

# Defense Styles Mediate the Association Between Empathy and Burnout Among Nurses

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**Abstract:** Research has extensively identified empathic skills as essential in health trainings, policies, and recommendations. However, there have been conflicting views of the impact of empathy on burnout. Some studies contend that empathy serves a protective role, whereas other studies have shown that burnout leads to a diminished capacity to empathize. To date, studies have not yet explored whether defense styles mediate associations between empathy and burnout. A total of 442 nurses completed questionnaire measures of empathy, burnout, and defense mechanisms as part of a large-scale research study on nurse burnout. Findings reflected very high levels of emotional exhaustion and depersonalization among the nursing staff. The nurses in this study endorsed a predominantly immature defense style. In addition, immature defense styles mediated the association between empathy and emotional exhaustion and between empathy and depersonalization. The study provides further knowledge about the role of defense styles in nurse burnout and empathy.

**Key Words:** Burnout, nurses, defense mechanisms, empathy, emotional exhaustion

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Over the past decade, there has been a growing emphasis on the concept of empathy within the health care profession. Studies have shown that practitioner empathy is highly correlated with patient satisfaction (e.g., Vedsted and Heje, 2008) and changes in symptoms (Mercer et al., 2008). The biological basis of empathy has also been extensively studied in an effort to further understand its neurological underpinnings. There is a growing consensus that empathy consists of three macro components: emotional simulation (Decety and Lamm, 2009), perspective-taking (Shamay-Tsoory, 2011), and emotion regulation (Decety and Lamm, 2009). Burnout has been shown to have a negative impact on one's ability to preserve and maintain empathy in a health care environment. The three dimensions of burnout—emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach and Jackson, 1981a, 1981b)—have been found to interfere with cognitive processes and perspective-taking as well as emotion regulation. It is essential that staff working in the health service can infer both the affective and cognitive states of others to navigate the social world of health care successfully.

Studies have shown that nurses have the highest levels of burnout when compared with other health care professionals (Aiken et al., 2002; Dominguez-Gomez and Rutledge, 2009; Sermeus et al., 2011). It appears that the rates are highest among nurses who provide direct patient care in nursing homes and hospitals (McHugh et al., 2011). Research has shown that between 30% and 50% of nurses reach clinical levels of burnout (Aiken et al., 2002; Gelsema et al., 2006; Poncet et al., 2007). There has been little change in these prevalence rates. A recent study that surveyed nurses in 12 European

countries, including Ireland, found that one (27%) in four nurses reported high emotional exhaustion, 10% were experiencing high depersonalization, and 17% had a low sense of personal accomplishment (Dall'Ora et al., 2015). Other previous studies reported similar findings (Patrick and Lavery, 2007). These experiences have significant implications for the well-being and health of nurses (Lim et al., 2010; Nolan and Smojkis, 2003). Previous research has investigated nurse burnout and its effect on patient outcomes. Studies have shown that burnout can lead to poor quality of care on units and increased risk of failure to recognize patients in distress (Aiken et al., 2001; Poghosyan et al., 2010). One reason for this may be due to depersonalization. Depersonalization as a result of burnout may lead to objectifying patients and dehumanizing the relationship with them, based on defense and protection mechanisms, which consequently alter empathy (Brazeau et al., 2010; Shanafelt et al., 2012; Zenasni et al., 2012).

