 15 • Further research in other locations is necessary to corroborate the findings  
16 and investigate whether the results could be replicated elsewhere, possibly leading to  
17 a further exchange of knowledge between nursing and leadership studies.
- 18 • Established organisational development strategies could be amended to  
19 recruit and train individuals differently in response to the findings.

20

21

## 1 INTRODUCTION

2 Nursing has been deeply affected by recent changes in healthcare funding and the economic  
3 crisis, which in some cases has led to workforce cuts. Numerous reports suggest that employees  
4 in the health sector, especially those directly involved with patients, are in an environment of  
5 constant stress (Wilkinson, 2015; Rankin & Campbell, 2007; McVicar, 2003), raising health and  
6 safety concerns not only for the patients under their care, but also for the workforce (Wilkinson,  
7 2015).

8 Personnel in the private sector have been able to perform effectively under similar levels of  
9 stress through training in leadership theory and being entrusted to take increased responsibility  
10 and independent decisions. Such employees subsequently demonstrated increased commitment,  
11 engagement and sense of purpose regarding their professional duties. Despite the availability of  
12 such measures, however, nursing still faces challenges resulting from stressful working  
13 conditions. Recent developments emerging from leadership studies have come from authentic  
14 (Avolio & Gardner 2005; Wong & Laschinger, 2012) and transformational theories. In particular,  
15 the work on embodied leadership (Sice et al., 2013; Koya et al., 2015), proposes a series of  
16 leadership characteristics that could, if refined and tailored, support employees in stressful  
17 situations. This present study has further investigated embodied leadership characteristics in  
18 medical care professionals to understand the factors that contribute its personification.

## 19 BACKGROUND

### 20 Theoretical Framework

21 The roots of embodied leadership lie in the combination of transformational (Bass, 1998),  
22 authentic (Avolio & Gardner, 2005) and resonant leadership (Boyatzis & McKee, 2005) theories.  
23 Building on Scharmer's (2008) work on identifying the scotoma in leadership studies, embodied

1 leadership aspires to create a model that could assist individuals to actually ‘become’ leaders, in  
2 contrast to ‘acting’ as leaders. It proposes the model based on Maturana and Varela’s (1987)  
3 theory of enaction. This suggests the standard of human experience is based on reciprocity  
4 between social and biological dynamics, implying that leadership is a capability that can  
5 materialize through the possession of enhanced biological functions, cognitive functions and  
6 better social interactions. Based on this understanding, the embodied leadership model of Koya  
7 et al. identifies several characteristics which are believed to underpin embodied leadership in  
8 individuals: being non-judgemental, listening actively, tolerance of uncertainty, intuition  
9 (through patterned thinking), ethics and values, authentic presence, intention, meaning/purpose  
10 and holistic decision-making.

#### 11 **INSERT TABLE 1**

12 The embodied leadership characteristics are of interest to researchers in transformational,  
13 authentic and embodied leadership. It is suggested that individuals who embody these  
14 characteristics have better relationships with their co-workers, improved performance (Avolio &  
15 Gardner, 2005), less stress (Boyatzis & McKee, 2005; Koya et al., 2015) and make better  
16 strategic decisions (Ilies et al., 2005). It is therefore worthwhile to better understand the factors  
17 or practices that will enable health professionals to learn to become embodied leaders and  
18 healthier employees.

#### 19 **LITERATURE REVIEW**

##### 20 **Embodied Leadership**

21 Embodied leadership posits linearity in behavioural aspects, physiological dynamics and social  
22 dynamics in a human experiential phenomenon: leadership. The idea of correlations in  
23 behaviours and physiology between individuals originates from Maturana and Varela’s (1987)

1 theory of enaction and the more recent interpersonal neurobiology work of Siegel (2007).  
2 Leadership studies, which had been undergoing a transformation, began focusing on more  
3 comprehensive ways to train leaders. Authentic and resonant leadership perspectives were also  
4 starting to emerge. Various studies between leaders and their subordinates have linked  
5 supportive behaviours and wellbeing to performance (Bass, 1998; Lipman-Blumen, 2000; Sice &  
6 French, 2004; Bernerth et al., 2007; Komives et al., 2009). Several works on transformational  
7 leadership (Bommer et al., 2004; Lyons & Schneider 2009; Avolio & Gardner, 2005),  
8 charismatic leadership (Conger et al., 2009; Rowold & Laukamp, 2009) and destructive  
9 leadership (Schaubroeck et al., 2007; Tepper, 2000) have recognized that supportive behaviours,  
10 wellbeing and performance relationships have implications for the effectiveness of organizations  
11 (Padilla et al; 2007, Einarsen et al., 2007). Boyatzis and McKee's (2005) work on resonant and  
12 dissonant leadership highlights clearly how different leadership approaches lead to different  
13 physiological and behavioural outcomes. Supportive behaviours, according to Boyatzis et al.  
14 (2012), lead to 'high quality connections', where both leaders and their staff benefit from better  
15 physiological health (Heaphy & Dutton, 2008), positive behavioural change in the organization  
16 (Dutton, 2003), improved potential (Carmeli et al., 2009; Lilius et al., 2008; Roberts, 2007;  
17 Boyatzis et al., 2006) and an overall subjective experience of wellbeing (Miller & Stiver, 1997;  
18 Quinn & Dutton, 2005). Such findings have been substantially corroborated across education,  
19 health and several private sector organisations. The nursing profession/role, however, is in need  
20 of review, based on the findings of embodied leadership in particular.

## 21 The Potential Contribution to Nursing of Embodied Leadership

22 Recent reports have indicated the various challenges leaders in nursing have faced from staff in  
23 recent years, such as exhaustion, attitude and behavioural problems and poor health, leading to

1 sickness absence, which adversely affects patient care (Wilkinson, 2015; Rankin & Campbell,  
2 2007; McVicar, 2003).

3 Some work has been done on how this situation can be improved. Wong & Laschinger (2012)  
4 point out how structural empowerment (Kanter, 1993) leads to behavioural changes towards  
5 becoming authentic individuals, similar to how the behaviours are imparted from leader to  
6 subordinate as stated in authentic leadership theory (Avolio & Gardner, 2005). Additionally,  
7 authentic and transformational leadership studies in nursing demonstrate the positive correlation  
8 in attitudes and behaviours between nurse leaders and their staff (Wong & Laschinger, 2013).  
9 Resonant leadership theories provide an interpersonal neurobiological understanding. However,  
10 studies on wellbeing and leadership in nursing have often been limited and anecdotal.  
11 Furthermore, and importantly, while most leadership theories provide an explanation for the  
12 behaviour of leaders towards their staff, their solutions only seem to encourage people to act as  
13 leaders rather than become leaders. Also, research undertaken in this area has confined itself to a  
14 few people in leadership positions in the organization. This narrow perspective has precluded the  
15 opportunity and possibility of developing leadership capabilities in greater numbers of  
16 individuals, apart from those in traditional leadership positions. Embodied leadership can,  
17 however, be adopted by people in healthcare at all levels.

18 Embodied leadership distinguishes itself by empowering individuals through enabling them to  
19 develop themselves as genuine and whole leaders. The behavioural characteristics of embodied  
20 leadership, as listed in Table 1, have been recognized by studies in various sectors, including  
21 finance, healthcare and education (Miller & Stiver, 1997; Quinn & Dutton, 2005; Carmeli et al.,  
22 2009; Lilius et al., 2008; Roberts, 2007; Boyatzis et al., 2006; Dutton, 2003). The same studies  
23 have not, however, been accepted as the sum of the whole - as the personification of embodied  
24 leadership - in nursing; the characteristics have merely been accepted individually. Being non-



1 judgmental, for instance, has been recommended to care workers as a professional duty (Koh,  
2 1999), as it builds compassion and higher quality nursing (Gilbert, 2009). Active listening too, a  
3 skill that involves multiple senses (Davidhizar, 2003), has been found to be vital as it can assist  
4 nurses to empathize with their patients and help to cross cultural boundaries. Embracing  
5 uncertainty, as a daily part of nursing life, is well documented (Thompson & Dowding, 2000;  
6 Vaismoradi et al., 2001; Penrod, 2001). Thompson and Dowding's (2001) work on dealing with  
7 uncertainty is built on three principles, rationality, bounded rationality and intuition, which are  
8 drawn from experience and cognitive performance. Intuition in nursing practice has been quite  
9 widely researched; (McCutcheon & Pincombe, 2001; Young, 1987; Gobet & Chassy, 2008; Rew  
10 & Barrow Jr., 2007). Moreover, universal ethics and values as essential nursing characteristic  
11 have received tremendous support from practitioners and researchers alike (Milton, 2007). So too  
12 have the characteristics of intention (Watson, 2002; Johns & Freshwater, 2009; Zahourek, 2005,  
13 Yegdich 1999) and meaning and purpose (Ross, 1994; Baldachino & Draper, 2001; Sessana, et  
14 al., 2007). Reflective practice is recognized as assisting nurses, individually and in groups, to  
15 reflect on their practice to generate fresh ways of working (Bulman & Schutz, 2013; Howe, 2006;  
16 Jarvis, 1992; Platzer et al., 2000). Authentic presence can be described as understanding one's  
17 own thinking and being mindful of one's presence. Several studies in nursing mention this  
18 characteristic, although it has multiple interpretations (Watson, 2002; Watson, 2012). Decision-  
19 making at all levels is the essence of nursing (Orme & Maggs, 1993) and, in the theory of  
20 embodied leadership, holistic decision-making is the practice of taking into account all the  
21 aforementioned characteristics before acting.

