More Than a Feeling:
The Role of Empathetic Care in Promoting Patient Safety and Worker Attachment in Healthcare

Carrie Leana, Jirs Meuris, and Cait Lamberton
University of Pittsburgh

Abstract

In this paper we use inductive and deductive methods to explore the role of empathy in caregiving jobs: Specifically, the relationship between empathetic care, patient safety and employee turnover. We argue that empathetic care is evidenced by extra-role behavior, emotional engagement, and relational richness between paid caregivers and clients. We develop our model using qualitative interviews with paid caregivers, and test it using quantitative case studies in six skilled nursing facilities. We find that empathetic care predicts patient safety but not employee turnover. Moreover, we find that job and life circumstances moderate the relationship between empathetic care and safety. Specifically, patient load, overtime work, and financial hardship dampen the otherwise positive relationship between empathetic care and safety. We find some evidence of a moderating effect of employee self-efficacy in influencing the relationship between empathetic care and turnover. We discuss the implications of these findings for the design of care jobs.

---

1 This research was supported by the Russell Sage Foundation. Address correspondence to the first author at leana@pitt.edu.
More Than a Feeling:
The Role of Empathetic Care in Promoting Patient Safety and Worker Attachment in Healthcare

You gotta have the heart, really, though...to do a good job. –Certified Nursing Assistant

Paid care work is an increasingly important part of the occupational mix in developed economies. In the United States, for example, care occupations (in industries such as healthcare, education, and social services) account for almost a third of GDP. Demand for such work is projected to grow, with care jobs comprising ten of the twenty fastest growing occupations in the U.S. (BLS, 2014). As Eaton (2000) aptly noted over a decade ago, if manufacturing organizations such as auto plants represented the typical workplace of the 20th century, care organizations are the workplaces of the 21st century, both in terms of employment levels and in their impact on the larger society. Indeed, in the U.S., there are currently more people working in just one care occupation, nursing aides, than all auto workers, steelworkers, machinists, fabricators, metal workers, and boilermakers combined (BLS, 2014).

Care work is distinct from other types of service work on several dimensions. First, it involves the provision of services to others in a face-to-face, hands-on, and/or first-name relationship that implies some concern for the person’s well-being (Folbre, 2012). In this regard, it is different from other service occupations (e.g., gardeners) where face-to-face contact is not a standard component of the job. Second, as Abel and Nelson (1990) summarize, care work is meant to “foster the independence and autonomy of people placed in dependent positions,” be they children in schools or patients in a hospital. From this perspective, care work is different from occupations such as hairdressers or skin specialists (another occupation in the top 20 for
growth) both because of the explicit human development goal as well as the dependent state of service beneficiaries. Third, care is typically co-produced by the caregiver and the care recipient. Teachers collaborate with children and their parents to enhance educational outcomes, just as oncologists work with individual patients to develop tailored treatment plans. At the same time, recipients of care services often lack consumer sovereignty, because of lack of information, impaired competency, or limited alternative choices. Finally, and most relevant to the research described here, the work outcome – i.e., quality of care – should be enhanced when the care is provided with empathy. As Folbre and Wright (2012:4) describe, the hallmark of care work is that “concern for the well-being of the care recipient is likely to affect the quality of the services performed.”

In this paper, we examine the importance of empathy in the context of the quintessential care occupation, aides who care for the frail elderly, by addressing three questions: (1) What does it mean to do one’s work with empathy? (2) What difference does empathy make in terms of outcomes for both those who are cared for and those who provide care? and (3) Are there circumstances that attenuate the relationship between empathetic care and such outcomes? We examine these questions using both qualitative and quantitative methods, focusing on the occupation of nursing aides.

Nursing aides (“aides”) are archetypal care jobs in archetypal care organizations. Their primary job responsibilities are to assist residential patients with activities of daily living (ADLs) such as eating, bathing, and mobility. They also provide some skilled nursing care such as changing catheters and monitoring vital signs. Because nursing homes are residential facilities, aides interact with patients on a daily basis, and thus have the opportunity to form rich relationships with them. As the National Center for O*NET Development (2015) reports, 85% of
aides engage in face-to-face discussions on a daily basis at work, and 82% cite maintaining interpersonal relationships as an important part of their jobs.

These environments present two distinct challenges that may undermine the quality of care given. First, nursing aides have been implicated in substantial concerns about patient safety. According to a 2014 report from the US Office of Inspector General\(^2\), one-third of patients in skilled nursing facilities suffered harm as a result of treatment, with 59% of adverse events clearly or likely preventable. Importantly, approximately 32% of these events occurred due to failures in patient care, and another 30% due to infections, both areas that are closely related to the aide’s care and hygiene duties. Second, turnover among nursing aides is quite high, estimated to be over 40% annually (AHCA, 2014). High rates of turnover are associated with disruptions in care protocols, resulting in an inevitable decline in the overall quality of care; heightened personal stress, job burnout, and other deleterious social and economic consequences for workers and their families; millions of dollars spent on site-specific recruitment and training by long-term care facilities; and higher costs to the health-care system as a whole (Castle & Anderson, 2011; Castle & Engberg, 2005; Institute of Medicine, 2008).

One argument is that hiring employees with high degrees of empathy – i.e., the "reactions of one individual to the observed experiences of another" (Davis, 1983: 113) could be the key to better safety and lower turnover (Schell & Kayser-Jones 2007). Indeed, our findings suggest that empathetic care does have important outcomes, both for patient safety and for worker attachment. However, we also find that the effect of care workers’ empathy is contingent on numerous exogenous factors – factors that are not dependent on the personality or motivation of

the care worker, but rather, determined by management or by their own life circumstances. Thus, our study presents a strong argument that the management of this labor force requires not simply identification of the most empathetic individuals, but appropriate understanding of the resources and strains that may promote or reduce the positive outcomes of their empathy.

**THEORY DEVELOPMENT**

**The Nature of Empathy in Care Work**

Empathy is often described as “feeling with” another individual – being concerned for another’s emotional well-being, taking their perspective, being distressed in response to their trouble, and being able to imagine oneself in the place of another individual (Davis, 1983). Our focus here is on how empathy is enacted as part of one’s job as a paid caregiver. Previous research (Lamberton, Leana & Williams, 2015) has labeled this “empathetic care”, defined as behaviors that support the development of care recipients’ socioemotional capabilities and address their emotional needs.

To better understand the nature of empathy in care jobs, we began our research inductively through conducting interviews and focus groups with aides from a variety of settings. This qualitative data was gathered over time across numerous facilities, such that we could obtain a broad picture of the dynamics surrounding empathetic care. In total, we completed 8 focus groups, which included 52 participants, as well as 12 individual interviews. From them, we gleaned a number of insights that confirmed past theory and guided our quantitative research.

First, empathetic care appears to be based more strongly in intrinsic rather than extrinsic sources of motivation (England, Folbre & Leana, 2012; Jochimsen 2003). That is, caregivers who provide empathetic care do so not because it will result in additional pay, promotions, or...
other extrinsic benefits but, rather, because they derive satisfaction from promoting the well-being of patients. This was a consistent theme in all of our interviews and focus groups. By illustration, one aide noted:

Well, I've come out of the job actually very sad at times and wanting to leave and thinking it's too much. But then I go back because, like I say, I have so much in common with them and I feel that I'm really good for the patients. Unfortunately, the patient's not really good for me at times. (Laughs.) 'Cause it's one of those matters that you learn too much. You see too much and you learn too much. But what keeps me going back to that unit is that I just feel that I need to be there. I need to help these people both physically and mentally.

Others noted the emotional benefits of the work when asked to describe the best parts of their job:

The best, I think, is the opportunity to be able to help people that are totally ill... It's a joy and satisfaction you get.