Although there is an increasing amount of data suggesting potential direct links between empathy and burnout, the direction of this relationship has been met with debate. Some models suggest that empathy is a direct cause of burnout (e.g., the theory of compassion fatigue; Duarte et al., 2016), whereas other models suggest that empathy is an indirect cause of burnout. For instance, the theory of emotional dissonance proposes that burnout is associated with diminished empathic capacities (Tei et al., 2014). In other words, burnout is an “empathy killer.” A third hypothesis posits that empathy may protect health providers from burnout, as it may be associated with job satisfaction and job meaning (Halpern, 2003). Thomas et al. (2007) found that an increase in empathy had a protective role against burnout among medical students. The conflicting effects of empathy may be related to its multidimensional construct. Recent models describe empathy as consisting of an affective trait, a cognitive trait, and both (Decety and Jackson, 2004; Eisenberg and Eggum, 2009). Affective empathy refers to the ability to experience and share the feelings of others (Mehrabian and Epstein, 1972), whereas cognitive empathy is the ability to identify what another individual is feeling without an affective response (Fehr and Fischbacher, 2003). Researchers have examined the relationship between affective empathy and cognitive empathy on burnout. In 1999, Omdahl and O'Donnell found that nurses with greater cognitive empathy were less likely to depersonalize their patients, whereas the opposite pattern was found for nurses with higher levels of affective empathy (Omdahl and O'Donnell, 1999). Similarly, Lee et al. (2003) found that cognitive empathy was the most important predictor of low levels of depersonalization and a greater sense of personal accomplishment. Research has shown that lower levels of burnout are associated with a higher level of perspective-taking (cognitive empathy) (e.g., Lamothe et al., 2014).

Exploring the impact of empathy is important because many health policies and recommendations are advocating for an increase in empathetic skills. Empathy is a central component of nurse-patient relationships; however, the pathway indicating that empathy is a protective factor of burnout is unclear and requires further attention. Studies have shown that emotional demands, or patient stressors, do not contribute significantly to burnout (Duquette et al., 1994; Maslach et al., 2001). Instead, emotional dissonance has been found to be the largest contributor (Zapf, 2002). According to Zapf (2002), “emotion work” requires staff to display organizationally expected emotions; thus, when

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conflict arises between one's inner emotions and the emotions that are required from them, feelings are suppressed and "emotional dissonance" occurs. Emotional suppression is a form of defense style used by the ego to shield the conscious mind from unpleasurable affects (Blackman, 2004) and from the awareness of internal or external stressors. Malan's (1995) "triangle of conflict" has become a useful framework for understanding the defensive system. According to Malan (1995), impulses, wishes, images, and "hidden feelings" that are distressing or associated with conflict enter our consciousness, and awareness of this induces anxiety, which in turn activates our defense mechanisms. The solution or goal is to avoid conscious acknowledgement of this conflict to restore psychic equilibrium. It appears then that nurses may be experiencing anxiety because of a conflict between their own empathy and the organization's required emotions and so use defense styles to cope; this may explain why empathetic processes are altered.

Although defense profiles are for the most part stable, they can vary in accordance with the emotional demands of a situation (Bond, 2004). Defense styles can be either adaptive or maladaptive depending on the circumstance and their severity. In addition, defense styles exist within a hierarchy of maturity. Mature defense styles attenuate anxieties and moderate distressing emotions. They gradually increase awareness of the sources of anxiety so that the individual can think about them and problem solve appropriately (Cohen, 2003) through, for instance, the use of humor, sublimation, or seeking social support. In contrast, immature defenses hinder the conscious processing necessary for the resolution of anxiety. They tend to distort the importance and scale of the source of stress or stressful event. According to Huprich (2008), a blurring between the self and the external world can occur. One effect of immature defenses is a lack of awareness; another effect is ineffective actions. Falling in the middle of this continuum of mature to immature defenses are the neurotic defense mechanisms (Bond, 2004). These defense mechanisms attempt to moderate stress by distorting the meaning or effect of the threat source (Vaillant, 1971; Vaillant et al., 1986).

Bria et al. (2012) demonstrated in their systematic review that health care workers with greater levels of burnout were more likely to use neurotic defenses and defensive strategies such as denial, humor, and withdrawal. Research has shown that nurses use avoidance of their own emotions, emotional detachment, masochism, passive aggression, and introjection (Bruneau and Ellison, 2004; Pompili et al., 2006; Skogstad, 1997). However, immature defense mechanisms may be shielding nurses from conscious awareness of work-related anxiety, placing them at higher risk of becoming "burned-out." One study found that immature defenses (*i.e.*, introjection, masochism) were associated with emotional exhaustion among a sample of 120 nurses (Pompili et al., 2006). Similar findings have been reported by Regan et al. (2009). Despite evidence linking empathy to burnout and the proposal that individual differences in burnout levels may be related to defense styles, the mediating role of defense styles in the relationship between burnout and empathy has not yet been directly examined. The aims of the present study were as follows: a) to identify Irish nurses' level of empathy, b) to examine the association between burnout (emotional exhaustion, depersonalization, and low sense of personal achievement) and empathy, and c) to examine whether immature defense styles mediate the relationship between empathy and emotional exhaustion/depersonalization.