22 The characteristics that constitute embodied leadership are intrinsically linked to compassionate  
23 nursing; hence, the authors believe that embodied leadership characteristics are consonant with/  
24 compatible with/ in agreement with the concept of compassionate nursing. Although  
25 compassionate nursing has not yet been clearly defined, owing to its subjective nature

1 (Straughair, 2012; Curtis, 2013), this present research suggests that embodied leadership  
2 characteristics contribute to understanding compassionate practices in nursing. New  
3 contributions and an exchange of knowledge between nursing and leadership studies can,  
4 therefore, only enhance both research areas.

5

## 6 **THE STUDY**

### 7 Aim

8 The aim of this study is to explore and understand the factors contributing to, or influencing, the  
9 development of embodied leadership attributes in medical care professionals. Hence, to report a  
10 potential knowledge exchange between nursing studies and the results obtained from a study  
11 conducted into the attributes of embodied leadership.

### 12 Research Design

13 The study applied an exploratory and qualitative design to recognize what facilitated/ facilitates  
14 the development of the characteristics of embodied leadership and takes an interpretivist stance  
15 on the results. Semi-structured interviews were designed to guide the participants through this  
16 exploration.

### 17 Sample

18 A sample of 14 medical care professionals (2 chief physicians, 1 senior consultant, 1 consultant,  
19 3 nurse practitioners and 7 registered nurses) was recruited on a voluntary basis in two clinics  
20 located in Hyderabad, India, where the researchers were working as contractors to build an  
21 integrative patient records management system. As the clinics were small, the researchers  
22 communicated personally with all staff regarding the study and sought their willingness to

1 participate. The participants were required to have been employed full-time for at least one year  
2 and to comprehend and speaking English. Qualitative studies such as this do not necessarily  
3 represent a population; rather, they attempt to generate insight and meaning. Thus, there were no  
4 principles involved in the sample other than considerations of practicality, purpose and interview  
5 design (Troachim et al., 2006).

## 6 Data Collection

7 Semi-structured interviews were scheduled and took place over a period of 5 months, from  
8 February 2012 to July 2012. Most of the interviews were scheduled in the afternoon, as this was  
9 the time when participants were less busy and in a more relaxed state of mind. The participants  
10 were evaluated on their present, past and desired competency in demonstrating the embodied  
11 leadership characteristics (Table 1). A visual analogue scale was provided to assist the  
12 participants to rate themselves between 0 to 10, with 0 being the worst score and 10 being the  
13 best. The computer application ExpressScribe was used to record the interview, the design of  
14 which is further elaborated in Figure 1. Four pilot interviews were conducted prior to the actual  
15 research and analysed for the purpose of improving interviewing skills and time management.  
16 The pilot interviews were not included in the final analysis. Questions in the form of closed-  
17 ended questions (questions leading to “yes” or “no” answers) and any irrelevancies that emerged  
18 were later modified to make the interviews more open and informative.

## 19 Interview Design

20 The interview was designed to encourage self-evaluation and reflection by the participant. The  
21 interviewer’s role was limited to guiding this reflection, with no attempt to influence the  
22 participant. Each characteristic of embodied leadership was explored and investigated using the  
23 above interview guide. The visual analogue scale provided a constant reference, enabling all

1 participants to identify accurately their ratings, 10 being the best and 0 being the worst. The

2 interview process was set up in five stages:

3 Stage A: The question at this stage is a self-evaluation of the participant's current performance of  
4 the characteristics.

5 Stage B: The purpose of this question is to gain insight into the participant's past performance of  
6 the characteristics.

7 Between Stage B & Stage C: If the participant's past score was lower than their present score, it  
8 was assumed that they had made a subsequent improvement, so a question as to how they  
9 managed the improvement was asked. If the participant's score was higher than their present  
10 score, it was assumed that they had been challenged in some way and they were questioned as to  
11 the reason behind this. Real life scenarios and instances were requested as part of the  
12 conversation at this stage:

13 Stage C: This stage is about understanding the participant's desired behaviour as regards the  
14 characteristics.

15 Stage D: The final stage aims to understand what factors could support and assist the participant  
16 in improving their score so as to reach their desired behaviour. It also helps us to understand  
17 whether the environment around the participant is conducive to change.

18 Ethical Considerations

19 The Research Ethics Committee of Northumbria University approved this study and the review  
20 board conducted an evaluation on this study to review informed consent, data protection, storage,  
21 coding and privacy.

22 Data Analysis

1 Descriptive statistics was employed to understand the demographics of the participants; namely,  
2 the Statistical Program for Social Sciences (SPSS 17.0). The transcribed interviews were coded  
3 systematically, compared (Corbin & Strauss, 1998) and analysed in Nvivo 8 and MS Excel,  
4 using thematic analysis from a grounded theory approach. It should be clarified again that this is  
5 not a grounded theory study; rather it uses the coding technique, where the results are grounded  
6 in the data. The open codes are the embodied leadership characteristics (Table 1), which were  
7 further explored through the interview in an effort to understand the nature of their manifestation.  
8 A detailed analysis of the transcriptions identified phrases and words, which were then  
9 conceptually grouped as themes. Memos were made during analysis to keep track of the subtle  
10 semantic nature of themes. Selective coding was employed to understand the relationship  
11 between the characteristics of embodied leadership and the factors that contribute towards their  
12 personification.

### 13 Rigour

14 Reflexivity and sensitivity to the verbatim was promoted through dialogue with the participants  
15 and the interviewer (Hall & Callery, 2001). The validity of the study followed Lincoln and  
16 Guba's (1986) criterion for qualitative study, which, essentially, is to address credibility,  
17 transferability, dependability and confirmability. The rigour of the study can be judged by the  
18 author's reflection on the data, the consideration given to multiple perspectives and the research  
19 process itself. At every stage of the interview, the participants were given freedom to express  
20 themselves and the interpretations made by the author during the interview were reconfirmed by  
21 the participants through ongoing clarification. The overarching themes appeared after eight  
22 interviews; however, it was decided to complete the fourteen interviews, although data saturation  
23 appeared to have occurred by this point.

### 24 Findings

## 1 Descriptive statistics

2 Fourteen participants between the ages of 20-45 took part in the study (Mean 29.35 years;  
3 Standard deviation 6.11). The medical care providers ranged from newly qualified staff to highly  
4 experienced individuals who had been in nursing for well over twenty years.

## 5 Themes

6 The study revealed that each characteristic had its own set of factors (grouped as themes in the  
7 results section) contributing towards its embodiment in the participants. The characteristics and  
8 contributing factors are summarised in figure 2. The factors emerged from the participants'  
9 experiences of what they thought had assisted them in building each characteristic at Stage D and  
10 between Stage B and Stage C of the interview they describe how to improve their ability in each  
11 characteristic, based on their perspective of their world. The scenarios or circumstances  
12 described by the participants were from the past and present of both their personal and  
13 professional lives. The participants' desired goals provided insight into the usefulness of their  
14 current circumstances as regards enabling them to move forward.

15

## 16 RESULTS AND DISCUSSION

### 17 Vocational Skills

18 Vocational skills such as knowledge, maximising potential, experience and planning skills,  
19 contributed to being able to be non-judgmental, dealing with uncertainty, active listening,  
20 intuition and holistic decision-making. This effectively assisted the staff to perform their duties:

21 *...updating my knowledge allows me to take decisions that can lead to uncertain*  
22 *consequences.*

1           ...*practice, experience, knowledge and an intent to work has helped me* immensely in  
2           what I do.

