

Full Length Research paper

Using the demoralization scale for the early detection of demoralization in health professionals

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Demoralization is a marker of existential distress and loss of meaning and purpose in patients suffering from advanced diseases. However, health professionals can also suffer from demoralization. There is little education for health professionals to prevent demoralization. The Demoralization Scale is a tool to test the severity of demoralization. The aim of this study was to evaluate the applicability of the demoralization scale to doctors and nurses. The participants were medical and nursing staff of the Mackay Memorial Hospital, a large hospital in Taiwan with a high proportion of cancer patients. All participants used the Mandarin version of the Demoralization Scale (DS-MV). For the reliability tests, we used factor analysis and internal consistency calculated by Cronbach's alpha, using SPSS 18.0. Acceptable reliability of factor analysis in the DS-MV was found for both doctors and nurses. The Cronbach's alpha value of the total score was 0.95 for doctors and 0.94 for nurses. This suggests that the Demoralization Scale is a suitable tool not only for evaluating the severity of demoralization amongst doctors and nurses, but also for examining the outcomes of continuing educations in health professionals.

Keywords: Demoralization, burnout, spiritual well-being, health professionals, continuing educations.

INTRODUCTION

Demoralization occurs not only in patients, but also in physicians and nurses who are under great pressure (Raviola et al., 2002; Attree, 2005). Demoralization develops when patients cannot cope with stress. They may have a sense of helplessness, hopelessness and even loss meaning and purpose in life (Kissane et al., 2001; Clarke and Kissane, 2002). Kissane and Clarke proposed the demoralization syndrome in 2001. Its core

features are hopelessness, loss of meaning and existential distress (Kissane et al., 2001). They went on to develop the Demoralization Scale (DS), for use in cancer patients (Kissane et al., 2004). The DS has been used worldwide to study demoralization in cancer patients (Cockram et al., 2009; Mullane et al., 2009; Hung et al., 2010). But it has not yet been used to assess the extent of demoralization in health professionals.

Compared to demoralization, the notion of spirituality is being increasingly recognized as a component of health. As yet there is no agreed definition of spirituality. It is a vast concept that includes a transcendent dimension.

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Insofar as it includes a sense of well-being and meaning in life, it overlaps the territory covered by the concept of demoralisation. One of the core features of demoralization syndrome is loss of meaning (Visser et al., 2010).

The concept of demoralization amongst health professionals has been mentioned in the literature (Caplan, 1983; Ross and Doherty, 1988) but not explored. Although demoralization amongst medical staff is still unclear, spirituality has been studied (Cammann et al., 1983; Shanafelt et al., 2005; Fang, 2006; Lai et al., 2009; Hooper et al., 2010; Albin et al., 2011; Fang et al., 2011). The spiritual well-being (SpWB) of medical staff is a critical issue (Fang, 2006; Fang et al., 2011) and correlates strongly with demoralization. Addressing the notion of hopelessness as part of the spiritual education component of medical and nursing undergraduate curriculum might help to reduce later demoralization (Lai et al., 2007; Lai et al., 2009).

Recent research has explored the impact of stress on medical professionals (Shanafelt et al., 2005; Hooper et al., 2010; Albin et al., 2011). Three variables have been identified: the source of work stress, the nature of work stress and the impact on health. Chronic work stress is related to environmental conditions, such as overloading, excessive responsibility, time pressure and role conflict, all of which influence physical and mental health, and spiritual well-being (Albin et al., 2011). Health care is a high stress environment, especially for those doctors and paramedics who frequently confront death. Taking care of hospitalized patients is time-consuming, and intimate communication with patients and their family members is stressful. According to research from one cancer center in Maine, USA, only 50% of the doctors consider themselves "comfortable" (Shanafelt et al., 2005). Research from Manchester University in the UK found that paramedics feel increasingly frustrated and demoralized by medical policies (Attree, 2005). The quality of medical teamwork and patients' healthcare is placed at risk if medical staff is experiencing intolerable stress. Thus, we need a tool to identify impending medical staff demoralization.

The purpose of this research was to test whether the Demoralization Scale is applicable to health professionals, and if it can predict impending staff demoralization, especially amongst doctors and nurses with the greatest patient contact.

METHODS

Subjects and study design

This research integrates parts of two previous research projects: "to construct continuing medical education for physicians to prevent burnout and to promote spiritual well-being" (NSC98-2511-S-195-001-) and "the

phenomena of compassion fatigue and vicarious traumatization of nurses in ICU and cancer/hospice wards" (NSC98-2511-S-003-064-), from the Taiwan National Science Council. Both projects were approved by the Mackay Memorial Hospital Institutional Review Board (MMH-I-S-676 and 09MMHIS094). The research was conducted from Aug 2009 to Jul 2010. Participants gave written informed consent, with the option of withdrawal at any stage of participation.