## METHODS

### Design

A cross-sectional design was used. Data were collected online through the completion of self-report measures.

### Participants

A total of 442 nurses working in Ireland (mean age = 41.1 years, age range = 23–63 years) completed an online survey via the

surveymonkey.com portal. Participants were broadly categorized as "nurses" and self-identified as either employed in general nursing, paediatrics, gerontology, intellectual disability nursing, accident and emergency, surgery, or psychiatric nursing. Full ethical approval was granted through the National University of Ireland, Galway's research ethics committee before beginning recruitment to the study. Participants were invited to partake in the study via press release, social media, organization mailing lists, and the contact details provided on organization Web sites. On request, participants were provided with a leaflet describing the study aims, the benefits of participation, and the limits of confidentiality. In line with the ethical requirements, it was also emphasized that their participation was voluntary and that their data would only be used for research purposes. All participants were invited to complete an online survey, using the surveymonkey.com portal. Participants were required to provide informed consent online before anonymously commencing the survey, which was then followed by a debriefing form. The online survey was designed in such a way that participants could not access the next online page of the survey unless they had answered all the questions. The survey took on average 30 minutes to complete. Contact details for support services were provided at the end of the survey. See Table 1 for sample characteristics. Inclusion criteria for the study were as follows: a) 18 years and older; b) qualified, registered nurses; and c) a minimum of 1 year of work experience after qualification.

### Measures

Quantitative data were gathered over 3 months (January 2017 to March 2017). Cronbach's alpha statistics were calculated to provide an indication of each scale's internal consistency, a measure of the extent to which items within the scale are measuring the same latent construct. Alpha values of .6 to .7 are considered acceptable, and values of .7 to .9, ideal (Bland and Altman, 1997).

### Demographic Information

Participants completed a demographic questionnaire to gather information regarding their age, sex, ethnicity, nationality, relationship status, number of children, education, employment status (full-time/part-time), nursing field, and job tenure (number of years after registration).

### Burnout

The Maslach Burnout Inventory for Human Services (MBI; Maslach et al., 1996) is a 22-item instrument designed to measure three domains of burnout: emotional exhaustion (9 items; *e.g.*, "I feel emotionally drained by my work"), depersonalization (5 items; *e.g.*, "I really don't care about what happens to some of my patients"), and personal accomplishment (8 items; *e.g.*, "I accomplish many worthwhile things in this job"). In this study, the human services version (MBI-HSS) was administered. Respondents were invited to rate the frequency with which they experience each item on a 7-point Likert scale ranging from "never" to "everyday." A subscale score is obtained by summing the items in each subscale. A high degree of burnout is one in which a respondent has high scores on the emotional exhaustion and depersonalization subscales, and a low score on the personal accomplishment subscale. The MBI has good reliability for the three subscales with Cronbach's alphas of .90 for emotional exhaustion, .79 for depersonalization, and .71 for personal accomplishment, with test-retest reliability coefficients of .82, .60, and .80, respectively (Maslach and Jackson, 1981a; Maslach et al., 1996). In this study, the Cronbach's alpha coefficients for the three dimensions of MBI were .93, .77, and .77, respectively.