3   Working responsibly in a particular position increases knowledge in the specific area and leads  
4   to a non-judgmental attitude (Youngson, 2011), enhanced ability to deal with uncertainty (Slovic  
5   et al., 2005) and intuitive capabilities through creating a knowledge base (Burns & Grove, 2010).  
6   All of this ultimately leads to better decision-making (Standing, 2007; Hoffman et al., 2004;  
7   Kuiper & Pesut, 2004). The participants in this study also felt that having a knowledge sharing  
8   system in clinics would assist in better performance (Ditillo, 2004; Mosindi & Sice, 2011). This  
9   is backed by research in nursing and healthcare studies by Youngson (2011) and research in the  
10   areas of exercise physiology (Lenton et al., 2008), probability (Manski, 2004) and medicine  
11   (Giustini, 2006), which have demonstrated that when experience is fed into a system, individuals  
12   in the system responded better to uncertain situations and made better decisions. It is also a  
13   generally accepted fact that, in human systems, experience increases knowledge and, thus,  
14   improves potential growth in uncertain periods (Argote & Miron-Spektor, 2011; Taylor & Greve,  
15   2006). This was also the general opinion of the participants during the interviews but it was  
16   noted that subjective experience should be combined with interpersonal skills (Nolan & Bradley,  
17   2008) to create smoother operations in the organization.

18   Planning skills underpin the functional effectiveness of any leader (Derue et al., 2011).  
19   Participants agreed that they appeared to constitute a crucial factor when handling uncertain  
20   situations as they assisted in making good decisions. They also agreed that forethought and  
21   planning provided direction and stability, essentially achieved through divergent thinking  
22   (Neufville, 2003). Divergent thinking is the systemic process of generating creative ideas by  
23   exploring as many solutions as possible (McCrae, 1987). Montana and Charnov (2008)  
24   demonstrate this by proposing a three-step process that could be implemented to improve

1 planning in every aspect of management science, including the care sector. The three steps are:  
2 choose a goal; think and evaluate directions to reach that goal; choose a direction. Neufville  
3 (2003) also demonstrates similar techniques for handling uncertainty, using systems design and  
4 divergent thinking.

## 5 Listening Skills

6 Participants opined that active listening skills contributed towards being non-judgmental,  
7 intuition and decision-making. Listening skills involved interactions made with the full attention  
8 of all the senses”

9 I make an effort to listen to my patients as much as I can to completely understand their  
10 side of the story before making any diagnosis and doing this helps me catch clues.  
11 Physical evaluation is not enough to make a diagnosis in my opinion. People  
12 (colleagues/doctors) judge too quickly or come up with treatment options too quickly  
13 *without understanding the patient’s story... this confuses the patient and leads to a*  
14 complete lack of trust.

15 The link between listening skills and being non-judgmental has been recognized by research both  
16 in counselling and guidance (Bobevski et al., 1997) and in nursing (Wiseman, 1996). When  
17 combined with vocational skills and empathy (Funnell, 2010), such listening skills deliver better  
18 care. Some participants also mentioned that listening skills created an open thinking environment,  
19 which enabled them to provide personalized care for patients:

20 I could have provided better care to that patient if my superior (senior) colleague had  
21 *listened to me....but he judged saying that I was trying to make a statement as I was*  
22 *new...I had already talked to the patient regarding their problem and I think I know the*  
23 severity because I know his entire background.



1 In the context of intuition, the participants stated that during any conversation, an individual is  
2 likely to be confined to their thoughts, judgments, experience and knowledge and this can  
3 prevent them from listening to their surroundings, which include their peers and patients. In this  
4 context, active listening could influence intuitive capabilities (McCain, 1965).

#### 5 Team Spirit

6 Team spirit in the form of knowledge sharing, collective realisation, collective intent and  
7 respecting peer intuition appears/appeared to contribute towards shared decision-making,  
8 congruence and intuitive decision-making. One of the participants mentioned the term ‘collective  
9 realization’ when implementing universal values in a group. These values merge with personal  
10 values and become a general belief system in the group, as found in the following (Muller, 2004):

11 *we can't convince* people on values as everyone has ~~got~~ their own individualities. All I  
12 can do is stand true to my values. I believe there should be a collective realisation when  
13 it comes to implementing universal values.

14 This is like group intention (Kristof-Brown et al., 2005), a form of collective realization, which  
15 maintains a bond in the group (Hermes et al., 2009) and works towards fulfilling the planned  
16 goals.

#### 17 Self & Social Awareness

18 Possessing self and social awareness in the form of contemplative decision-making without  
19 preconceptions, performing conscious actions with the right intention, accepting uncertainty and  
20 emotional detachment can lead to the embodiment of leadership attributes:

21 It is important to realise what I had done throughout the day. I think about why I had  
22 taken a decision, why have I behaved in a (particular) manner and why am I doing my  
23 job. Asking myself these questions helps me review my action...*It becomes experiential.*

1           ...as long as we are able to answer to ourselves in a true manner, there is nothing to be  
2           afraid of

3   Emotional detachment here is referred to in the context of rational judgement, a judgement made  
4   with integrity and not affected by personal desires or attachments (Osumi & Ohira, 2010). The  
5   participants suggest that judgments might be made with relevance to the group's overall aim, but  
6   not out of personal desires or fondness. This is an aspect of decision-making that keeps the group  
7   together (Mallinckrodt & Wei, 2005) and was initially recognized through the work on emotional  
8   intelligence (Goleman, 2006), pertaining to the balance between individual and group emotion.  
9   Various researchers have suggested the use of mind training practices such as meditation to  
10   attain composure over emotions (Siegel, 2007; Davidson, 2003). Studies in the past have stated  
11   that emotions mask our real understanding of observations (Jeste & Vahia, 2008):

12           I usually take decisions after giving a lot of thought, even after that if something goes  
13           wrong, I accept responsibility and change it. There is no place for *ego here as I'm*  
14           connected and my decisions affect others around me.

15   Contemplation mainly contributed to the characteristic of holding authentic presence, which is  
16   connected to constructivism and investigation into why individuals think and behave in a  
17   particular way. This factor is the core of behavioural psychology (Mahoney & Stattin, 2000),  
18   where therapists seek to understand why someone presents in a certain way and try to find  
19   appropriate ways of treatment (Hoffman et al., 2010). Contemplative methods such as  
20   mindfulness and meditation (Hoffman et al., 2010; Davidson et al., 2003), Socratic questioning,  
21   mentored dialogue and self-checking (Hayes et al., 2006; Baer et al., 2006) are used to aid  
22   individual contemplation. However, it is contemplation in a wider context that relates to the  
23   characteristics of reflective practice and decision-making. Reave (2005), in a review study of  
24   over 150 studies, showed the relationship between meditation or contemplative reflection and

1 effective leadership. He noted how meditation as a reflective practice allowed leaders to make  
2 better decisions, enabling them to consider their previous decisions or actions from an external  
3 perspective.

#### 4 Universal Ethics

5 Possessing ethical values (Do not all human beings possess “ethical values” of some kind??)  
6 appears to influence the embodied leadership attribute of congruence in individuals. Universal  
7 ethics is built around compassion for the self and showing compassion towards others (Schwartz,  
8 2005). Additionally, Spinrad & Eisenberg (2009) suggest parenting style could also embed  
9 leadership qualities in children by encouraging them to nurture ethics, compassion and empathy:

10 *I'm aware of some of my colleagues outside of this organisation duping their patients,*  
11 *but I had never encouraged it in my clinic or in my personal life....although I can judge*  
12 *ethics, I cannot command ethics, because ultimately the action lies with that person.*

13 Participants agreed that the primary factors that affect conscience are an individual's ethics and  
14 values. Research on conscience and subjective wellbeing came to the fore during the recent  
15 economic crises (Easterlin, 2006). In their work on the subjective wellbeing of individuals,  
16 Kahneman and Krueger (2006) also recognize the importance of a clean conscience and how it  
17 affects an individual's ability to stay within the congruence of generalized beliefs. It is not  
18 surprising to see how an individual's family and upbringing affects their value system and ethics.  
19 Parker et al. (2006) cite the importance of screening before recruiting to ensure the candidate's  
20 personal values are compatible and aligned with the values of the organization. Research on  
21 workplace safety has also identified family upbringing as a major factor that needs to be  
22 considered during recruitment (Granovetter, 1995); hence, Choudhry et al. (2007) and  
23 Guldenmund (2007) stress the importance of implementing a regulation to check on the  
24 background of applicants.

