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Mood and Engagement Contagion in a Call Center Environment

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Mood and Engagement Contagion in a Call Center Environment

By

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A Thesis Submitted in Partial Fulfillment of the
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Mood and Engagement Contagion in a Call Center Environment

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This thesis has been examined and approved by the following members of the student’s committee.

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ABSTRACT

The expanding call center industry creates a work environment characterized by low engagement, high stress, and high turnover. By investigating the phenomena of mood and engagement contagion, this study seeks to identify ways to improve the negative call center working conditions. Specifically, mood and engagement contagion from supervisor to subordinate is investigated within a large retail call center. In addition, the relationships between mood and performance, engagement and performance, and mood and engagement are explored.
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INTRODUCTION

Engagement in the workplace

Over the last two decades, as more companies have realized the crucial value of human capital, the topic of employee engagement has experienced a dramatic rise in popularity. A comprehensive search of the literature shows that the year 1995 saw about 3,000 publications on the topic. In 2015, only twenty years later, more than 26,000 were published. Employee engagement can be defined as the emotional connection an individual feels towards their organization and their job purpose, which leads to greater effort and dedication in their work (Wulff, 2011). It involves factors such as passion, organizational commitment, and employee involvement (Macey & Schneider, 2008). Engagement is a cognitive state that is not focused on any one thing or event in particular, but a general pattern of positive energy, involvement, and efficacy (Schaufeli & Bakker, 2002).

Engagement is more accurately defined by three components: vigor, dedication, and absorption (Schaufeli & Bakker, 2002). Vigor implies a high level of mental strength and energy, the willingness to invest effort into one’s daily tasks, and the persistence to overcome difficulties (Bledow, 2011; Schaufeli & Bakker, 2002). Dedication relates to the challenge and enthusiasm one experiences through their work, which is related to feelings of pride, inspiration, and significance (Schaufeli & Bakker, 2002). Finally, absorption refers to a level of high concentration in which time passes quickly and detachment from the task is difficult (Bledow, 2011).
Thus, engagement requires conscious self-involvement and dedication of energy. The employee who simply shows up to work and expends only the minimum amount of effort required to perform their duties is not engaged. The employee who is not passionate about what they are doing or does not voluntarily put in extra effort to further the success of the organization they work for is also not engaged. At the very opposite end of the spectrum, disengagement represents a cognitive and affective withdrawal from work or disillusionment about one’s job (Verbeke et al., 2004). Those who are disengaged actively try to hurt the company or cause workplace conflict (Wilson, 2014).

According to Kahn (1990), engagement can only occur when employees are emotionally connected and cognitively active in their work. He proposed the concept that personal engagement is the behavior by which an individual brings their true, authentic self to their work role performances. An employee is more likely to allocate discretionary effort in their job and “give their best” when they feel most like themselves in their environment (Woodruffe, 2006). Most of the factors that contribute to this voluntary effort are non-financial motivators, such as development, autonomy, praise, support, etc.

Thus, the concept of engagement is not to be confused with employee satisfaction, which is a measure of an employee’s attitude towards the conditions of their current job rather than the intangible relationship with their work (ADP Research Institute, 2012). Satisfaction is a critical ingredient in engagement, but it does not encompass the concept in its entirety (Rice & Marlow, 2012). In other words, satisfaction is necessary, but not sufficient, for engagement to exist. Examples of factors that influence satisfaction are benefits, work-life balance, and office culture (ADP Research Institute, 2012). In the workplace, there may be many satisfied employees who are content with the conditions
of their job, but are only willing to put in the minimal effort necessary or perform the
duties formally assigned to them. This kind of attitude towards work was all that was
needed in the days when “cradle-to-grave” jobs were the norm (Woodruffe, 2006).

However, today’s employment market is one of little job security and constant change.
Job applicants these days are motivated by more than just a high-paying salary; they want
to be engaged (2006). Potential recruits, especially the top-performing ones, are attracted
to jobs that offer challenge, opportunities for growth, and significance (Woodruffe,
2006). Furthermore, offering these provisions is not a one-time lure. After attracting and
attaining their human capital, organizations that want to succeed must constantly work to
cultivate engagement within their ranks (Brady, 2007). According to one survey by the
IBM subsidiary Kenexa, 57% of new hires turnover after two years due to their decline in
engagement (Brady, 2007). This makes engagement a crucial determinant of an
organization’s success and competitive advantage within its industry.

Highly engaged employees are those who go above and beyond their job duties,
voluntarily putting time and energy into supporting the company’s mission, and coming
up with innovative solutions to move their company forward (ADP Research Institute,
2012). Unfortunately, there seems to be a severe lack of engaged employees in today’s
workforce. According to Gallup’s latest employee engagement survey, only 31.5% of
U.S. employees are engaged (Adkins, 2015). The yearly survey, conducted since 2000,
also reveals that 51% of employees are not engaged and, even worse, 17.5% of
employees are “actively disengaged” (Adkins, 2015). This same survey estimates that the
engagement deficit is costing businesses up to $550 billion per year in lost productivity
(Wilson, 2014). Clearly, there is a need for HR managers and other business
professionals to further investigate the factors that contribute to employee engagement and identify ways to boost its presence in the workplace.