### Defense Style

Participant's defense mechanisms were measured using the Defense Style Questionnaire (DSQ-40; Andrews et al., 1993). The DSQ-40 is a 40-item inventory designed to assess conscious expressions of defense

**TABLE 1.** Demographic and Work-Related Characteristics of Nurses (N = 442)

Variable	n	%
Age, mean (SD)	442	41.1 (9.8)
Sex		
Male	30	6.8
Female	412	93.2
Nationality		
Irish	423	95.7
British	9	2.0
European	3	0.7
Asian	3	0.7
American	3	0.7
Relationship status		
Married	241	54.5
In a relationship	84	19.0
Divorced or separated	21	4.8
Single, never married	92	20.8
Widowed	4	0.9
Children		
No children	205	46.4
One child	50	11.3
Two children	82	18.6
Three or more	105	23.8
Education level		
PhD	8	1.8
Master's	79	17.9
Postgrad diploma/cert	163	36.8
Degree	138	31.2
Diploma	54	12.2
Nursing experience, mean (SD)	17.5	10.7
Employment status		
Full-time	346	78.3
Part-time	89	20.1
Locum/bank	7	1.6
Nursing discipline		
General	118	26.7
Community/PHN	32	7.2
Older age	70	15.8
Emergency/A&E	33	7.5
Intensive care	18	4.1
Surgery/surgical ward	31	7.0
Oncology	24	5.4
Mental health	28	6.3
Disability	6	1.4
Other <sup>a</sup>	82	18.5

<sup>a</sup>Specialized nursing field, that is, chronic pain, rehabilitation, renal clinic, etc.

mechanisms. The defense mechanisms are divided into three categories: mature (8 items), neurotic (8 items), and immature (24 items). The mature style factor consists of items measuring anticipation, humor, sublimation, and suppression. The neurotic style factor includes idealization, pseudoaltruism, reaction formation, and undoing. The immature style factor assesses acting out, autistic fantasy, denial, devaluation, displacement, dissociation, isolation, passive-aggression, projection, rationalization, somatization, and splitting. Participants were asked to rate the extent to which they agree with statements about themselves on a

9-point Likert scale (from 1 to 9). Items include “I get satisfaction from helping others and if this were taken away from me, I would get depressed,” and “I often act impulsively when something is bothering me.” Individual defense scores were calculated as the mean between the two items corresponding to each defense mechanism, and the scores for each category were calculated as the mean between all scores of the defense mechanism belonging to that category. The DSQ-40 does not provide a total score but elicits scores for each of the three defense styles. However, it is the relative strength with which one style is endorsed compared with another that is of interest. Watson and Sinha (1998) found an average item-scale correlation of  $r = 0.78$  for the 20 scales. Test-retest correlations have been reported with an average of  $r = 0.66$  for the 20 scales using a 4-week period (Andrews et al, 1993). Cronbach's alpha values are dependent on the number of items in the scale. As the mature and neurotic scales consist of a small number of items (less than 10), the mean inter-item correlation value was reported instead. Optimal mean inter-item correlation values range from .2 to .4 (Briggs and Cheek 1986). In this study, the mean inter-item correlation was .21 for the mature factor, .18 for the neurotic factor, and .22 for the immature factor.

### Empathy

To assess the participants' levels of empathy toward their patients, a five-item empathy scale adapted from the Barrett-Lennard Relationship Inventory (Ganley, 1989) was administered. In 1989, Ganley identified five items relating to empathy, and these items were adapted and reworded to be stated from a nurse's point of view. Answers to items such as “Do you usually sense or realise what your patients are feeling? Do you nearly always know how they feel?” were recorded on a 5-point Likert scale ranging from never to always. The original scale has good levels of internal consistency (Cronbach's  $\alpha = .84$ ) and good test-retest reliability (.83) (Gurman, 1977). The shorter scale demonstrated good reliability (Ganley, 1989). The internal consistency for the empathy measure was .69 in this sample.

### Data Analysis

The data were transferred from the surveymonkey.com portal into the IBM Statistical Package for the Social Sciences (SPSS) version 24 software for analysis. Data was assessed for normal distribution by analyzing histograms, stem and leaf plots and employing Kolmogorov-Smirnov analysis. Descriptive statistics of the variables in the study included means, standard deviations (SDs), frequency counts, percentages and skewness and kurtosis values. A series of t-tests, one-way analysis of variance (ANOVA) and Pearson  $r$  correlation were performed to examine the associations between socio-demographics, work-related characteristics, and level of burnout. Mediation analyses were performed using the SPSS PROCESS (Hayes, 2013; www.afhayes.com) macro 2.16 (Hayes, Columbus, OH) (model 4). The confidence intervals of the indirect effect were created by bootstrapping 5,000 samples. Mediation existed if the confidence interval of the indirect effect did not include 0.