## 1 Open Thinking

2 Some participants mentioned the term ‘open thinking’ when asked how they could become less  
3 judgmental and improve their intuition and effective decision-making abilities. They explained  
4 this further when they said they would try to approach people and situations without  
5 preconceived notions:

6 *I believe that I don't know everything that is there in this world and I know that everyone*  
7 *in this world does not know everything. You know something at a particular moment, we*  
8 *have to give our full attention so that we learn at least some small thing.*

9 This is what psychologists refer to as divergent thinking or multiple thinking strategies  
10 (Razoumnikova, 2000). There have been several studies on improving divergent thinking in  
11 different contexts for personnel improvement (Nusbaum & Silvia, 2011; Gilhooly et al., 2007).  
12 In a landmark finding, McGarvey (1990) showed that this type of open or creative thinking  
13 decreased in children as they grew older and climbed up the school ladder. Robinson (2001)  
14 mentions loss of creative thinking both in his book and during a highly acclaimed Technology  
15 Entertainment Design (TED) talk, during which he discusses transforming teaching practices to  
16 encourage increased creativity.

## 17 Mentorship/Friendly Relationships/Empathy

18 The participants believed that mentorship and good relationships are co-relational and justified  
19 this by saying that good relationships with co-workers create an environment where individuals  
20 listen with intent to understand. This accords with work by Zachary (2011), where mentorship is  
21 identified as a leading contributor to good workplace environments:

22 *Having a friendly atmosphere and being true to myself and my colleagues resulted in*  
23 *good decisions being made in my work and life.... as decisions are complementary... they*

1           *also have to be accepted by others... others have to see where you are* coming from and  
2           understand you.

3       Research is currently being carried out on how good relationships can create a mentoring culture,  
4       improving the empathy of individuals (O’Broin & Palmer, 2009).

5       Creating a good relationship with the environment itself; respecting it and enabling it to  
6       reciprocate by supporting and nurturing the people occupying it, has also been recognised as  
7       being important to health and wellbeing. Unpleasant working conditions can assault or  
8       undermine the senses, depleting energy levels and effectiveness. Having an awareness of the  
9       effects of one’s settings and the ability to nuance and enhance or mitigate them, greatly  
10      contributes to a sense of personal control and increased ownership, especially at work.

11      Empathetic listening has been researched for a long time (Drollinger et al., 2006), but there were  
12      no suggestions as to how it could be put into practice, until Scharmer’s proposal in Theory U  
13      (Scharmer, 2008), which actually goes beyond empathetic listening. This present study is partly  
14      an attempt to make Scharmer’s work easier to comprehend. Interestingly, while the participants  
15      were not aware of generative listening, they had the ability to describe it:

16           *When I listen to patients or my colleagues in with intent...I can connect to* what they are  
17           trying to convey to me and I can also see the picture behind it, helping me make better  
18           decisions

19      Traditionally, those carrying out Eastern practices, such as mindfulness, transcendental  
20      meditation, qigong and the like, have claimed to be able to embed empathy into individuals and  
21      empirical evidence now supports this claim (Birnie et al., 2010; Kristeller & Johnson, 2005;  
22      Andersen, 2005) in the areas of nursing and business. Findings in nursing (Wilson et al., 2005)  
23      and occupational therapy (Milner & Bossers, 2004) indicate that mentorship is a characteristic of

1 a leader and assists individuals in the organization to deal with uncertainty and other potential  
2 problems. This finding was corroborated here by the participants, although they voiced concerns  
3 about lack of mentors being available in their own sectors:

4 *I had the knowledge from college...but no on the job experience....I had to learn*  
5 *everything about the clinic by myself....I received no help whatsoever to take care of*  
6 *problems arising in the clinic or treating difficult cases...*

### 7 Coaching and Professional Development through Activities

8 The meaning of active listening is to listen with all the senses with complete attention while  
9 simultaneously suspending judgment. One of the participants contended that his experience of  
10 being a sportsperson had helped him in his active listening skills:

11 I used to be sportsman. I was coached to be switched on all the time. To be focussed on  
12 players around me all the time. I was able to bring that experience into my other parts of  
13 life.

14 This is not surprising as many sports psychologists and coaches work as life skills teachers in  
15 organizations (Danish & Nellen, 1997). A recent study (Wylleman et al., 2009) also indicated  
16 how the application of sports psychology increases professional development in organizations,  
17 especially in the area of listening skills (Anderson et al., 2004). The non-judgmental method of  
18 listening could be borrowed from the person-centred approach (Bovey & Hede, 2001). Bruce  
19 Lee (1971) conceives this idea perfectly:

20 Be like water making its way through cracks. Do not be assertive, but adjust to the object  
21 and you shall find a way around or through it. If nothing within you stays rigid, outward  
22 things will disclose themselves. Empty your mind, be formless. Shapeless, like water. If  
23 you put water into a cup, it becomes the cup. You put water into a bottle and it becomes

1           the bottle. You put it in a teapot, it becomes the teapot. Now, water can flow or it can  
2           crash. Be water, my friend.

### 3 Ownership

4 According to the participants, taking ownership of goals increases the chances of making better  
5 intuitive judgments (Andersson & Floren, 2008) during uncertain periods, enabling better quality  
6 connectivity. The study participants agreed that taking ownership of their vocational obligations  
7 makes them better understand the nature of the work and hence take better decisions:

8           My responsibility is important. *After I've done my duty...I get a feeling of satisfaction*  
9           and also connects me to my work.

### 10 Rational/Social/Emotional Intelligence and Resilience

11 The participants felt the need for resilience and adaptability, as occasional uncertainty was  
12 inevitable in their roles. Work on resilience and adaptability has been implemented in  
13 occupational therapy (Skorikov & Vondracek, 2011) and personal development (Ungar, 2008).  
14 This is one of the most important character factors as it has been shown to affect health,  
15 relationships and overall wellbeing (King et al., 2006) and could be usefully integrated into  
16 organizational continuing professional development.

17 Recognition of emerging patterns is a thought process similar to the rational process of thinking  
18 (Avolio et al., 2004), where relationships are built on the effects that a decision might manifest.  
19 This is enhanced by divergent thinking (Razoumnikova, 2000), through which relationships in a  
20 space can be viewed from an outside perspective. Again, this enhances the chances of better  
21 intuitive decision-making.

22 The embodied leadership characteristics identified in the findings exhibit mental and relational  
23 qualities that underpin the empathetic and compassionate mindset psychologies (Gilbert, 2014):

- 1 (1) Caring for and understanding of self and others (e.g. self and social awareness, open  
2 thinking, active listening, universal ethics);
- 3 (2) Supporting and nurturing, engaging to alleviate or prevent suffering (e.g. emotional and  
4 social intelligence, resilience, ownership, team spirit, mentorship, coaching, friendly  
5 relationships).

6 The empathetic and compassionate mindset psychologies have been identified as key qualities in  
7 nursing leadership (Kuiper & Pesut, 2004; Howe, 2006; Rew & Barrow Jr., 2007; Campbell-Yeo,  
8 Latimer & Johnston, 2008; Standing, 2008; Berwick Report, 2013). Subsequently, this research  
9 suggests how an understanding of compassionate nursing and embodied leadership can learn  
10 from one another.

## 11 LIMITATIONS

12 This study has only considered a sample of 14 medical care professionals at a single location,  
13 therefore the findings can only be linked to this population. Transferability and dependability  
14 could be confirmed by using similar data collection techniques in different settings, although  
15 deviations are bound to occur owing to differences in the background of the population,  
16 geopolitical, socio-economic, linguistic and cultural.

## 17 CONCLUSION

18 This study suggests there are substantial similarities between the latest research in areas of  
19 leadership and nursing, especially in the aspect of compassionate care. Further investigations in  
20 different contexts could reveal additional factors contributing to embodied leadership  
21 characteristics in medical care professionals. Organizational development programmes in the  
22 medical care sector could incorporate the current findings to create an immediate effect on both  
23 employees and, by extension, on patients. However, research into embodied leadership is in its



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1 infancy and there remains significant scope for gaining insight and knowledge that may  
2 contribute to identifying contributing factors and overlapping characteristics between sectors.  
3 Questions for further research would include: What conditions facilitate/prevent compassionate  
4 care? What practices develop empathetic and compassionate leadership?