I love to help people who are in need. If I am able to make a difference in someone's life that makes me feel happy.

I'm a very compassionate person. I love seeing others benefit from something I've done. It makes me so happy when I walk into a patient's room and they say to me 'Thank God you're here tonight.'

Two important points emerge from our recognition of the intrinsic nature of empathetic care. First, empathetic care may not be directly related to a care worker’s hourly wage; extrinsic rewards may or may not have anything to do with aides’ likelihood to behave empathetically toward their patients. In fact, some respondents explicitly contrasted their pay to the intrinsic value of their work: “You should get paid way more money than what is given...but I will never let that come between the life of a resident. I feel if nothing else at this job, I have true love for each one I take care of.” Similarly, another aide stated that wages are irrelevant to their commitment to good care, saying “We get paid very little for what we do, but many of us bend
over backwards to see that our residents receive top notch care.” Others noted the receding importance of financial gain, offering comments like, “Five year ago money motivated me. Today helping my patient and learning do. When I started this I never knew how attached I would become to the people I take care of.” Further, given that it is internally-generated, empathetic care, like empathy in general, may be difficult to externally manipulate. Indeed, prior research has found that even intensive reflective training experiences may do little to change care workers’ base empathetic care levels (Webster, 2010).

Second, although many care workers tend to select into the profession because of a priori high levels of empathy (Schell and Kayers-Jones 2007), there is likely to be variance in the degree to which empathetic care is enacted among care workers. Prior research has found that in more cases than one might expect, professional and paraprofessional care workers can display surprisingly low levels of empathy in their work. For example, Christiansen (1977) found that occupational therapy students display generally low levels of empathy, while Hills and Knowles (1983) find that nurses often change the subject of a conversation rather than address clients’ emotional needs (see Reynolds and Scott, 2000 for a review). In some cases, care workers indict one another for their lack of empathy in their work and connect such differences to the quality of care that patients receive. As several aides described:

And some of these younger people, they just don’t care...I don’t know if it’s just they don’t or if they’re just in and out – you know, this is a paycheck.

I mean some people just – some newer employees I think that they just can’t stand being around old people.

In other interviews, aides discuss the frustration they feel with less-empathetic workers:

And I – we have the [Certified Nursing Assistant] classes and they bring them to my floor to orient and train a little bit, and I try to teach them also, you know, this isn’t a can
of green beans here you’re dealing with. You’re dealing with a human life, and it’s somebody’s grandmother, it’s somebody’s aunt, it’s somebody’s daughter sometimes, you know, and you treat them with respect and you give them the time, and even though you’re rushed, you can rush doing other things.

The bad parts—and there are many—would be people that really truly do not want to do this job, people that constantly disappear during a shift, only to be found texting...I feel lucky to be here and to care for people. That is what my purpose in life is, I truly believe. Sometimes it is just very eye-opening and at times sad to see the dark side of how people that depend on us can be treated by people they are counting on. It makes me want to be the best that I can be every day.

Measuring Empathetic Care

Given that caregivers are conscious of variations in the level of empathy expressed by those around them, it is reasonable to expect that a self-report measure may capture empathetic care tendencies. To this end, past work has conceptualized and validated a self-report measure labeled the Empathetic Care Scale (Lamberton et al., 2015). Unlike some studies of professional care workers like the physical therapists cited earlier, Lamberton, et al., (2015) found a fairly high mean level of empathetic care among paraprofessional care workers like aides (M = 5.63 on a 7-point scale) but also report that the full range of the scale was reflected in the samples (range = 1.11-7.0; SD=1.29). Lamberton et al. (2015) validated the empathetic care scale against time use and performance review scenarios and showed convergent and discriminant validity (see Lamberton, et al., 2015, for a full description of the scale construction and validation). For example, they report a significant positive relationship between prosocial motivation and empathetic care, but no relationship between empathetic care and extrinsic motivation. Further, responses to scenario stimuli suggested that empathetic care was correlated with aides’ preferences in terms of the ways in which they carried out their jobs: Care workers with higher as opposed to lower empathetic care scores were more likely to use discretionary time at work getting to know their patients better (as compared to sharpening technical skills), were more
interested in being evaluated on emotional and relational aspects of their work, and stated that
they would allocate more time to tasks that, while not related to work "checklists," would
support patients' emotional well-being (Lamberton, et al., 2015).

The empathetic care scale (ECS) has three interrelated facets: extra-role behavior, emotional engagement, and relational richness. Extra-role behavior is evidenced by the desire to go above and beyond the written job description of an aide in order to improve the quality of patients’ lives. Extra-role behavior is not specified in the formal job description, nor do employees receive extrinsic rewards like bonuses for engaging in such proactive behavior (Van Dyne & LePine, 1998). This theme also emerges strongly in our qualitative data, both in terms of tangible tasks and emotional support:

Now here is the thing...Well, it’s not my job, it’s housekeeping’s. Well, when I don’t really have nothing to do and everyone’s sleeping or quiet, I take a garbage bag and I empty all of the garbage cans. I put their – like when I worked 3:00 to 11:00, my rooms were spotless. I hung up peoples’ clothes and put them in the wash. Since I left, I’ve had people say to me, ‘when you were here, these rooms were never a mess.’ You should see some of the things that I don’t have to do or shouldn’t do, but I do it. You know, you don’t even have to tell me. And you won’t hear me say, ‘Well, that’s not my job.’

We do more for these residents than people can imagine. We’re there for their birthday, Christmas and any other milestone in their life. When their family leaves them here, we are there.

The second facet of empathetic care identified in Lamberton, et al. (2015) is emotional engagement – a sense that the care of the emotional aspects of a patient’s life is an intrinsic part of the caregiving job. As Folbre and Wright (2012: 5) note, “emotional attachment often plays a crucial role in the development of concern for the well-being of care recipients.” In our qualitative research for this study, respondents also described the way that emotional experiences of workers and patients become intertwined:
I mean, you get emotionally involved in their lives and they get emotionally involved in your life.

They become like your family, you know? I treat them like I'd want somebody to treat my mother.

Often, care workers’ emotional engagement is reflected in their willingness to take time to respond to patients’ negative emotions while still showing care and respect, even when dealing with particularly difficult patients:

Every resident is unique. Sometimes just asking, ‘Why are you hitting me?’ And maybe they’re not mad at you at all; maybe they’re mad because they’re too noisy. And you just take them out of, like, the group activity and take them to another part of the facility where it’s quiet, that may be all. Maybe it’s because you need to take them to the bathroom and maybe they don’t think you should be disrobing them. So you try to explain, ‘Well, we’re going to go to the bathroom.’ Maybe they don’t want to shower. Again, you’ve got to explain and to the best of your ability take the time to let them understand what you’re doing to them. And a lot of times, that will calm them down.

They [the patients] know that person [the aide] really loves them and cares for them, and will make them look so pretty that day...She has that one resident. That one...and she makes her hair look so pretty. She makes it look like a flowerpot...this is every day. So you can tell that she takes the time...that she’s building a relationship.

Further, as part of this emotional engagement, caregivers are often willing to manage their own emotions in order to promote the emotional well-being of their patients.

… First off you have to try to keep a happy face, because your residents feed off of it if you’re happy. And it makes it worse if you’re on edge, they get on edge…so you keep a happy face.

You know when you work together, you see the people that’s always smiling, always loving on the residents, always going the extra mile showing they care. They may have just come off that toilet...you’ll put them right back on it, still with a smile on your face.