## RESULTS

### Demographic Synopsis

The demographic and professional characteristics of the nurse participants are shown in Table 1. The nurses in the study were primarily women ( $n = 412, 93.2\%$ ), Irish ( $n = 423, 95.7\%$ ), married ( $n = 241, 54.5\%$ ), had no children ( $n = 205, 46.4\%$ ), and had completed a post-graduate certificate or diploma ( $n = 163, 36.8\%$ ). The mean age was 41 (SD = 9.8), ranging from 23 to 63 years. Years working as a nurse ranged from 1 to 45 years (mean = 17.5, SD = 10.7), with the majority in a full-time post ( $n = 346, 78.3\%$ ). Over a quarter of the participants were working in general nursing ( $n = 118, 26.7\%$ ). The prevalence of burnout in the following study was very high. Among the participants,

**TABLE 2.** Means and Standard Deviations for Key Variables (N = 442)

Outcome measure	Mean	SD
MBI		
Emotional exhaustion	37.60	10.76
Depersonalization	14.04	5.96
Low personal accomplishment	37.94	6.51
Empathy scale		
Total score	3.90	0.44
DSQ-40		
Mature	4.18	1.08
Neurotic	4.82	1.12
Immature	6.06	0.99

359 (81.2%) were above the cutoff point for high levels of emotional exhaustion, 254 (57.5%) reported high levels of depersonalization, and 75 (17%) scored above the cutoff point for high levels of a low sense of personal accomplishment. Mean MBI scores in this study are above the normative sample (e.g., Maslach et al., 1996). The mean score for empathy was 3.90 and for immature defense style was 6.06 (see Table 2).

In general, the three burnout subscales were unrelated to demographic features in the nursing samples, with a few small exceptions. Emotional exhaustion was slightly but significantly negatively correlated with age ( $r = -0.13, p = 0.005$ ), as was depersonalization ( $r = -0.30, p = 0.000$ ). Low personal accomplishment was slightly positively associated with age ( $r = 0.15, p = 0.001$ ). There were no significant differences between the three dimensions of burnout and sex, nationality, or relationship status. The difference in depersonalization mean scores between no children and having three or more was small, with an effect size of 0.03. Nurses with a postgraduate qualification scored significantly lower on emotional exhaustion (mean = 36.54, SD = 10.87;  $t[440] = 2.37, p = 0.02$ ) but higher on low personal accomplishment (mean = 38.7, SD = 6.85;  $t[440] = -2.91, p = 0.004$ ); effect sizes were small. Higher mean scores for emotional exhaustion were noticeable among nurses working in the surgery (mean = 41.7, SD = 8.4) and emergency (mean = 41.4, SD = 9.3) departments. One-way ANOVA revealed that nurses in the above fields had higher mean scores than those in mental health (mean = 31.95, SD = 13.51). In addition, emergency nurses had the highest mean scores for depersonalization, and their levels were significantly higher than public health nurses, nurses working in older-age services and those who work in intellectual disability services. Nursing experience was negatively correlated with emotional exhaustion ( $r = -0.13, p = 0.005$ ) and depersonalization ( $r = -0.25, p < 0.0005$ ), but positively correlated with low personal accomplishment ( $r = -0.13, p < 0.01$ ). Empathy was significantly positively associated with age ( $r = 0.16, p < 0.005$ ) and nursing experience ( $r = 0.16, p < 0.005$ ). There were no significant differences in scores with regard to sex and other demographic variables.

### Associations Between Burnout, Empathy, and Defense Styles

Examination of bivariate correlations revealed a significant relationship between emotional exhaustion and all the outcome variables, with large effect sizes for depersonalization ( $r = 0.62$ ) and with medium effect sizes for immature defense style ( $r = -0.41$ ) and personal accomplishment ( $r = -0.38$ ). Depersonalization significantly inversely correlated with immature defense style ( $r = -0.45$ ) with a medium effect size. There was a significant negative association between low personal accomplishment and a mature defense style ( $r = -0.36$ ). Empathy was significantly negatively correlated with emotional exhaustion, depersonalization, and a mature defense style but positively

associated with low personal accomplishment and immature defense style (see Table 3).