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1 REFERENCES

2 Abraham, C., & Michie, S. (2008). A taxonomy of behavior change techniques used in  
3 interventions. *Health psychology*, 27(3), 379.

4  
5 Andersen, D. T. (2005). Empathy, psychotherapy integration and meditation: A Buddhist  
6 contribution to the common factors movement. *Journal of Humanistic Psychology*, 45(4), 483-  
7 502.

8  
9 Anderson, A., Miles, A., Robinson, P., & Mahoney, C. (2004). Evaluating the athlete's  
10 perception of the sport psychologist's effectiveness: What should we be assessing?. *Psychology*  
11 *of Sport and Exercise*, 5(3), 255-277.

12  
13 Andersson, S., & Florén, H. (2008). Exploring managerial behavior in small international firms.  
14 *Journal of Small Business and Enterprise Development*, 15(1), 31-50.

15  
16 Argote, L., & Miron-Spektor, E. (2011). Organizational learning: From experience to knowledge.  
17 *Organization science*, 22(5), 1123-1137.

18  
19 Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of  
20 positive forms of leadership. *The Leadership Quarterly*, 16(3), 315-338.

21  
22 Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., & May, D. R. (2004). Unlocking  
23 the mask: A look at the process by which authentic leaders impact follower attitudes and  
24 behaviors. *The Leadership Quarterly*, 15(6), 801-823.

25

- 1 Avolio, B. J., & Locke, E. E. (2002). Contrasting different philosophies of leader motivation:  
2 Altruism versus egoism. *The Leadership Quarterly*, 13(2), 169-191.  
3
- 4 Ashforth, B. E., Harrison, S. H., & Corley, K. G. (2008). Identification in organizations: An  
5 examination of four fundamental questions. *Journal of Management*, 34(3), 325-374.  
6
- 7 Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J. & Toney, L. (2006)"Using self-report  
8 assessment methods to explore facets of mindfulness." *Assessment* 13(1) 27-45.  
9
- 10 Baldacchino, D., & Draper, P. (2001). Spiritual coping strategies: a review of the nursing  
11 research literature. *Journal of advanced nursing*, 34(6), 833-841.  
12
- 13 Bass, B. M. (1998). *Transformational leadership*, NJ: Lawrence Erlbaum  
14
- 15 Bernerth, J. B., Armenakis, A. A., Feild, H. S., Giles, W. F., & Walker, H. J. (2007). Leader–  
16 member social exchange (LMSX): Development and validation of a scale. *Journal of*  
17 *Organizational Behavior*, 28(8), 979-1003.  
18
- 19 Berwick report, NHS England, <https://www.england.nhs.uk/tag/berwick-report/>  
20
- 21 Birnie, K., Speca, M., & Carlson, L. E. (2010). Exploring self-compassion and empathy in the  
22 context of mindfulness-based stress reduction (MBSR). *Stress and Health*, 26(5), 359-371.  
23
- 24 Bobevski, I., Holgate, A. M., & McLennan, J. (1997). Characteristics of effective telephone  
25 counselling skills. *British Journal of Guidance and Counselling*, 25(2), 239-249.

- 1
- 2 Bommer, W. H., Rubin, R. S., & Baldwin, T. T. (2004). Setting the stage for effective leadership:  
3 Antecedents of transformational leadership behavior. *The Leadership Quarterly*, 15(2), 195-210.  
4 DOI: 10.1002/job.342. Retrieved on 21/05/2014.  
5
- 6 Bovey, W. H., & Hede, A. (2001). Resistance to organizational change: the role of cognitive and  
7 affective processes. *Leadership & Organization Development Journal*, 22(8), 372-382.  
8
- 9 Boyatzis, R. E., & McKee, A. (2005). *Resonant Leadership: Renewing Yourself and Connecting  
10 with Others Through Mindfulness, Hope and Compassion*. Harvard Business Press.  
11
- 12 Boyatzis, R. E., Passarelli, A., Koenig, K., Lowe, M., Matthew, B., Stoller, J., Phillips, M.  
13 (2012). Examination of neural substrates activated in experiences with resonant and dissonant  
14 leaders (2 ed., vol. 23, pp. 259-272). *The Leadership Quarterly*  
15
- 16 Boyatzis, R. E., Smith, M. L., & Blaize, N. (2006). Developing sustainable leaders through  
17 coaching and compassion. *Academy of Management Learning & Education*, 5(1), 8-24.  
18 doi:10.5465/AMLE.2006.20388381. Retrieved on 21/12/2013.  
19
- 20 Breuer, F. (2003). Subjectivity and reflexivity in the social sciences: Epistemic windows and  
21 methodical consequences. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social  
22 Research* 4(2).  
23
- 24 Bulman, C., & Schutz, S. (Eds.). (2013). *Reflective practice in nursing*. John Wiley & Sons.  
25

- 1 Campbell-Yeo, M., Latimer, M. & Johnston, C. (2008) 'The empathetic response in nurses who  
2 treat pain: concept analysis.', *Journal of advanced nursing*, 61 (6), pp. 711-719.  
3
- 4 Carmeli, A., Brueller, D., & Dutton, J. E. (2009). Learning behaviours in the workplace: The role  
5 of high-quality interpersonal relationships and psychological safety. *Systems Research and*  
6 *Behavioral Science*, 26(1), 81-98. DOI: 10.1002/sres.932. Retrieved on 20/01/2013.  
7
- 8 Cennamo, L., & Gardner, D. (2008). Generational differences in work values, outcomes and  
9 person-organisation values fit. *Journal of Managerial Psychology*, 23(8), 891-906.  
10
- 11 Choi, Y., & Mai-Dalton, R. R. (1999). On the leadership function of self-sacrifice. *The*  
12 *Leadership Quarterly*, 9(4), 475-501.  
13
- 14 Choudhry, R. M., Fang, D., & Mohamed, S. (2007). The nature of safety culture: A survey of the  
15 state-of-the-art. *Safety science*, 45(10), 993-1012.  
16
- 17 Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and  
18 practice. *Academy of management review*, 13(3), 471-482.  
19
- 20 Conger, J. A., Kanungo, R. N., & Menon, S. T. (2000). Charismatic leadership and follower  
21 effects. *Journal of Organizational Behavior*, 21(7), 747-767. DOI: 10.1002/1099  
22 1379(200011)21:7<747::AID-JOB46>3.0.CO;2-J. Retrieved on 20/02/2014  
23
- 24 Cunningham, I., & Hyman, J. (1999). Devolving human resource responsibilities to the line:  
25 beginning of the end or a new beginning for personnel?. *Personnel Review*, 28(1/2), 9-27.

- 1
- 2 Curtis, K. (2013). 21st Century challenges faced by nursing faculty in educating for  
3 compassionate practice: Embodied interpretation of phenomenological data. *Nurse education*  
4 today, 33(7), 746-750.
- 5
- 6 Dane, E., & Pratt, M. G. (2007). Exploring intuition and its role in managerial decision making.  
7 *Academy of Management Review*, 32(1), 33-54.
- 8
- 9 Danish, S. J., & Nellen, V. C. (1997). New roles for sport psychologists: Teaching life skills  
10 through sport to at-risk youth. *Quest*, 49(1), 100-113.
- 11
- 12 Davidhizar, R. (2003). Listening--a nursing strategy to transcend culture. *The Journal of*  
13 *practical nursing*, 54(2), 22-4.
- 14
- 15 Davidson, R. J. (2003). Affective neuroscience and psychophysiology: toward a synthesis.  
16 *Psychophysiology*, 40(5), 655-665.
- 17
- 18 Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S. F.  
19 (2003). Alterations in brain function produced by mindfulness meditation. *Psychosomatic*  
20 *medicine*, 65(4), 564-570
- 21
- 22 Derue, D. S., Nahrgang, J. D., Wellman, N. and Humphrey, S. E. (2011) Trait and Behavioural  
23 theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel*  
24 *Psychology*, 64: 7-5
- 25