You’ve got to act kind, you’ve got to be kind, you’ve got to do things you know, you really don’t want to do. You can’t neglect that person, or disrespect them.
This concern for patients’ emotional well-being is often most notable as patients near the end of life. Here, a care worker describes the way that she attempts to ease the loneliness of death for a patient who may otherwise be alone:

> And, you know, it’s – you know, if somebody doesn’t have family, we’ll try to get into the resident more often and try not to let them go by themselves if we can, you know.

The third facet of empathetic care Lamberton, et al. (2015) identified is relational richness – the tendency to form deep connections with patients. These connections lead aides to share information about their lives outside the facility like their family life, or take on the role of family members to their patients. Our qualitative work supports this; more empathetic caregivers tend to form these relationships, whereas less empathetic caregivers do not:

> ...I like to hear about peoples’ families, and they like to hear about mine, and you know, especially with older folks. They love to hear about kids, you know, and the grandkids, and talking about their grandkids, it’s such a good topic of conversation, and, you know, you can’t hear enough.

> ...So, but you become friends with them...I received a card today from one of my ladies...It was a picture that my husband’s grandfather had taken. It was a postcard and she had copies made and sent me it. I just wrote her a thank you card...Yeah, one of the older ladies, Rose. I’ll remember her forever. You just sort of remember those certain ones, you know.

> The best part of my job is I feel that our 45 residents...are my extended family. Some of the residents do not have family members that come visit or don’t have family members at all, so I am their adopted family. I have an adoptive mother. My resident adopted me as her daughter.

Again, the richness of these relationships becomes particularly clear as patients enter their final days. In such cases, we see that caregivers can experience negative outcomes associated with their empathy:

> I try to tell myself that most times when they’re very sick, they welcome that, and I realize it’s my selfishness that wants to keep them within the facility, that it is their time to go, but you still miss them. You know, the next day there will be an empty bed.
Sometimes you get too close to them, and then somebody dies. You get emotionally attached. That can be really hard. And you cry.

And I did have one resident, she decided I was her cousin and she didn’t want anyone else taking care of her or anything, and I was there the day she passed away, and that was very, very rough. I had to leave...She decided I was her cousin, and that was it. But I try not to get super close to them because I know what the outcome’s going to be. But, they are your extended family.

And seeing people die. We’re really, really – I mean, you never get used to that, but some people really can’t deal with it.

Lamberton, et al. (2015) found that the three facets described – extra-role behavior, emotional engagement, and relational richness – all load on the underlying construct of empathetic care. They also found no significant differences in empathetic care based on demographics such as gender or age, or job factors such as tenure and pay. Empathetic care scores were also uncorrelated with trait empathy, suggesting that empathetic care is a construct describing what aides feel and do on the job, rather than an underlying personality construct.

In summary, empathy in care work goes beyond feelings or personality traits. Driven by the intrinsic motivation of care workers, empathetic care is enacted in the form of extra-role behaviors, high levels of emotional engagement, and the development of rich relationships with patients. The aides in our interviews and focus groups could clearly describe empathetic care and, moreover, make a case for its importance in influencing patient well-being. At the same time, there has been little empirical work that has examined the relationship between empathetic care and patient outcomes. Here, we examine the relationship between empathetic care and patient safety – an outcome of key importance not only to patients, as it is likely to raise their level of well-being, but also to policymakers and employers, who seek to continually improve their overall standards of care.

The Effect of Empathetic Care on Patient Safety
Although little empirical work has focused specifically on empathetic care, it is not unreasonable to anticipate that empathetic care promotes positive outcomes for patients. As long as concern for a patient’s emotional well-being is accompanied by appropriate levels of skill, it should result in improved quality of care (Folbre and Wright, 2012). But empirical evidence to this effect is scant. In one of the few such studies (1979), mental health nurses were prompted to communicate with low or high levels of empathy to elderly patients over an 8-week period. Patients who were treated with higher empathy had significant increases in their self-concept, an important component of general well-being. Other research argues that to the extent that empathetic care facilitates trust, it may allow for more client-self-disclosure and better responsiveness to patient needs (Carver and Hughes 1990). However, only minimal evidence has been provided to connect empathy in care to health outcomes (Bennett 1995), and we were able to identify no research that connected actions associated with empathetic care to the types of systemic improvements in practice that could benefit both care recipients and the overall quality of the care facility in which they reside.

We expect empathetic care to be particularly predictive of patient safety for several reasons. First, patient safety is the bedrock of quality care. The admonition of “do no harm” is critical to the effective functioning of skilled nursing facilities and, indeed, all healthcare organizations. At the same time, care work requires attention in a cognitively crowded environment. Empathy for patients focuses the caregiver’s attention so that she notices patient needs and any changes in patient well-being that may result in threats to patient safety. Care workers we interviewed noted that their direct connection with clients facilitated awareness of changes in well-being, for example:
The nurses don’t know when they’re sick; we do. We have to go tell the nurse, “Oh, do you know such and such ain’t ate in two or three – she ain’t eating like she normally eats. Something’s wrong.” That’s the only way the nurses know anything.

Second, relational richness and emotional engagement allow for better co-creation of care. When the caregiver knows the client well (relational richness) and is in tune with the client’s emotional needs (emotional engagement), there is more fluid communication between the care worker and the care recipient regarding patient concerns, or any risks to or changes in client well-being. Third, extra-role behavior means that the care giver is willing to be proactive on behalf of the client so that client needs are met, and to anticipate safety issues such as a change in patient behavior. Thus, we expect to find a positive association between empathetic care and patient safety.

**Moderators**

Although we hypothesize a main effect of empathetic care on safety, there are also factors that may amplify or attenuate this relationship. Caregiving is a demanding occupation, particularly in jobs with lower status and pay such as nursing aides. Based on our review of the literature and our qualitative data, it appears that empathetic care can translate into better patient care when workplace and life demands do not interfere. Three issues in particular emerged that may affect the relationship between empathetic care and attention to patient safety: patient load, overtime, and financial hardship.

**Patient Load.** Patient load is the number of clients to which a caregiver must attend. Prior research has shown that insufficient or “short” staffing in hospitals and other healthcare facilities is associated with poorer patient outcomes (AHRQ, 2004; Institute of Medicine, 1986). Medical conditions such as infections and, in particular, rates of pneumonia and pressure ulcers appear to be particularly sensitive to staffing levels. Other patient outcomes, such as dehydration (Kayser-
Jones & Schell, 1997) and rates of incontinence and catheterization (Feuerberg, et al., 1996) have also been reported. Short staffing has also been associated with outcomes detrimental to the workers themselves. These include heightened worker injury rates in nursing homes (Trinkoff, Johantgen, Muntaner & Le, 2005) and work-related illnesses and injuries among hospital staff (Shogren & Calkins, 1997). Other research has shown a link between staffing levels and turnover (Castle & Engberg, 2006).

In a qualitative study of nursing aides, Bowers, Esmond & Jacobson (2000) report on a relational link between staffing levels and quality of care. As Bowers, et al. (2000: 57) note, “For [nursing aides], delivering high-quality care meant developing relationships with residents and then using those relationships to enhance the quality of residents’ lives.” When staffing was inadequate, aides coped by resorting to time-saving care routines rather than customizing care to each resident’s needs. At the same time, residents had to wait longer for services or such services were provided quickly when staffing was short, leading to more problems with incontinence, immobility, and oral hygiene. Aides were less able to provide care that could ameliorate current medical problems and they were less likely to anticipate future medical problems. In our interviews, aides echo this frustration, pointing out that for strongly empathetic caregivers, high patient loads are particularly troubling:

*Like, sometimes you become their families. And it’s a shame that we are so stressed out that you have to run from resident to resident sometimes ...so you have to deal with, you know, saying, ‘Okay, I have to go to the next resident’ with tact, but sometimes, you know, like we have bed alarms going off that somebody’s crawling out of bed, see, you have to run from one resident clear down to another resident...it’s a shame you have to feel like you’re neglecting somebody else.*

*You’ve got ten patients. You’ve got lights going off. You’re running from this thing to that ... It’s just chaos.*
I had, my good friend, she said, she wanted to do what I did...she lasted about a month. She said, ‘I can’t do this.’ She said, ‘I thought it would be so rewarding.’ She said, ‘You have to rush right by and,’ – I said, ‘Yeah...’ But she was amazed that she had to do this many residents and try to do them and take care of them good.