### Mediating Role of Immature Defense Style

A mediation analysis was conducted to test the proposed indirect effects model suggesting that the association between empathy and burnout may be due, at least in part, to an immature defense style. A graphical depiction is provided in Figure 1. Results revealed a significant indirect effect of empathy on emotional exhaustion through immature defense styles,  $ab = -1.97$ , BCa CI  $[-3.17, -1.03]$  (see Table 4). Immature defense style could account for three quarters of the total effect,  $P_M = 0.71$ . The results of the bootstrapping procedure showed that the confidence interval of the indirect effect did not contain zero, which supports the significance of the mediation effect. In addition, there was a smaller but significant indirect effect of empathy on depersonalization through immature defense styles,  $ab = -1.13$ , BCa CI  $[-1.76, -.55]$ , accounting for approximately one third of the total effect,  $P_M = 0.33$  (see Table 4).

### DISCUSSION

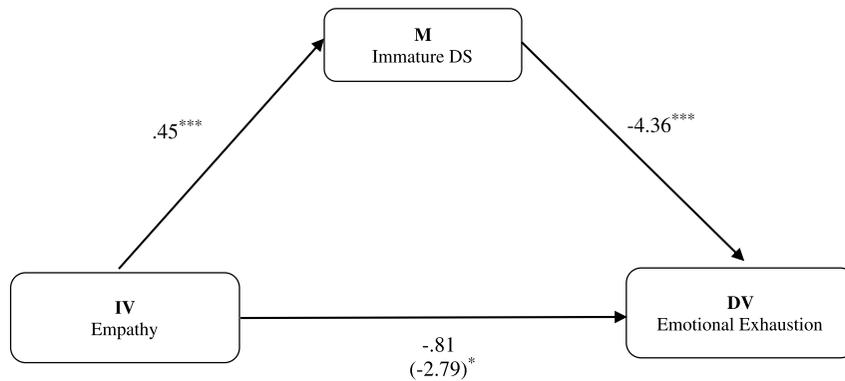
The present study investigated associations between empathy and burnout and whether the use of immature defense style mediated the association between empathy and emotional exhaustion and depersonalization. Within this study, the average score for both emotional exhaustion and depersonalization was above the cutoff threshold to be considered at risk of burnout. In fact, 81% of nurses reported a high level of emotional exhaustion and 58% reported high levels of depersonalization. The prevalence rates are higher than Dall'Orta et al.'s (2015) recent European study; however, the percentage for low personal accomplishment was the same (17%). Our findings also revealed that most of the nurses had a moderate score of empathy and a high score of immature defense styles. Findings showed that older and more experienced nurses had a higher empathy score. Empathy or burnout was not associated with sex, educational level, and marital status. In this study, the most influential demographic on empathy and burnout was age and work experience. It is interesting to note that nearly half of the nursing participants did not have any children. Attachment styles are important in developing and maintaining effective social relationships. The majority of work in health care settings frequently requires interactions with patients and their families. Studies have shown that attachment style can influence individual functioning in the work environment, with links between secure attachment and higher levels of overall work satisfaction, confidence, and perceptions of others as viewing them favorably (Hazan and Shaver, 1990; Mikulincer and Shaver, 2007). Studies have found that attachment styles are significant predictors of nursing staff's abilities to cope with difficult circumstances and in using better-coping methods to manage stress (Franczak, 2012). Hawkins

**TABLE 3.** Correlation Coefficient Values Between Key Variables (N = 442)

Variable	1	2	3	4	5	6	7
1. EE	—	.62**	-.38**	-.11*	.13**	-.16**	-.41**
2. D		—	-.36**	-.25**	.10*	-.13**	-.45*
3. PA			—	.35**	-.36**	-.01	.28**
4. Empathy				—	-.17**	.02	.20**
5. Mature DS					—	.26**	.02
6. Neurotic DS						—	.50**
7. Immature DS							—

\* $p < 0.05$  (two tailed), \*\* $p < 0.01$  (two tailed).