Mackay Memorial Hospital is a large medical center in northern Taiwan. It has two campuses: Taipei City and a satellite center in the suburb of Dansui. All 771 doctors of both branches were invited to participate, and 428 (55.5%) agreed. The final number was 417 (54.1%) after excluding incomplete questionnaires. The nursing staff component was conducted in five units of the Dansui branch: the medical intensive care unit (MICU), surgical intensive care unit (SICU), neurological intensive care unit (NICU), oncology unit and palliative care unit. All 221 nurses were invited to take part, of whom 160 (72.3%) agreed. The final number was 154 (69.7%) after excluding incomplete responses.

Questionnaires

The Mandarin Version of the Demoralization Scale (DS-MV) was translated from the Demoralization Scale English version (Kissane et al., 2004). DS-MV has been validated in cancer patients. Validation with Bartlett's Test of Sphericity is highly significant ($p < .0001$) and Cronbach's alpha value of internal consistency of the Full Scale is 0.92. Cronbach's alpha value for individual items ranged from 0.63 to 0.88 (Hung et al., 2010). As Kissane mentioned, the reliability is higher when DS is restricted to cancer patients but needs further testing in other populations.

The data involving doctors was extracted from research about the Physician's Spiritual Well-Being Scale (PSPWBS) (Fang et al., 2011), and the Michigan Organization Assessment Questionnaire (MOAQ) (Cammann et al., 1983).

Statistical analysis

This research used SPSS18.0. Descriptive statistics use frequencies to analyze the category scale of the basic profile of the sample. It detects the convergence or divergence trend inside the samples. The reliability and validity test of this research used methodology already published for the English and Mandarin scales- Evaluation of the Reliability and Validity of the Demoralization Scale for Cancer Patients (Kissane et al., 2004; Hung et al., 2010). The principal component analysis (PCA)

Table 1. Characteristics of physicians and nurses

Item		Nurses	Physicians
Sample		154(69.7%) ^a	417(54.1%) ^a
	Male	1(1%)	304(72.9%)
	Female	153(99.0%)	113(27.1%)
Departments or Units	Palliative care units	42(27.3%)	
	Oncologic units	36(23.4%)	
	Surgical intensive care unit		
	Neurological intensive care unit	76(49.4%)	
	Medical intensive care units		
	Internal medicine		112(26.9%)
	Surgery		75(18%)
	Pediatrics		46(11%)
	Obstetrics and gynecology		29(7%)
	Other clinical departments		127(30.4%)
	Non-clinical departments		28(6.7%)
Age (yr)		26.66	36.33
seniority (yr)	Nurses		
	≤ 2 years	58(37.7%)	
	2 to 5 years	35(22.7%)	
	≥ 5 years	61(39.6%)	
	Not fill out		
	Doctors		
	≤ 4 years		157(37.6%)
	5 to 11 years		117(28.1%)
	≥ 12 years		143(34.3%)
Religion	Yes	92(59.7%)	194(46.5%)
	No	62(40.3%)	223(53.5%)
Position	Resident or chief resident		183(43.9%)
	Attending physician		234(56.1%)

^a response rate to complete all questionnaires.

addresses five factors: loss of meaning, dysphoria, disheartenment, helplessness and sense of failure. The internal consistencies were tested with Cronbach's α value.

RESULTS

A total of 417 doctors and 154 nurses completed the questionnaires in these two research projects (Table 1). Their sex, age, duration of work experience, clinical department, seniority and religious affiliation are described in table one.

The total score of the 24 questions in DS-MV is 25.57

for doctors with SD value 12.36 and 35.73 for nurses with SD value 13.61.

Cronbach's α was used to test the reliability (Table 2) and calculate the internal consistency of the full scale. The Cronbach's α value for doctors was 0.95. The five components (loss of meaning, dysphoria, disheartenment, helplessness and sense of failure) were tested as described by Kissane. We found that the internal consistency Cronbach's α values were 0.89, 0.76, 0.9, 0.81 and 0.69 respectively. The Cronbach's α value for nurses was 0.94, and the internal consistency Cronbach's α value of individual components was 0.84, 0.76, 0.86, 0.84 and 0.62 respectively. This indicates high reliability and validity with both nurses and doctors.

Table 2 . Reliability analyses using Cronbach's alpha: means, and standard deviations for the 5-factors, 24-item solution.