Thus when staffing is insufficient and a caregiver must attend to the needs of increasing numbers of clients, we expect that care will suffer, even for the most empathetic caregivers. Attention will be spread over more clients and attention to detail and individuation of care will be adversely affected. Thus, patient load is expected to moderate the relationship between empathetic care and attention to patient safety.

Working Overtime. Working more than a 40-hour work week (working “overtime”) may also be associated with lower quality patient care, particularly when such overtime is mandated by the employer. Prior research has shown that overtime hours are associated with increased rates of accidents (Kogi, 1991) and, within healthcare, increased rates of hospital infections (Arnow, Allyn, Nichols, Hill, Pezzio & Barlett, 1982) and medical errors (Rogers, Ting, Scott, Aiken & Dinges, 2004) – all threats to patient safety. A large contributing factor is the fatigue associated with overtime work. Fatigue is associated with slowed reaction times, inattention to detail, and lower productivity (Krueger, 1994). Additionally, experimental studies report that working a shift that extends past 8 hours is associated with greater fatigue (Rosa, Bonnet & Cole, 1998) and decreased cognitive function and alertness (Macdonald & Bendak, 2000).

There is also evidence that overtime work adversely affects the worker. NIOSH (2004) reports that in 16 of 22 studies examined, overtime was associated with poorer overall health, a greater incidence of worker illness, and increased rates of on-the-job injury. As summarized by Geiger-Brown, Mantaner, Lipscomb and Trinkoff (2004), there are several reasons for the association between overtime work and worker well-being, including higher exposure to
demanding working conditions, decreased time for rest and recovery from these demands, and the use of adverse palliative measures to deal with these demands such as alcohol use and smoking. In a study of nursing aides, Geiger-Brown, et al. (2004) also report a link between overtime and mental health conditions like depression. For these reasons, overtime work may impede the capacity of aides to extend empathetic care in a way that results in better patient outcomes. Even the most caring aides may not be able to provide high quality care to residents over time if they are too tired or too overwhelmed because of long working hours. Thus, overtime is expected to moderate the relationship between empathetic care and attention to patient safety.

Financial Hardship. The third factor influencing whether empathic care translates into patient safety is financial hardship. Recent research in psychology has shown that financial deprivation, or “scarcity”, is associated with reductions in general cognitive performance (Mani, Mullainathan, Shafir & Zhao, 2013; Mullainathan & Shafir, 2012), resulting in a cognitive and emotional “tax” on the financially distressed, which can interfere with other aspects of their lives. When individuals feel financially strapped, they tunnel in on such concerns, to the diminution of attention to other matters (e.g., Shah, Mullainathan, & Shafir, 2012; see also Kahneman, 1973). Meuris and Leana (2015) argue that this cognitive and emotional tax can affect work performance, particularly in occupations that require vigilance regarding safety procedures and/or interpersonal interactions with customers or clients.

Since the worry and stress of financial insufficiency reduces cognitive resources available for other concerns (Haushofer, 2011; Haushofer & Fehr, 2014; Mani et al., 2013), it can hinder the translation of empathetic care into attention to patient safety. When aides tunnel in on their
financial concerns, the associated reduction in cognitive bandwidth reduces their ability to be attentive to patient needs (Wallace & Chen, 2005). We hear this in our qualitative interviews:

When the price of milk is $3.87 and gas is $3.34 a gallon and when they do your review they cannot give you 3% or better for a pay raise and it’s only 23¢, it’s funny. I have been here over 7 years and I know some CNA’S are coming in making more than me. I love my job and love most of the nurses but I love to provide for my family and I right now have to work 40+ hours in a week to make it.

While empathetic care behaviors allow caregivers to develop relationships with their patients that offer them an advantage in recognizing and addressing signs of potential safety concerns, the reduction in cognitive resources from economic scarcity undermines this advantage because the caregiver has less attention to devote to recognizing safety issues. Thus, financial hardship is expected to moderate the relationship between empathetic care and attention to patient safety.

The Effect of Empathetic Care on Worker Attachment

Several studies have examined the antecedents of turnover among nursing aides (e.g., pay, working conditions) and proposed programs to attenuate it. A set of studies by Rosen and colleagues (Mittal, Rosen & Leana, 2009; Rosen, Stiehl, Mittal & Leana, 2011) examined determinants of turnover but also asked the question of why the majority of nursing aides stay in their jobs. Retention rates (vs. turnover) among nursing aides are estimated to be approximately 68% annually (AHCA, 2014). Mittal et al. (2009) found that the drivers of aide retention are different than those of aide turnover. While turnover is driven by factors like benefits and the difficulty of the work, retention is driven by factors like interpersonal relationships with patients. Aides who had richer relationships with their patients and were more emotionally engaged with them were more likely to stay in their jobs. Thus, attachment to patients drives attachment to the
job. We would expect, then, that aides who are higher in empathetic care would be less likely to leave the patients they care for by leaving their jobs.

But such high levels of attachment are not without costs. Past research and our qualitative work suggest that highly empathetic caregivers may experience substantial strain as a result of the rich relationships they form with patients. For example, “empathy fatigue” has been suggested to be likely in any context where individuals provide “intense levels of service for persons with acquired chronic diseases and disabilities.” (Stebnicki 2000: 24). Such fatigue is associated with distancing from the recipients of a service, and ultimately, burnout (Maslach 1981). Moreover, end-of-life care is part of the job for aides who care for the frail elderly. As described above, more empathetic aides will experience greater levels of grief on the death of a patient than will less empathetic aides. Further, also as described above, empathetic caregivers often feel that they are unable to keep up with all job demands while protecting their patients’ dignity. Such an inability to meet all of their clients’ physical, relational and emotional needs may lead aides to feel dissatisfied with their jobs.

We argue that generalized self-efficacy (Bandura 1977: 3) will determine caregivers’ response to such empathy-related challenges. Generalized self-efficacy determines, “how long [individuals] will persevere in the face of obstacles and failures, their resilience to adversity...how much stress and depression they experience in coping with taxing environmental demands, and the level of accomplishments they realize.” Self-efficacy may thus provide a buffer against the demands of the job and, in this way, reduce turnover. Indeed, even simple job-specific self-efficacy interventions have been shown to reduce turnover likelihood in other industries (McNatt & Judge, 2008).
We anticipate that individuals who are low in self-efficacy may show high turnover intentions if they also have strong empathetic care tendencies. Whereas empathetic care may more closely bind a high-efficacy worker to their workplace as predicted above, lower self-efficacy individuals are particularly unlikely to be able to manage the emotional stress created by high empathy (Gist et al. 1989; Glaser & Hecht 2013). Further, to the extent that grief, loss and time strain are seen as career-related challenges, lower self-efficacy individuals may respond to them less positively than higher self-efficacy workers, experiencing frustration and exhaustion rather than increased motivation (Stumpf, Brief, & Hartman 1987). Therefore, for aides low in self-efficacy, empathetic care may be associated with higher, rather than lower turnover intentions. For these individuals, it may be that empathetic care is dangerous: Lacking the ability to cope with the emotional demands empathetic care creates, it may encourage them to leave, rather than commit to, their patients. Conversely, for aides high in self-efficacy, empathetic care should only bolster their intention to stay in their positions: Empathetic care creates bonds with patients, and self-efficacy enables workers to emotionally manage the demands of those relationships.