- 1 Ditillo, A. (2004) "Dealing with uncertainty in knowledge-intensive firms: the role of  
2 management control systems as knowledge integration mechanisms." *Accounting, Organizations  
3 and Society* 29(3) 401-421.  
4
- 5 Drollinger, T., Comer, L. B., & Warrington, P. T. (2006). Development and validation of the  
6 active empathetic listening scale. *Psychology & Marketing*, 23(2), 161-180.  
7
- 8 Dutton, J. E. (2003). *Energize your workplace: How to create and sustain high-quality  
9 connections at work*. San Francisco: Jossey-Bass.  
10
- 11 Easterlin, R. A. (2006) "Life cycle happiness and its sources: Intersections of psychology,  
12 economics and demography." *Journal of Economic Psychology* 27(4) 463-482.  
13
- 14 Einarsen, S., Aasland, M. S., & Skogstad, A. (2007). Destructive leadership behaviour: A  
15 definition and conceptual model. *The Leadership Quarterly*, 18(3), 207-216.  
16 DOI: 10.1016/j.leaqua.2007.03.002. Retrieved on 30/09/2013.  
17
- 18 Fernando, M & Jackson, B. (2006). "The influence of religion-based workplace spirituality on  
19 business leaders' decision-making: An inter-faith study." *Journal of Management &  
20 Organization* 12(1) 23-39.  
21
- 22 Funnell, M. M. (2010). Peer-based behavioural strategies to improve chronic disease self-  
23 management and clinical outcomes: evidence, logistics, evaluation considerations and needs for  
24 future research. *Family practice*, 27(suppl 1), i17-i22.  
25

- 1 Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in psychiatric treatment*,
- 2 15(3), 199-208.
- 3 Gilhooly, K. J., Fioratou, E., Anthony, S. H., & Wynn, V. (2007). Divergent thinking: Strategies
- 4 and executive involvement in generating novel uses for familiar objects. *British Journal of*
- 5 *Psychology*, 98(4), 611-625.
- 6
- 7 Gleig, A. L. (2010) *Enlightenment After the Enlightenment: American Transformations of Asian*
- 8 *Contemplative Traditions*. Dissertation. Rice University.
- 9
- 10 Gobet, F., & Chassy, P. (2008). Towards an alternative to Benner's theory of expert intuition in
- 11 nursing: a discussion paper. *International Journal of Nursing Studies*, 45(1), 129-139.
- 12
- 13 Goleman, D. (2006) *Emotional intelligence: Why it can matter more than IQ*. New York:
- 14 Bantam Books.
- 15
- 16 Giustini, D. (2006). How Web 2.0 is changing medicine. *Bmj*, 333(7582), 1283-1284.
- 17
- 18 Granovetter, M. S. (1995). *Getting a job: A study of contacts and careers*. University of Chicago
- 19 Press.
- 20
- 21 Guldenmund, F. W. (2007). The use of questionnaires in safety culture research—an evaluation.
- 22 *Safety Science*, 45(6), 723-743.
- 23
- 24 Haggard, P., & Clark, S. (2003). Intentional action: conscious experience and neural prediction.
- 25 *Consciousness and cognition*, 12(4), 695-707.



- 1
- 2 Hall, W.A. and Callery, P., 2001. Enhancing the rigor of grounded theory: Incorporating  
3 reflexivity and relationality. *Qualitative Health Research*, 11(2), pp.257-272.
- 4
- 5 Hayes, S. C., Luoma, J. B., Bond F. W., Masuda, A & Lillis, J. (2006)"Acceptance and  
6 commitment therapy: Model, processes and outcomes." *Behaviour research and therapy* 44(1) 1-  
7 25.
- 8
- 9 Heaphy, E. D., & Dutton, J. E. (2008). Positive social interactions and the human body at work:  
10 Linking organizations and physiology. *Academy of Management Review*, 33(1), 137-doi:162.  
11 10.5465/AMR.2008.27749365. Retrieved on 08/08/2013.
- 12
- 13 Hermes, G. L., Delgado, B., Tretiakova, M., Cavigelli, S. A., Krausz, T., Conzen, S. D., &  
14 McClintock, M. K. (2009). Social isolation dysregulates endocrine and behavioral stress while  
15 increasing malignant burden of spontaneous mammary tumors. *Proceedings of the National*  
16 *Academy of Sciences*, 106(52), 22393-22398.
- 17
- 18 Hoffman, K., Donoghue, J., & Duffield, C. (2004). Decision-making in clinical nursing:  
19 investigating contributing factors. *Journal of Advanced Nursing*, 45(1), 53-62.
- 20
- 21 Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based  
22 therapy on anxiety and depression: A meta-analytic review. *Journal of consulting and clinical*  
23 *psychology*, 78(2), 169.
- 24
- 25 Howe, C. (2006). Reflective Practice in Nursing. *Journal of Advanced Nursing*, 54(3), 400-400.

- 1
- 2 Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-
- 3 being: Understanding leader–follower outcomes. *The Leadership Quarterly*, 16(3), 373-394.
- 4
- 5 Jarvis, P. (1992). Reflective practice and nursing. *Nurse Education Today*, 12(3), 174-181.
- 6
- 7 Jeste, D. V., & Vahia, I. V. (2008). Comparison of the conceptualization of wisdom in ancient
- 8 Indian literature with modern views: Focus on the Bhagavad Gita. *Psychiatry*, 71(3), 197.
- 9
- 10 Johns, C. & Freshwater, D. (2009) *Transforming Nursing Through Reflective Practice*, 2nd edn.
- 11 Oxford: Blackwell.
- 12
- 13 Giacalone, R. A., & Jurkiewicz, C. L. (2003). Right from wrong: The influence of spirituality on
- 14 perceptions of unethical business activities. *Journal of Business Ethics*, 46(1), 85-97.
- 15
- 16 Gilbert.P. (2014). The Origins and nature of compassion focused therapy, *British Journal of*
- 17 *Clinical Psychology*, 58, 6-41.
- 18
- 19 Kahneman, D. & Krueger, A. B. (2006). "Developments in the measurement of subjective well-
- 20 being." *The journal of economic perspectives* 20(1) 3-24.
- 21
- 22 Kanter R.M. (1993) *Men and Women of the Corporation*, 2nd edn. Basic Books, New York.
- 23
- 24 King, L. A., Hicks, J. A., Krull, J. L., & Del Gaiso, A. K. (2006). Positive affect and the
- 25 experience of meaning in life. *Journal of personality and social psychology*, 90(1), 179.

- 1
- 2 Koh, A. (1999). Non-judgemental care as a professional obligation. *Nursing Standard*, 13(37),  
3 38-41.
- 4
- 5 Klehe, U. C., Zikic, J., Van Vianen, A. E., & De Pater, I. E. (2011). Career adaptability, turnover  
6 and loyalty during organizational downsizing. *Journal of Vocational Behavior*, 79(1), 217-229.
- 7
- 8 Komives, S. R., Lucas, N., & McMahon, T. R. (2009). *Exploring leadership: For college*  
9 *students who want to make a difference*. John Wiley & Sons.
- 10
- 11 Koya, K. anderson, J., Sice, P & Kotter, R. (2015). Attributes of embodied leadership: A  
12 beginning in the next chapter of leadership development. *Human Systems Management*, 34 (4),  
13 287-300.
- 14
- 15 Kristof-Brown, A. L., Zimmerman, R. D. & Johnson, E. C. (2005) "Consequences of individual's  
16 fit at work: A meta-analysis of person-job, person-organisation, person-group and person-  
17 supervisor fit" *Personnel psychology* 58(2) 281-342.
- 18
- 19 Kristeller, J. L., & Johnson, T. (2005). Cultivating loving kindness: a two-stage model of the  
20 effects of meditation on empathy, compassion and altruism. *Zygon®*, 40(2), 391-408.
- 21
- 22 Kuiper, R. A., & Pesut, D. J. (2004). Promoting cognitive and metacognitive reflective reasoning  
23 skills in nursing practice: self-regulated learning theory. *Journal of Advanced Nursing*, 45(4),  
24 381-391.
- 25

1 Lee, B (1971). Long Street. Available at <https://www.youtube.com/watch?v=LTnSEFsInp0>

2

3 Lenton, J. P., Fowler, N. E., Van der Woude, L., & Goosey-Tolfrey, V. L. (2008). Wheelchair  
4 propulsion: effects of experience and push strategy on efficiency and perceived exertion. *Applied*  
5 *physiology, nutrition and metabolism*, 33(5), 870-879.

6

7 Lichtenstein, B. B., & Plowman, D. A. (2009). The leadership of emergence: A complex systems  
8 leadership theory of emergence at successive organizational levels. *The Leadership Quarterly*,  
9 20(4), 617-630.

10

11 Lilius, J. M., Worline, M. C., Maitlis, S., Kanov, J., Dutton, J. E., & Frost, P. (2008). The  
12 contours and consequences of compassion at work. *Journal of Organizational Behavior*, 29(2),  
13 193-218. DOI: 10.1002/job.508. Retrieved on 01/12/2013.