EE indicates emotional exhaustion; D, depersonalization; DS, defense style; PA, personal accomplishment.



**FIGURE 1.** Analysis of immature defense styles as a mediator of the relation between empathy and emotional exhaustion.

et al. (2007) found partial support for the hypothesis that nurses with insecure attachment styles experience more stress than securely attached nurses. It has been proposed that the relationships formed in organizations between individuals and groups may mirror the attachments formed between infants and parents and between adults (Popper and Maysel, 2002). Attachment styles have also been linked to defense mechanisms. Besharat et al. (2001) demonstrated that participants with secure attachment styles were more likely to use mature defense mechanisms, whereas those with insecure or ambivalent attachment styles were more likely to use neurotic and immature defense mechanisms. The majority of studies have focused on examining the association between burnout and early attachment relationships, but there is limited research on whether burnout is related to current attachment style in adulthood. Future research could examine the protective role of parenting and current attachment styles in burnout and nurse empathy.

This study found that empathy was negatively associated with emotional exhaustion and depersonalization but positively associated with a low sense of personal accomplishment. In addition, nurses with higher levels of empathy were more likely to use immature defense styles. Mediation analyses revealed that immature defense style mediated the relationship between empathy and emotional exhaustion, accounting for three quarters of the total effect. In addition, immature defense styles mediated the relationship between empathy and depersonalization, accounting for one third of the total effect.

These findings suggest that although empathy may serve a protective role, nurses with higher levels of empathy are using immature defense styles. One reason may be the occurrence of emotional dissonance, that is, the emotion work one must engage in when their organizationally required emotions conflict with their true internal emotions (Zapf, 2002). It may be that nurses are emotionally conflicted. To carry out the demanding role of nursing, they must resort to immature defense styles to block this conflict from conscious awareness and to increase their emotional reserves in the short-term. Interestingly, nurses with higher empathy scores reported a reduced sense of personal accomplishment. This is consistent with findings reported by Lee et al.

(2003) and does not support the hypothesis that empathy prevents burnout because it generates greater professional satisfaction (Halpern, 2003). According to Vaillant (1971), ego defenses can alter a person's perception of internal and external realities. This might also explain why the use of immature defense styles has led nurses to perceive themselves as less accomplished than their peers.

Immature defenses are normative in young children (Cramer, 1991). However, adults who maintain an immature defense style experience greater psychopathology and maladjustment (Perry and Cooper, 1989; Vaillant, 1994), length of marriage, income level, and objective physical health (Vaillant and Schnurr, 1988). Studies have shown that immature defense styles act as a moderator in the link between negative attributional style and depressive symptoms (Kwon and Lemon, 2000) and between low hope and depression (Reff et al., 2005). Kwon and Olson (2007) also found that rumination was associated with depressive symptoms primarily when accompanied by an overuse of immature defenses. This has important clinical implications for nurses, who, through the overreliance of immature defenses, are increasing their risk for further burnout, anxiety, depressive symptoms, and other mental health disorders.

### Implications and Future Directions

The findings from this study demonstrate that the rate of nurse burnout in Ireland is significantly high. Furthermore, from this study, it appears that the majority of nurses with high levels of empathy are using immature defense styles to further reduce their levels of emotional exhaustion and depersonalization. The increasing emphasis on productivity within the health care system may lead to a perpetual state of “fight or flight.” It is essential that health care policies advocate for more clearly defined boundaries so that nurses are not at risk of overstretching themselves. Defense styles are dynamic and can, therefore, be altered; thus, it seems important for senior management teams to consider ways to reduce the impact of emotional dissonance. For instance, the organizational rules regarding emotional display of frontline employees and the style of supervision may need revision. Nurses

**TABLE 4.** Mediation Analyses Testing the Influence of Immature Defense Styles on the Relationship Between Empathy and Emotional Exhaustion/Depersonalization