Summary of Hypothesized Relationships

Figure 1 shows a model of the expected relationships between empathetic care, patient safety and worker attachment. More formally, these are stated in the following hypotheses:

H1: Empathetic care will be positively associated with attention to patient safety.

H2: The relationship between empathetic care and attention to patient safety will be moderated by patient load. When patient loads are high (i.e., more clients per caregiver), the relationship will be weakened.
H3: The relationship between empathetic care and attention to patient safety will be moderated by work overload. When aides work more than 40 hours per week, the relationship will be weakened.

H4: The relationship between empathetic care and attention to patient safety will be moderated by financial hardship. For aides experiencing financial hardship, the relationship will be weaker.

H5: Empathetic care will be negatively associated with turnover.

H6: The relationship between empathetic care and turnover will be moderated by self-efficacy. For aides low in self-efficacy, empathetic care will be positively related to turnover; for aides high in self-efficacy, empathetic care will be negatively related to turnover.

METHODS

Description of Case Study Contexts

Our quantitative case studies were conducted in six nursing home facilities in the northeastern United States operated by a large health care organization. All nursing home facilities operated by this organization were included in our study. The six facilities varied in size, with the smallest facility having a maximum capacity of 43 beds and the largest facility having a maximum capacity of 174 beds. By focusing on nursing homes operated by one organization, we were able to assess individual-level outcomes uniformly across the six facilities using standardized supervisor assessments of performance.

Most aides in our sample (87%) worked full-time in their facility. Approximately half of aides included in our study had some college education, but only 8% had a 4-year college degree or higher. All aides are paid by the hour and tend to work in one of three shifts (morning, afternoon, night). As is common in this industry (HHCS, 2014), turnover among aides in these facilities is high. During the year our study was conducted, almost a third (32%) of aides left their jobs.
Data Sources

Our analyses are based on three data sources. First, we conducted paper-and-pencil surveys with nursing aides in each of the six facilities included in our study. Next, approximately seven months after the surveys were completed we gathered supervisors’ assessments for each aide based on the annual performance review. To protect participant confidentiality and ensure the study would not impact their employee relationship, these two data sources were linked using a de-identified coding system. Finally, we received turnover information, as well as facility-level information on size and total number of employees, directly from the organization’s records.

Survey

Researchers administered surveys with aides in each of the facilities over a six-week period. Aides completed the surveys on their own time before or after their work shifts and were paid a total of $50 for completing all aspects of the research, including completion of the survey and consent to access their performance ratings. Of 283 aides working across the six facilities, 233 completed the survey for an overall response rate of 82%. Of these, 10 did not complete all survey items and were dropped in subsequent analysis, leaving a survey sample size of 223. Surveys included demographic information used for the controls and moderation analyses, and the measurement of empathetic care.

Organization Records

We gathered information from organizational records on facility size and the total number of aides employed by each facility to calculate patient load and turnover. In addition, supervisor ratings of attention to patient safety were collected for each individual aide. For 108 aides, there were no supervisor assessments of safety, either due to turnover (32%) or because
the supervisor did not conduct the assessment. For these reasons, the sample size used in the regression analyses related to patient safety was significantly lower than the total number of aides who completed all parts of the surveys (125 vs. 223). Because of the large differences in the sample sizes, we compared aides who stayed vs. those who left their jobs. There were no significant differences between aides who stayed versus left their jobs on gender or organizational tenure although, not surprisingly, there was a significant difference on age, with younger workers more likely to leave their jobs. In addition, there were no significant differences between aides who stayed vs. left on patient load, overtime hours, financial hardship or our index of “bad jobs” (described below).

Measures

*Empathetic Care*

Empathetic care was assessed using Lamberton, et al.’s (2013) Empathetic Care Scale (ECS). This scale consists of 10 items measuring the three facets of empathetic care described earlier: (a) extra-role behavior (“Doing my job well means doing things that are not necessarily in my job description”; “I do many extra things for my clients, even if my employer doesn’t tell me to”; “It would be hard for me to measure a lot of things I do for my clients”; and “This job requires a lot more than it says in the job description”); (b) emotional engagement (“I help my clients feel better when they’re down”; “sometimes you just have to give a client a hug when she’s feeling down”; and “My client’s emotional state is just as important as their physical state”); and (c) relational richness (“Part of my job is to get to know pretty much everything about the people I care for”; “My clients would find it difficult if another care worker were assigned to them instead of me”; and “I know what my client’s lives were like before they
became unwell”). Items were rated on 7-point scales with lower scores indicating lower empathetic care. Lamberton, et al. (2013) describe tests of the scale for convergent and discriminant validity, as well as the scale’s reliability. In the current study, mean scores ranged from 1.81 to 7 (mean = 5.69; sd = .797). Cronbach’s Alpha for the scale was .72.

Outcome Variables

Safety ratings

Since each patient in a skilled nursing facility is cared for by multiple aides and other staff on a daily basis, facilities are not able to assign patient wellness scores (be they incidents of preventable health problems like pressure ulcers or family members’ assessments of the overall attention to patient safety) to particular aides, but instead report these at the level of the facility or the unit. At the same time, patients often suffer cognitive impairments that prevent them from being reliable assessors of the quality of care provided by individual aides. Indeed, in pre-testing we attempted to have patients rate individual aides, using prompts like aides’ pictures, but many of the patients were unable to identify the names or even the pictures of the aides who cared for them on a daily basis, much less assess the aides’ work performance. However, part of the job of the supervisors in each facility is to do on-going observations of each aide’s performance, particularly regarding the aide’s attention to patient safety, and summarize these observations in an annual performance rating. We used these ratings as our measure of safety for each aide. Safety ratings consisted of supervisor’s assessments of each aide’s engagement in behaviors that promote patient safety as well as the individual’s compliance with safety regulations. Aides were evaluated at least once a year. We used the safety rating that was temporally closest to the date
in which the survey data were collected from each aide. Ratings were done on a 5-point scale. In our sample, scores ranged from 2 (low) to 5 (high) (Mean = 3.05; SD = .39).

**Turnover**

We measured turnover from organizational records by examining which of the aides who participated in our survey remained employed in the organization a year after collection of survey responses. While the majority of prior studies examining individual aides use turnover intentions (e.g., Decker, Harris-Kojetin & Bercovitz, 2009; Karsh, Booske & Sainfort, 2005), we use a direct measure of actual turnover in this study. Approximately 32% of aides had left their jobs within a year of the survey data collection. This is somewhat lower than national averages of nursing aide turnover (PHI, 2014).

**Moderator Variables**

**Patient Load**

Since multiple aides tended to the needs of each patient, employee-level indicators of patient load were not practical so we used facility-level indicators. To arrive at a score for average patient load within each facility we divided the number of aides employed in a facility by the number of beds available to patients at the time of survey data collection. Patient load ranged from a low of 1.59 patients per aide to a high of 3.0 patients per aide (mean=2.7; sd=.35).