14

15 Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in  
16 naturalistic evaluation. *New directions for program evaluation*, 1986(30), 73-84.

17

18 Lipman-Blumen, J. (2000). *Connective leadership: Managing in a changing world*. Oxford  
19 University Press.

20

21 Lunn, J. (2009). The Role of Religion, Spirituality and Faith in Development: a critical theory  
22 approach. *Third World Quarterly*, 30(5), 937-951.

23

24

1 Lyons, J. B., & Schneider, T. R. (2009). The effects of leadership style on stress outcomes. *The*  
2 *Leadership Quarterly*, 20(5), 737-748. DOI 10.1016/j.leaqua.2009.06.010. Retrieved on  
3 11/06/213.

4  
5 Mahoney, J. L., & Stattin, H. (2000). Leisure activities and adolescent antisocial behavior: The  
6 role of structure and social context. *Journal of adolescence*, 23(2), 113-127.

7  
8 Makoul, G., & Clayman, M. L. (2006). An integrative model of shared decision making in  
9 medical encounters. *Patient education and counseling*, 60(3), 301-312.

10  
11 Mallinckrodt, B., & Wei, M. (2005). Attachment, Social Competencies, Social Support and  
12 Psychological Distress. *Journal of Counseling Psychology*, 52(3), 358.

13  
14 Manski, C. F. (2004). Measuring expectations. *Econometrica*, 72(5), 1329-1376.

15  
16 Maturana, H. R., & Varela, F. J. (1987). *The tree of knowledge: The biological roots of human*  
17 *understanding*. New Science Library/Shambhala Publications.

18  
19 McCain, R. F. (1965). Nursing by assessment--not intuition. *The American journal of nursing*,  
20 82-84.

21  
22 McCutcheon, H. H., & Pincombe, J. (2001). Intuition: an important tool in the practice of  
23 nursing. *Journal of advanced nursing*, 35(3), 342-348.

24  
McCrae, R. R. (1987). Creativity, divergent thinking and openness to experience. *Journal*

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of personality and social psychology, 52(6), 1258.

- 1
- 2 McGarvey, R. (1990) 'Creative Thinking', USAIR, pp. 36-54.
- 3
- 4 McVicar, A. (2003). Workplace stress in nursing: a literature review. *Journal of advanced*  
5 *nursing*, 44(6), 633-642.
- 6
- 7 Miller, J. B., & Stiver, I. P. (1997). *The healing connection: How women form relationships in*  
8 *therapy and in life*. Beacon Press.
- 9
- 10 Milton, C. L. (2007). Professional values in nursing ethics: essential or optional in the global  
11 universe?. *Nursing science quarterly*, 20(3), 212-215.
- 12
- 13 Milner, T., & Bossers, A. (2004). Evaluation of the mentor–mentee relationship in an  
14 occupational therapy mentorship programme. *Occupational Therapy International*, 11(2), 96-  
15 111.
- 16
- 17 Montana, P. J. & Charnov, B. H. (2008) "Management. New York, Barron's Educational Series."  
18 Inc. p333
- 19
- 20 Mosindi, O & Sice, P. (2011) "An Exploratory Theoretical Framework for Understanding  
21 Information Behaviour." *International Journal of Technology and Human Interaction (IJTHI)*  
22 7(2) 1-8.
- 23

1 Müller, H. (2004). Arguing, bargaining and all that: communicative action, rationalist theory and  
2 the logic of appropriateness in international relations. *European journal of international*  
3 *relations*, 10(3), 395-435.

4  
5 Neufville, R. (2003) "Real options: dealing with uncertainty in systems planning and design."  
6 *Integrated Assessment* 4(1) 26-34.

7  
8 Nolan, P., & Bradley, E. (2008). Evidence-based practice: implications and concerns. *Journal of*  
9 *Nursing Management*, 16(4), 388-393.

10  
11 Nonaka, I. & Takeuchi, H. (1995) *The knowledge-creating company: how Japanese companies*  
12 *create the dynamics of innovation*. Oxford: Oxford University Press.

13  
14 Nusbaum, E. C. & Silvia, P. J. (2011) "Are intelligence and creativity really so different?: Fluid  
15 intelligence, executive processes and strategy use in divergent thinking." *Intelligence* 39(1) 36-  
16 45

17  
18 O'Broin, A., & Palmer, S. (2009). Co-creating an optimal coaching alliance: A Cognitive  
19 Behavioural Coaching perspective. *International Coaching Psychology Review*, 4(2), 184-194.

20  
21 Orme, L., & Maggs, C. (1993). Decision-making in clinical practice: how do expert nurses,  
22 midwives and health visitors make decisions?. *Nurse Education Today*, 13(4), 270-276.

23

- 1 Osumi, T., & Ohira, H. (2010). The positive side of psychopathy: Emotional detachment in  
2 psychopathy and rational decision-making in the ultimatum game. *Personality and individual*  
3 *differences*, 49(5), 451-456.
- 4
- 5 Padilla, A., Hogan, R., & Kaiser, R. B. (2007). The toxic triangle: Destructive leaders,  
6 susceptible followers and conducive environments. *The Leadership Quarterly*, 18(3), 176-194.  
7 doi: 10.1016/j.leaqua.2007.03.001. Retrieved on 06/04/2012
- 8
- 9 Parker, S. K., Williams, H. M., & Turner, N. (2006). Modeling the antecedents of proactive  
10 behavior at work. *Journal of applied psychology*, 91(3), 636.
- 11
- 12 Penrod, J. (2001). Refinement of the concept of uncertainty. *Journal of Advanced Nursing*, 34(2),  
13 238-245.
- 14
- 15 Platzer, H., Blake, D., & Ashford, D. (2000). An evaluation of process and outcomes from  
16 learning through reflective practice groups on a post-registration nursing course. *Journal of*  
17 *advanced nursing*, 31(3), 689-695.
- 18
- 19 Platzer, H., Blake, D., & Ashford, D. (2000). Barriers to learning from reflection: a study of the  
20 use of groupwork with post-registration nurses. *Journal of advanced nursing*, 31(5), 1001-1008.
- 21
- 22 Probst, T. M. (2005) "Countering the negative effects of job insecurity through participative  
23 decision making: lessons from the demand-control model." *Journal of Occupational Health*  
24 *Psychology* 10(4) p320.



- 1 Quinn, R. W., & Dutton, J. E. (2005). Coordination as energy-in-conversation. *Academy of*  
2 *Management Review*, 30(1), 36-57. Retrieved on 6/6/2011.
- 3
- 4 Rankin, J. M., & Campbell, M. L. (2006). *Managing to nurse: Inside Canada's health care*  
5 *reform*. University of Toronto Press.
- 6
- 7 Razoumnikova, O. M. (2000) "Functional organization of different brain areas during convergent  
8 and divergent thinking: An EEG investigation." *Cognitive Brain Research* 10(1) 11-18.
- 9
- 10 Reave, L. (2005) "Spiritual values and practices related to leadership effectiveness." *The*  
11 *Leadership Quarterly* 16(5) 655-687.
- 12
- 13 Reily, K., Finnerty, P. L., & Terveen, L. (2009, May). Two peers are better than one: aggregating  
14 peer reviews for computing assignments is surprisingly accurate. In *Proceedings of the ACM*  
15 *2009 international conference on Supporting group work* (pp. 115-124). ACM.
- 16
- 17 Rew, L., & Barrow Jr, E. M. (2007). State of the science: intuition in nursing, a generation of  
18 studying the phenomenon. *Advances in Nursing Science*, 30(1), E15-E25.
- 19
- 20 Roberts, L. M. (2007). From proving to becoming: How positive relationships create a context  
21 for self-discovery and self-actualization. *Exploring positive relationships at work: Building a*  
22 *theoretical and research foundation*, 29-45.
- 23
- 24 Robinson, K. (2001) *Out of Our Minds: Learning to be Creative*. Oxford: Capstone.
- 25

1 Ross, L. (2006). Spiritual care in nursing: an overview of the research to date. *Journal of clinical*  
2 *nursing*, 15(7), 852-862.

3  
4 Rowold, J., & Laukamp, L. (2009). Charismatic leadership and objective performance indicators.  
5 *Applied Psychology*, 58(4), 602-621. DOI: 10.1111/j.1464-0597.2008.00365.x. Retrieved on  
6 21/09/2011.

7  
8 Scharmer, C. O. (2008) 'Uncovering the blind spot of leadership', *Leader to Leader*, 2008 (47), p.  
9 52.