Predictor	Outcome	Mediator	Path <sup>a</sup>	Path <sup>b</sup>	Direct Effect <sup>c</sup>	Total Effect <sup>c</sup>	Indirect Effect <sup>ab</sup>	Confidence Intervals (Lower to Upper)	
Empathy	Emotional exhaustion	Immature DS	0.45***	-4.36***	-0.81	-2.79*	-1.97	-3.15	-1.03
	Depersonalization	Immature DS	0.45***	-2.49***	-2.25	-3.38***	-1.13	-1.76	-0.55

<sup>a</sup>Dependent variable: emotional exhaustion.

<sup>b</sup>Lower confidence interval 95%; upper confidence interval 95%.

<sup>c</sup>\**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001.

might be taught how to respond to the emotional demands of their work while staying true to their own feelings. A forum where nurses can explore and express the inherent anxieties that arise within the nursing environment may help nurses to achieve conscious acceptance and to use more mature defense styles. Reflective practice and peer groups should be a common practice in health care environments. Regular clinical supervision would help nurses to address their own internal processes and provide them with a safe space to process any unpleasant experiences. Peer reflective groups may help nursing staff maintain the ability to mentalize. There needs to be ward culture that provides nurses with the time to reflect on the individuality of each patient and deliver quality care. Those in senior management can enable compassion and stimulate mentalizing among staff by modeling these skills. Finally, the formative stages of the nursing profession require equal attention. Early intervention in the form of reflective practice will equip young nurses with the tools to self-regulate while on placement.

### Limitations

One limitation of this study is its cross-sectional design because it limits the degree to which one can interpret direct and indirect causality. Future research should investigate this linkage. Longitudinal research is warranted to further understand how burnout, empathy, and defense styles interact and develop over time. Another limitation is the use of self-report measures, which may increase the possibility of response bias. However, the strengths of self-report do include a reduction in observer and experimenter effects. In addition, self-report measures are especially conducive to large-scale testing and therefore very useful in cross-sectional studies. In addition, difficulties with low interrater reliability between observers are avoided (Skodol and Perry, 1993). There are mixed views regarding the application of self-report measures to defense styles that are “unconscious.” Some researchers highlight that people's belief systems are indicative of their pattern of defense use (Andrews et al., 1993) and that defensive behaviors may be made aware to them by others (Yo and Nishimura, 1998). Nevertheless, future research on defense styles and attachment would benefit from the use of implicit measures (e.g., Nosek et al., 2007; Implicit Association Test) alongside self-report questionnaires. Finally, the sample may not be generally representative of all Irish nurses because there were a higher proportion of female respondents; participation in the study was voluntary and required participants to be fluent in English. Although the response rate was quite high, nurses who were not experiencing burnout and who were happy with the work environment may not have been adequately represented. In addition, the online nature of the study created potential bias toward the more technology able. However, a strength of the data included in this study is the breadth of participant characteristics in terms of age, experience, educational level, occupation, and family status. Another strength is that this study provides data about prevalence rates of empathy and burnout among nurses in Ireland, which is important for policy development. The findings also provide some preliminary knowledge toward understanding the role of defense mechanisms in nurse burnout.

### CONCLUSIONS

This study is the first to date to explore the relationship between nurse burnout, empathy, and defense styles. Overall, the findings suggest that nurses who have high levels of empathy are using immature defense styles to reduce their levels of emotional exhaustion. The results may help to explain the negative associations frequently found between empathy and burnout. Emotion work is an exhausting activity, and those who are burned-out may have to put more effort into regulating their emotions. The discrepancy between felt emotions and those that must be displayed requires more deep acting, further depleting one's emotional resources. This is in line with the conservation of resources theory, suggesting that people who lack resources are the most

vulnerable to additional losses. It could be argued that encouraging nurses to increase their levels of mature defenses may be a difficult feat for any organization; however, an overall organizational policy that focuses on the provision of personal and job resources and encourages personal development and self-care strategies may go some way toward obtaining this objective.

### DISCLOSURE

The authors declare no conflict of interest.

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