**Financial Hardship**

Given that people may have access to significantly more financial resources than their own wages, differences in household income serves as a better proxy for financial hardship than do wages alone (Leana & Meuris, 2015). We measured financial hardship by dichotomizing
household income to differentiate between aides who have an annual household income that falls within the lowest two quintiles of household incomes in the United States (upper limit = approximately $40,000\textsuperscript{3}) and those who have household incomes in the top three quintiles ($40,000+ per year). In our sample, approximately two-thirds of aides (66.2%) reported total household incomes below $40,000 per year. We elected to dichotomize the variable rather than use a continuous score because we predicted differences in the relationship between empathetic care and safety between people who have scarce resources and those who do not, rather than a direct effect of household income. In other words, we do not expect to find differences in cognitive attention between people who have relatively small differences in annual household incomes (e.g., $38,000 vs. $41,000). Rather, we expect differences between people who are financially deprived (i.e., the lowest two quintiles) and those who are not (Meuris & Leana, 2015). Therefore, we created two groups based upon their household income: 0=$40,000 or more per year; 1=under $40,000 per year.

Overtime

Overtime was measured by asking aides to indicate how many hours they worked in a typical work week. Three-quarters of the aides reported that they worked 40 hours per week.\textsuperscript{4} Thus, we split employees into two groups: In one group, we included aides who worked 40 hours or less, and in the other group we included aides who worked more than 40 hours in a typical week. In aggregate, 13.3% of aides reported working “overtime” or over 40 hours per week.

Self-efficacy

\textsuperscript{3} Data available at http://www.census.gov/hhes/www/income/data/historical/household/

\textsuperscript{4} 11.7% worked slightly under 40 hours per week.
General self-efficacy was measured using the scale developed by Chen, Gully and Eden (2001). In contrast to state self-efficacy (Bandura, 1986), general self-efficacy is considered a personal trait that captures people’s “perception of their ability to perform across a variety of different situations” (Judge, Erez, & Bono, 1998: 170). As such, general self-efficacy is not context-dependent and measures people’s overall belief in their ability (Chen, et al., 2001). The scale consists of four items with responses on a 5-point scale ranging from strongly disagree to strongly agree. Items include “I can successfully overcome most challenges I face” and “I can achieve most of the goals I set for myself.” The scale showed good reliability in our sample, Cronbach’s $\alpha = .85$.

Other variables

Controls

In all our regression analyses, we controlled for employee age, gender, and job tenure. We also controlled for facility. Since some research in this context suggests that there are facility-level effects of employee engagement on safety outcomes (Barsade & O’Neill, 2014), we wanted to show that individual-level effects of empathetic care affected outcomes after controlling for the variation in outcomes based on facility-level effects. Thus, we wanted to illustrate that there are individual-level effects beyond the facility effects found in prior research.

Pay and Benefits

Although not the focus of the research, we also wanted to examine any potential effects due to differences in pay and benefits among the aides in our study. Following Kalleberg, et al., (2000), we developed a “bad jobs” index based upon the availability of paid sick days, paid vacation days, paid personal days, and paid health insurance. Not surprisingly, these benefits
were correlated ($rs > .143; ps < .05$), and collectively provide an indication of “badness” (Kalleberg et al., 2000). When employees indicated that they did not receive one of these, their index increased by 1. In addition, again following Kalleberg, et al. (2000), the index increases by 1 if their hourly wage was within the lowest quintile of hourly wages in the sample. Therefore, the index ranged from 0 to 5 with higher values indicating “worse” jobs. The worst jobs were characterized by no paid sick days, no paid vacation days, no paid personal days, no paid health insurance, and wages in the bottom quintile. There was a good deal of variability in the sample, with scores ranging from 0 (best jobs) to 5 (worst jobs) on the index (Mean = 2.86; SD = 1.2).

**RESULTS**

**Descriptive Analyses**

Table 1 shows the percentages (for dichotomous variables), means, standard deviations, and range for the variables. Our sample is representative of the national nursing aide population in the U.S. (PHI, 2014) regarding gender (91% in our sample vs. 89% in the population), age (mean = 35 yrs. in our sample vs. 40 yrs. in the population), and race (54% white in our sample vs. 47% in the population). Job tenure in our sample ranged from <1 to 12 years with an average of approximately 3.5 years ($SD = 3.41$). Two-thirds of the aides in our sample had household incomes in the bottom two quintiles of the U.S. (approx. $40 000) and 13% worked overtime (more than 40 hours per week). Survey responses indicated high levels of empathetic care among our sample with an average score of 5.96 ($SD = .80$) on a scale ranging from 1 to 7. Self-efficacy ratings similarly were high with a mean of 4.54 ($SD = .56$) on a scale from 1 to 5.

Supervisor ratings of an aide’s attention to patient safety (hereafter “safety rating”) ranged from 2-5 with a mean rating of 3.05 ($SD = .39$). There was a 32% turnover rate one year
after completion of the survey, consistent with high turnover in the industry (HHCS, 2014). The six facilities participating in this case study differed significantly in size, indicated by the maximum number of patients they could accommodate, ranging from 43 beds to 174 beds with an average of 125 beds. Facilities in our sample had an average patient load of 2.7 aides per bed (SD = .35) with a range between 1.59 and 3 aides per bed.

**ENTER TABLE 1 ABOUT HERE**

Table 2 shows the zero-order correlations among the variables collected. Our main variable of interest, empathetic care, is significantly and positively related to patient safety ($r = .21, p < .05$), although it was not significantly correlated with turnover ($r = .08, p = .263$). Furthermore, empathetic care was not significantly related to the “bad jobs” index ($r = .04, p = .557$) or any other variable other than patient load ($r = .17; p < .01$). Age had a significant relationship to the outcome variables in our study, indicating that older aides tend to have higher safety ratings and are less likely to leave. Financial hardship was negatively related to safety ratings, consistent with previous research that has argued for a main effect of financial scarcity on employee performance and safety (Meuris & Leana, 2015). Patient load was also negatively related to safety ratings, and self-efficacy had a significant negative relationship with turnover. Finally, our “bad jobs” index was not related to any predictor (empathetic care) or outcome (safety ratings and turnover) variables although, not surprisingly, it was significantly correlated with patient load.

**ENTER TABLE 2 ABOUT HERE**

**Regression Analyses**
We tested the first set of hypotheses focused on the effects of empathetic care on safety ratings using ordinary least square regressions, examining the interaction of empathetic care and patient load (Table 3: Model 1 and 2), overtime (Table 3: Model 3 and 4), and financial deprivation (Table 3: Model 5 and 6) in predicting safety ratings. As previously described and shown in the Table, the sample size used for these analyses was significantly lower because of missing data largely due to turnover and/or lack of supervisor ratings for some aides. The final hypotheses regarding employee turnover were tested using a logistic regression examining the effect of empathetic care on the predicted likelihood of leaving (Table 4: Model 1 and 2). The sample size here is again somewhat reduced (n=215 vs. 233) because of missing data. In all analyses we controlled for facility, and employee age, job tenure, and bad job index.5

ENTER TABLE 3 ABOUT HERE

Safety Ratings

Since our OLS regression analyses tended to violate the assumption of heteroscedasticity, which can bias significance tests in linear regression, especially with small sample sizes (Long & Ervin, 2000), we used robust standard errors to adjust for violations of heteroscedasticity in our analyses. The use of robust standard errors in the regression analyses is further warranted in this study due to the clustered nature of the data. Since the error terms are not independent, as aides are clustered into six facilities, robust standard errors should also be used to account for the clustering in facilities (Williams, 2000). We used the MODPROBE 2.0 procedure developed by Hayes (2015) to test our models using the HC3 variant of the heteroscedasticity-consistent covariance matrix. According to Long and Ervin (2000), Monte Carlo simulations suggest that

5 We dropped gender from the analyses since the sample was overwhelmingly female and there were no significant correlations between gender and any other variables in the study.
the HC3 is particularly appropriate for small samples sizes \( (N < 250) \), and thus the use of this version in our study is recommended.