10  
11 Schaubroeck, J., Walumbwa, F. O., Ganster, D. C., & Kepes, S. (2007). Destructive leader traits  
12 and the neutralizing influence of an “enriched” job. *The Leadership Quarterly*, 18(3), 236-251.  
13 DOI: 10.1016/j.leaqua.2007.03.006. Retrieved on 25/1/2013

14  
15 Schwartz, M. S. (2005). Universal moral values for corporate codes of ethics. *Journal of*  
16 *Business Ethics*, 59(1-2), 27-44.

17  
18 Senge, P. (2006) *The fifth discipline: the art and practice of the learning organization*  
19 *London: Random House Business.*

20  
21 Senge, P., Scharmer, O. C., Jaworski, J. & Flowers, B. S. (2004) *Presence: Human purpose and*  
22 *the field of the future. Cambridge: SoL.*

23

- 1 Sessanna, L., Finnell, D., & Jezewski, M. A. (2007). Spirituality in nursing and health-related  
2 literature: A concept analysis. *Journal of Holistic Nursing*, 25, 252–262.  
3 doi:10.1177/0898010107303890  
4  
5 Siegel, D. J. (2007) 'Mindfulness training and neural integration: differentiation of distinct  
6 streams of awareness and the cultivation of well-being', *Social Cognitive and Affective*  
7 *Neuroscience*, 2 (4), pp. 259-263.  
8  
9 Siegrist, J., Starke, D., Chandola, T., Godin, I., Marmot, M., Niedhammer, I., & Peter, R. (2004).  
10 The measurement of effort–reward imbalance at work: European comparisons. *Social science &*  
11 *medicine*, 58(8), 1483-1499.  
12  
13 Sice, P., French, I. (2004). Understanding humans and organisations. *Philosophy of*  
14 *Management*, 4 (1), 55-66.  
15  
16 Sice, P., Koya, K., Mansi, S. (2013). Leadership capability: an autopoietic perspective. *Human*  
17 *Systems Management*, 32 (2). 95-103.  
18  
19 Skorikov, V. B., & Vondracek, F. W. (2011). Occupational identity. In *Handbook of identity*  
20 *theory and research* (pp. 693-714). Springer New York.  
21  
22 Smith, P. A. (2001). Action learning and reflective practice in project environments that are  
23 related to leadership development. *Management Learning*, 32(1), 31-48.  
24

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- 1 Slovic, P., Finucane, M. L., Peters, E., & MacGregor, D. G. (2004). Risk as analysis and risk as  
2 feelings: Some thoughts about affect, reason, risk and rationality. *Risk analysis*, 24(2), 311-322.  
3
- 4 Spinrad, T., & Eisenberg, N. A. N. C. Y. (2009). Empathy, prosocial behavior and positive  
5 development in schools. *Handbook of positive psychology in schools*, 119-129.  
6
- 7 Standing, M. (2008). Clinical judgement and decision-making in nursing—nine modes of practice  
8 in a revised cognitive continuum. *Journal of Advanced Nursing*, 62(1), 124-134.  
9
- 10 Straughair, C. (2012). Exploring compassion: implications for contemporary nursing. Part  
11 2. *British Journal of Nursing*, 21(4).  
12
- 13 Strauss, A. Corbin (1998) *Basics of Qualitative Research. Techniques and Procedures for*  
14 *Developing Grounded Theory*. Thousand Oaks.  
15
- 16 Sumpf, D. (2002) "Changing the perception of managers with art." *Management by Play,*  
17 *Creativity and Aesthetics track, The European Academy of Management, 2nd Annual Conference*  
18 *on Innovative Research in Management, Stockholm.*  
19
- 20 Tapper, K., Shaw, C., Ilsley, J., Hill, A. J., Bond, F. W., & Moore, L. (2009). Exploratory  
21 randomised controlled trial of a mindfulness-based weight loss intervention for women. *Appetite,*  
22 *52(2), 396-404.*  
23
- 24 Taylor, E. W. (2008). Transformative learning theory. *New directions for adult and continuing*  
25 *education*, 2008(119), 5-15.

- 1
- 2 Taylor, A., & Greve, H. R. (2006). Superman or the fantastic four? Knowledge combination and  
3 experience in innovative teams. *Academy of Management Journal*, 49(4), 723-740.
- 4
- 5 Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of management journal*,  
6 43(2), 178-190. doi: 10.2307/1556375. Retrieved on 15/4/2011.
- 7
- 8 Thompson, C., & Dowding, D. (2001). Responding to uncertainty in nursing practice.  
9 *International Journal of Nursing Studies*, 38(5), 609-615.
- 10 Tomasello, M., & Carpenter, M. (2007). Shared intentionality. *Developmental science*, 10(1),  
11 121-125.
- 12
- 13 Treviño, L. K., Weaver, G. R., & Reynolds, S. J. (2006). Behavioral ethics in organizations: A  
14 review. *Journal of management*, 32(6), 951-990.
- 15
- 16 Trochim, W. M., & Donnelly, J. P. (2005). *Research methods: The concise knowledge base*.  
17 Atomic Dog Pub.
- 18
- 19 Ungar, M. (2008) "Resilience across cultures." *British journal of social work* 38(2) 218-235
- 20
- 21 Vaismoradi, M., Salsali, M., & Ahmadi, F. (2011). Nurses' experiences of uncertainty in clinical  
22 practice: a descriptive study. *Journal of advanced nursing*, 67(5), 991-999.
- 23

- 1 Van Vegchel, N., De Jonge, J., Bosma, H., & Schaufeli, W. (2005). Reviewing the effort–reward  
2 imbalance model: drawing up the balance of 45 empirical studies. *Social science & medicine*,  
3 60(5), 1117-1131.  
4
- 5 Verquer, M. L., Beehr, T. A., & Wagner, S. H. (2003). A meta-analysis of relations between  
6 person–organization fit and work attitudes. *Journal of Vocational Behavior*, 63(3), 473-489.  
7
- 8 Watson, J. (2002). Intentionality and caring-healing consciousness: A practice of transpersonal  
9 nursing. *Holistic Nursing Practice*, 16(4), 12-19.  
10
- 11 Watson, I. (2012). The theory of human caring: retrospective and prospective. *Caring in Nursing*  
12 *Classics: An Essential Resource*, 237.  
13
- 14 Wheatley, M. J. (2010) *Leadership and the New Science: Discovering Order in a Chaotic World*  
15 *San Francisco: Berrett Kohler.*  
16
- 17 White, R. P., & Shullman, S. L. (2010). Acceptance of uncertainty as an indicator of effective  
18 leadership. *Consulting Psychology Journal: Practice and Research*, 62(2), 94.  
19
- 20 Wilkinson, E. (2015). UK NHS staff: stressed, exhausted, burnt out. *The Lancet*, 385 (9971),  
21 841-842  
22
- 23 Wilson, V. W., Leners, D. W., Fenton, J., & Connor, P. (2005). Mentorship: Developing and  
24 inspiring the next generation of nursing leaders. *Nurse Leader*, 3(6), 44-46.  
25

- 1 Wiseman, T. (1996). A concept analysis of empathy. *Journal of advanced nursing*, 23(6), 1162-  
2 1167.  
3
- 4 Wong, C. A., & Laschinger, H. K. (2013). Authentic leadership, performance and job  
5 satisfaction: the mediating role of empowerment. *Journal of advanced nursing*, 69(4), 947-959.  
6
- 7 Wylleman, P., Harwood, C. G., Elbe, A. M., Reints, A., & de Caluwé, D. (2009). A perspective  
8 on education and professional development in applied sport psychology. *Psychology of Sport  
9 and Exercise*, 10(4), 435-446.  
10
- 11 Yegdich, T. (1999). On the phenomenology of empathy in nursing: empathy or sympathy?.  
12 *Journal of Advanced Nursing*, 30(1), 83-93.  
13
- 14 Young, C. E. (1987). Intuition and nursing process. *Holistic Nursing Practice*, 1(3), 52-62.  
15
- 16 Youngson, R. (2011). Compassion in healthcare—the missing dimension of healthcare reform.  
17 *Caregiver stress and staff support in illness, dying and bereavement*, 49-61.  
18
- 19 Zachary, L. J. (2011). *The mentor's guide: Facilitating effective learning relationships*. John  
20 Wiley & Sons.  
21
- 22 Zahourek, R. P. (2005). Intentionality: Evolutionary Development in Healing A Grounded  
23 Theory Study for Holistic Nursing. *Journal of Holistic Nursing*, 23(1), 89-109.  
24