	Doctors	Nurses
Sample	417	154
Cronbach's α of the 5 factors		
loss of meaning	0.89	0.84
dysphoria	0.76	0.76
disheartenment	0.9	0.86
helplessness	0.81	0.84
sense of failure	0.69	0.62
Cronbach's α of the total score	0.95	0.94
mean	25.57	35.73
standard deviation	12.36	13.61

DISCUSSION

The Demoralization Scale was developed to evaluate the degree of demoralization in cancer patients (Kissane et al., 2004; Cockram et al., 2009; Mullane et al., 2009; Hung et al., 2010). This study demonstrates that the DS can also be used for doctors and nurses. Kissane's research (2004) in Australian cancer patients produced a Cronbach's α value of 0.94. Hung's research (2010), with Taiwanese cancer patients gave a Cronbach's α value of 0.92. Our research indicates that the DS's reliability in physicians and nurses is 0.95 and 0.94 respectively, and confirms recent reports of demoralization in nurses (Raviola et al., 2002; Attree, 2005; Yasunaga, 2008). It suggests that the DS could be used as a demoralization screening test in doctors and nurses.

There are already scales for measuring burnout or monitoring the mental or spiritual status of medical staff, such as Maslach Burnout Inventory—Human Service Survey (MBI-HSS) (Maslach and Jackson, 1981), Scale of Work Engagement and Burnout (SWEBO) (Hultell and Gustavsson, 2010), PsychoMatrix Spirituality Inventory (Wolman, 2001; Yang and Wu, 2009), and the Physician Spiritual Well-Being Scale (PSPWBS) (Fang et al., 2011). However, these scales are not sufficiently comprehensive to detect all staff distress. Some research suggests that the well-being of residents is not directly related to their medical knowledge and is not explained by burnout (West et al, 2010). Thus, we think the DS may be another scale to help us understand the spiritual status of physicians and nurses. If used in conjunction with other scales, such as MBI-HSS or PSPWBS, we may achieve a comprehensive understanding of the staff's physical, mental and spiritual status. Future research with different scales is needed to define the interrelationship between them, leading to a better understanding of the physical, mental and spiritual status of health professionals. The early detection of distress, at both undergraduate and

postgraduate levels, would enable the development of appropriate interventions, so as to reduce staff burnout or demoralization.

In previous research of demoralization in cancer patients, a depression scale was used for comparison (Kissane et al., 2004; Cockram et al., 2009; Mullane et al., 2011). In Taiwanese culture a label of "depression" can result in unfair discrimination against staff. Therefore we did not include a depression scale in this study. Therefore this research could not evaluate any link between demoralization and depression (North and Ryall, 1997; Halter, 2004; Middleton, 2008). Cancer patients can have demoralization without depression. Whether or not medical staff can have demoralization without depression needs further research. There is a correlation between depression and suicide, and demoralization can also increase the risk of suicide (Kissane et al., 2001; Clarke and Kissane, 2002). Suicide is occasionally observed in health professionals (Peipins et al., 1997; Hendin et al., 2003; Middleton, 2008). It is difficult for them to seek help, especially physicians (Hendin et al., 2003). The use of the DS to identify medical staff that needs help might prove to be an effective suicide prevention strategy.

Strengths and limitations

There are three major strengths of the research. Firstly, this is the first empirical study to quantify the demoralization of doctors and nurses. The result was statistically significant for both doctors and nurses. Secondly, the research was undertaken in a single organization, and achieved a very high response rate (physicians 54.1% and nurses 69.7%). Thirdly, although the demoralization scale originated from a western cultural context, this research demonstrates that it is applicable in an eastern cultural setting. The Demoralization Scale appears to transcend different

cultural backgrounds.

There are some limitations to the research. Firstly, because this is the first quantitative research to explore the demoralization of doctors and nurses, there is minimal literature available for comparison. Secondly, this research was confined to a single site and might not be generalisable to other sites. Multi-center and international research may be required. For instance, the mean value of demoralization scores of cancer patients in Australia and Taiwan was 30.82 ± 17.73 and 30.27 ± 15.62 respectively but the mean value of medical staff in different regions might not be so consistent. Furthermore, we were surprised to find that the demoralization mean value of our nurses (35.73 ± 13.61) was much higher than both Taiwanese and Australian cancer patients. This is worrying, and needs further research and a strategy to address this potentially serious situation.

CONCLUSION

The work environment of doctors and nurses is often very stressful. They are highly devoted to their patients but have little control over their workload. Witnessing the pain and death of their patients can produce profound suffering, causing burnout and demoralization. The Demoralization Scale might be a useful screening tool to identify demoralized staff. There is a need for appropriate continuous education to prevent and treat demoralization. This should commence at an undergraduate level in schools of medicine and nursing. The discovery that Taiwanese nurses are more demoralised than their patients is particularly worrying. There is an urgent need to discover the causal factors, and plan corrective interventions.

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