Hypothesis 1 predicts that empathetic care will be significantly and positively associated with safety ratings. As shown in Table 3, this hypothesis is supported, as empathetic care had a consistent significant positive relationship to safety across the regression models. Hypothesis 2 predicts that the relationship between empathetic care and safety is moderated by patient load. Model 2 suggests that there is a significant interaction between empathetic care and patient load in predicting safety ratings, \( B = -.508, RSE = .115, p < .05, \Delta R^2 = .120 \), providing support for Hypothesis 2. Simple slope analyses were conducted for 1 SD below and above the mean patient load (Aiken & West, 1991). When patient load was low, empathetic care was significantly and positively related to safety, \( B = .316, RSE = .123, p < .05 \), but when patient load was high, empathetic care did not translate into higher safety ratings, \( B = -.072, RSE = .074, p = .337 \) (Figure 2A). Thus, high patient loads dampened the otherwise positive relationship between empathetic care and patient safety.

Hypothesis 3 posits that there is a weaker relationship between empathetic care and safety for employees who work overtime (more than 40 hours per week). As illustrated in Table 3 (Model 4), the interaction between empathetic care and overtime was marginally significant, \( B = -.404, RSE = .237, p < .1, \Delta R^2 = .055 \), lending partial support for Hypothesis 3. Simple slope analyses indicated that when aides worked 40 hours per week or less, there was a significant effect of empathetic care on safety, \( B = .175, RSE = .064, p < .01 \). However, there was not a significant effect for aides who worked overtime (more than 40 hours per week), \( B = -.229, RSE = .230, p = .322 \) (Figure 2B). Thus, working overtime dampened the otherwise positive relationship between empathetic care and patient safety.
Finally, Hypothesis 4 posits that financial hardship will dampen the effect of empathetic care on safety. Model 6 (Table 3) indicates that there was a marginally significant effect of the interaction between empathetic care and financial hardship on safety, $B = -.228$, $RSE = .137$, $p < .1$, $\Delta R^2 = .043$, lending some support for Hypothesis 4. Simple slopes indicated that empathetic care among aides experiencing financial hardship (household income lower than $40,000) did not translate into higher safety ratings, $B = .054$, $RSE = .049$, $p = .272$, but empathetic care was related to higher safety ratings for aides who are not experiencing financial hardship (household income of $40,000 and over), $B = .282$, $RSE = .128$, $p < .05$ (Figure 2C).\(^6\)

**Employee Turnover**

The final set of hypotheses examined the relationship between empathetic care and turnover. Hypothesis 5 predicts that aides who report higher empathetic care are less likely to leave their jobs, and Hypothesis 6 further argues for an interaction between empathetic care and self-efficacy on employee turnover. As shown in Table 4, we did not find a direct relationship between empathetic care and turnover; thus Hypothesis 5 was not supported. However, there was a significant interaction between empathetic care and self-efficacy in predicting turnover (Table 4: Model 6), $B = -1.055$, $SE = .530$, $\text{Exp}(B) = .348$, $p < .05$. Simple slope analyses were conducted at one SD below and above the mean of self-efficacy. The results indicate a significant positive relationship between empathetic care and turnover for aides low in self-efficacy, $B = .851$, $SE = .434$, $\text{Exp}(B) = 2.342$, $p = .05$, but there was no significant relationship between empathetic care and turnover for those aides high in self-efficacy, $B = -.303$, $SE = .301$, $p = .272$.

\(^6\) We also conducted these same analyses using a single multiple regression equation simultaneously including the three interactions, but we reported separate regressions to maximize the sample size used for each analysis. Results of the simultaneous analysis are consistent with the ones report in the preceding section.
\[ \text{Exp}(B) = .739, \ p = .314 \] (Figure 2). Thus, there was no support found for Hypothesis 5 and marginal support found for Hypothesis 6.

**DISCUSSION**

In this study we develop a theory of empathy in care work then examine the effects of empathetic care on patient safety and worker turnover using a sample of nursing aides in six residential nursing homes. We find that empathetic care has a main effect on safety ratings but that this relationship is moderated by several situational variables. First, the relationship between empathetic care and safety is weakened when aides are burdened by higher patient loads. Second, we do not find the positive relationship between empathetic care and safety for aides who work more than 40 hours per week. Third, the relationship between empathetic care and patient safety only holds for workers who are not experiencing financial hardship as indicated by household income.

These findings have three important implications. First and foremost, empathetic care is beneficial to patient safety and, in this regard, it is something to be encouraged in healthcare facilities. Second, demanding workplace practices within the facility can erode these potential benefits. When aides are caring for a larger number of patients (high patient load), the benefits of empathetic care for patients disappear. When aides work overtime hours, the patient benefits of empathetic care similarly disappear. Thus, for facilities to realize the benefits of empathetic care, they must manage both patient loads and worker hours. Third, aides experiencing financial hardship, as indicated by low household income, also show difficulty translating empathetic care
into patient safety. As suggested by the recent work on the psychological consequences of scarcity (Meuris & Leana, 2015; Mullainathan & Shafir, 2012), the cognitive and affective “tax” imposed on people with financial worries may impede their ability to perform up to their potential at work. Taken together, these findings suggest that workplace practices that support employees (e.g., reasonable patient loads, no mandatory overtime, sufficient wages to alleviate concerns about economic scarcity) also support patient safety.

Our findings regarding the relationship between empathetic care and turnover are more complex. Contrary to prediction, we find that aides showing more empathy in their work are no more likely to stay (vs. leave) their jobs than those showing less empathetic care. Self-efficacy moderates the relationship but in unexpected ways. Aides who are most likely to stay in their jobs are those who report both low levels of empathetic care and low levels of self-efficacy. Indeed, as shown in Figure 1d, the turnover rate among such aides is about half the average for the sample. Aides who are most likely to leave their jobs are those who report a mismatch between empathy and efficacy. Aides who report high empathetic care but low self-efficacy have a turnover rate of close to 45%. Aides who report low empathetic care but high self-efficacy have a similarly high rate of turnover. Aides who are high in both empathetic care and self-efficacy have turnover rates of about 32%, or the sample average.

There are several potential implications of these findings. First, nursing aides who are most likely to stay in their jobs are those who do not show empathy in taking care of patients and, moreover, do not feel particularly competent in life more broadly. We label these aides as “stickers”. They lack both empathy and efficacy and are perhaps staying in positions for which they are poorly matched because they lack the confidence to do anything else. Thus, they are arguably the least desirable employees but also the most likely to stay. Alternatively, aides who
show low empathy but have high efficacy (these could be labeled “switchers”) are highly likely to leave their jobs. They are people who feel broadly competent but are less attached to their patients and are thus likely to switch jobs at a higher rate. For aides high in empathetic care, we also see differences based on self-efficacy. Those who are high on both efficacy and empathy can be labeled “keepers” because they show a great deal of care for their patients and are also efficacious in managing their lives and emotions and, in these regards, are perhaps the most desirable employees. Their turnover rate is 32%, lower than industry averages and about the mean in the current study. We label our final category “burnouts” – these are aides who are empathetic in providing care but are perhaps lacking in capacity as illustrated in their low self-efficacy scores and thus are likely to “burn out” and quit their jobs. Again, turnover rates for this group are significantly higher than the mean.

**Study Limitations**

This exploratory study sheds new light on a phenomenon that has received scant attention yet is critical to quality care. We explore empathetic care using both qualitative and quantitative methods across several long-term care facilities. At the same time, there are limitations to the research. First, our sample size is small and the findings may not generalize to facilities beyond our case study sites. Second, we cannot fully establish causal ordering regarding the relationship between empathetic care and patient safety. Our lagged dependent variable partially addresses this concern but cannot eliminate it. Third, although past research has distinguished empathetic care from trait empathy (Lamberton, et al., 2015), and our current research has shown it unrelated to individual factors such as demographics, our research does not address the question of why some care workers are more empathetic than others in doing their jobs. If empathetic care is important for quality patient outcomes yet it is not an inherent trait of the individual care
worker, it is important to better understand the factors – both individual and situational – that encourage empathy in care work. Nursing aides are not paid more highly than other jobs that require far less emotional labor and interpersonal interaction (e.g., cashiers; fast food workers), yet there is something about individuals that draws them to this profession and that propels them to do their jobs with empathy. We leave this to future research, which might begin by focusing on factors such as worker motivations for doing care work.

Conclusion

As Folbre (2012) and others have argued, empathy is a key aspect of care work, which distinguishes it from other types of service jobs. With the burgeoning of paid care work in developed economies, it is important to better understand empathetic care – its consequences as well as its predictors. Our research here is meant to shed light on the key role of empathy in such jobs. Importantly, our findings point to the interplay between caregivers’ behaviors and the environments in which they work – hiring the “nicest” people may not translate to safer and more stable workplaces. Rather, an understanding of appropriate patient loads, work hours, caregivers’ economic situations, and other limitations and resources is critical if we want to translate empathy into action.
Table 1. Descriptives

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
<th>Mean (SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility Size (beds)</td>
<td>125</td>
<td>43-174</td>
<td></td>
</tr>
<tr>
<td>Age (yrs.)</td>
<td>35 (13)</td>
<td>18-66</td>
<td></td>
</tr>
<tr>
<td>% female</td>
<td>91%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% white</td>
<td>54%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Tenure (in months)</td>
<td>43 (41)</td>
<td>0-145</td>
<td></td>
</tr>
<tr>
<td>Financial deprivation (Below 40K)</td>
<td>34%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overtime (Over 40 hours)</td>
<td>13%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathetic Care</td>
<td>5.69 (.80)</td>
<td>1.81-7.00</td>
<td></td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>4.54 (.56)</td>
<td>2-5</td>
<td></td>
</tr>
<tr>
<td>Patient load</td>
<td>2.7 (.35)</td>
<td>1.59-3.00</td>
<td></td>
</tr>
<tr>
<td>Bad jobs index</td>
<td>2.86 (1.2)</td>
<td>0-5</td>
<td></td>
</tr>
<tr>
<td>Safety Compliance</td>
<td>3.05 (.39)</td>
<td>2-5</td>
<td></td>
</tr>
<tr>
<td>Turnover</td>
<td>32%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All participants with available data were included in this table.
Table 2. *Correlation table*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Empathetic Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Age</td>
<td>.105</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Gender</td>
<td>-.103</td>
<td>-.077</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Tenure</td>
<td>.046</td>
<td>-.035</td>
<td>.192**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Financial deprivation</td>
<td>.054</td>
<td>-.083</td>
<td>-.008</td>
<td>.045</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Overtime</td>
<td>-.035</td>
<td>-.042</td>
<td>.004</td>
<td>-.037</td>
<td>.067</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Self-Efficacy</td>
<td>.292**</td>
<td>-.094</td>
<td>-.130*</td>
<td>-.025</td>
<td>.067</td>
<td>-.006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Patient load</td>
<td>.051</td>
<td>-.004</td>
<td>-.042</td>
<td>-.081</td>
<td>.034</td>
<td>.047</td>
<td>-.059</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Bad jobs index</td>
<td>.040</td>
<td>.055</td>
<td>.113</td>
<td>-.079</td>
<td>-.016</td>
<td>-.131</td>
<td>-.054</td>
<td>.170**</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Safety Rating</td>
<td>.292**</td>
<td>.203*</td>
<td>-.045</td>
<td>.086</td>
<td>-.195*</td>
<td>-.128</td>
<td>.082</td>
<td>-.303**</td>
<td>.123</td>
</tr>
<tr>
<td>11</td>
<td>Turnover</td>
<td>.076</td>
<td>-.152*</td>
<td>-.042</td>
<td>.016</td>
<td>-.040</td>
<td>-.015</td>
<td>.146*</td>
<td>-.014</td>
<td>.031</td>
</tr>
</tbody>
</table>

**p < .01; *p < .05**

All participants with available data were included in the correlations, but due to missing data, Ns ranged from 123 to 233. There was no correlation between safety ratings and turnover because we did not receive ratings for people who left the facility.
Table 3. Regression table – Safety ratings

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathetic Care</td>
<td>.113**</td>
<td>.122**</td>
<td>.137**</td>
<td>.112*</td>
<td>.126**</td>
<td>.136**</td>
</tr>
<tr>
<td></td>
<td>(.043)</td>
<td>(.040)</td>
<td>(.048)</td>
<td>(.048)</td>
<td>(.045)</td>
<td>(.044)</td>
</tr>
<tr>
<td></td>
<td>-.314*</td>
<td>-.215*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient load</td>
<td>(.086)</td>
<td>(.082)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[.165]</td>
<td>[.128]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overtime</td>
<td></td>
<td></td>
<td>-.091</td>
<td>-.122</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.098)</td>
<td>(.096)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[.100]</td>
<td>[.108]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial deprivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.131</td>
<td>-.124</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.069)</td>
<td>(.068)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[.080]</td>
<td>[.079]</td>
</tr>
<tr>
<td>Empathetic Care x Patient load</td>
<td>-.508**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.115)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[.236]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathetic Care x Overtime</td>
<td></td>
<td></td>
<td></td>
<td>-.404*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.158)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[.237]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathetic Care x Financial deprivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.227*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.095)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[.137]</td>
<td></td>
</tr>
<tr>
<td>Controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>115</td>
<td>115</td>
<td>102</td>
<td>102</td>
<td>114</td>
<td>114</td>
</tr>
<tr>
<td>R²</td>
<td>.231</td>
<td>.351</td>
<td>.154</td>
<td>.210</td>
<td>.166</td>
<td>.209</td>
</tr>
</tbody>
</table>

*p < .1; **p < .05

Parentheses “()” indicate standard errors; brackets “[]” indicate robust standard errors.

Ns are different due to missing data. All participants with available data were included in the analyses. There was no difference on gender and tenure between those included in the regressions and excluded as a result of missing data. However, there was a significant difference on age between those included and excluded given that we do not have safety ratings for CNAs who turned over during the study and age is significantly related to turnover.
Table 4. Regression table – Turnover

<table>
<thead>
<tr>
<th>Variable</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathetic Care</td>
<td>.145</td>
<td>.274</td>
</tr>
<tr>
<td></td>
<td>(.218)</td>
<td>(.236)</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.533*</td>
<td>.468</td>
</tr>
<tr>
<td></td>
<td>(.323)</td>
<td>(.331)</td>
</tr>
<tr>
<td>Empathetic Care x Self-efficacy</td>
<td>-1.055**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.530)</td>
<td></td>
</tr>
<tr>
<td>Controls</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>215</td>
<td>215</td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>12.246</td>
<td>16.843*</td>
</tr>
<tr>
<td>Cox &amp; Snell R²</td>
<td>.051</td>
<td>.071</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>.071</td>
<td>.099</td>
</tr>
</tbody>
</table>

*p < .1; **p < .05

All participants with available data were included in the analyses. There was no difference on age, gender, and tenure between those included in the regressions and excluded as a result of missing data.
Figure 1: Research Model
Figure 2A-2C. Simple slopes for patient safety

2A. Simple slopes for interaction between empathetic care and patient load

2B. Simple slopes for interaction between empathetic care and overtime
2C. Simple slopes for interaction between empathetic care and financial hardship

*Figure 3. Interaction of empathetic care and self-efficacy in predicting probability of turnover*
REFERENCES