*Engagement’s effect on performance*

Increased employee engagement has been associated with a multitude of positive work outcomes including: improved task performance (Salanova et al., 2005), higher productivity (Richards, 2013), reduced absenteeism (Rice et al., 2012), positive work attitudes (Hakanen et al., 2008; Halbesleben & Wheeler, 2008), increased innovation (Rice et al., 2012), fewer accidents (Rice et al., 2012), and organizational commitment (Saks, 2006). A number of studies have shown that employee engagement is one of the key determinants for high performance in any job (Anitha, 2014; Bothma & Roodt, 2012; Bhuvanaiah & Raya, 2010; Macey et al., 2009). In addition, engagement also has a positive effect on customer satisfaction (Rice et al, 2012; Salanova et al., 2005). This makes sense given that engaged employees are more likely to exhibit positive behaviors towards customers (Bhuvanaiah & Raya, 2014). For an organization, all of these positive outcomes not only help them to save money and resources, but they also give them a competitive advantage. A workforce that performs at its’ best is one of the most valuable resources a company can have in today’s economy (Bhuvanaiah & Raya, 2014).

The conclusions we can draw from this multitude of research lead to the first hypothesis:

*Hypothesis 1: Engagement is positively related to performance*
Another outcome of engagement that plays a large part in many businesses is a reduction in turnover (Halbesleben & Wheeler, 2008; Saks, 2006; Schaufeli and Bakker, 2002). As mentioned previously in the Kenexa survey, a decline in engagement is the primary reason why many employees decide to quit at around the two year mark (Brady, 2007). When you factor in the costs of hiring and training a replacement, lost productivity from the transition time, and the long-term disruption of the talent pipeline, it is estimated that the turnover cost of any given employee is equal to 150% of their base salary (Ruyle, 2012). Another study by Schaufeli & Bakker (2002) found that high turnover results from low engagement, which is experienced when people have fewer resources and more pressure in their job.

Engagement and the work environment

The results of the aforementioned study make sense given the job demands resources model (JD-R), which posits that higher demands and fewer resources at work produce negative outcomes. The job demands resources model can also act as a framework for determining when the work environment offers opportunities for greater employee engagement. The JD-R model was originally developed to examine the relationship between job characteristics and strain outcomes, such as burnout, within the human services industry (Verbeke et al., 2004). It was later adapted to be applicable to workers of all other industries beyond that of “people work” (Demerouti et al., 2003). Job demands are any aspect of the job that requires sustained physical or psychological effort, such as work pressure, deadlines, and emotional labor (Bakker & Demerouti, 2007). Job resources are the aspects of the job that alleviate the pressure of job demands. These can
be things such as role clarity, autonomy, mentoring, or performance feedback (Bakker & Demerouti, 2007).

Together job demands and job resources influence two psychological processes: health impairment and motivation (Bakker et al., 2003). The health impairment process results from high job demands and few job resources to buffer those demands (Bakker & Demerouti, 2007). Conversely, the motivation process is activated when job resources are high and even when job demands are high (Bakker & Demerouti, 2007). It is through this motivation process that engagement is born. Disengagement can also be explained if the motivation process is low (Demerouti et al., 2001). To reiterate, a work environment that offers more resources and less stringent demands creates an atmosphere more conducive to engagement. An example of this type of job might be someone who works for a small non-profit organization.

*The call center environment*

Call center environments are categorized as areas of low engagement (Bakker and Demerouti, 2007; Hakanen and Roodt, 2010; Mustosmaki et al., 2013). In other words, this environment makes it difficult for most workers to obtain challenge, significance, or absorption from their tasks. According to the JD-R model and past research, this is due to low autonomy and skill variety (Grebner et al., 2003; Mustosmaki et al., 2013), high pressure from customers (Mulholland, 2004; Townsend, 2005), call quotas (Holman, 2002), and high turnover (Ballard, 2012). Call center work often involves constant emotional labor in dealing with a repetitive string of demanding and unpleasant customer interactions (Ballard, 2012).
Further evidence of low autonomy is found in the requirement that call center employees take any verbal abuse to uphold the “customer is always right” values of the organization. In addition, their customer interactions are often confined by a script, limiting the employee’s control and making work very repetitive (Rose & Wright, 2005). Call center workers are also subjected to constant performance monitoring, where their calls may be recorded and time standards are enforced (Bakker et al., 2003). In summary, these negative conditions work together to produce low engagement levels, which then lead to poor performance outcomes. Due to the negative factors of the call center environment, absenteeism and turnover are quite high (Bakker et al., 2003). In fact, a study by Cornell University showed that call centers experience some of the highest turnover rates of any industry- up to 50% annually (Ballard, 2012).

Employee engagement in the unique environment of a call center is worth investigating both because of its business relevance and its negative factors. In today’s information economy, call centers are a vital and necessary part of customer support. For many companies, call service representatives are the first or only point of contact for customers interested in accessing its products or services (Wulff, 2011). They therefore act as representatives of the organization. Thus, interactions through a call center can either make or break customer relationships (Tschida, 2005). The experience that employees have at work can profoundly impact the kind of care and consideration a customer receives (Wulff, 2011). This, in turn, has a direct effect on customer retention.

One example of good customer service might be the call center employee who patiently explained operating instructions to the person on the other end of the line, instead of simply directing them to a website where they could read it themselves. An
engaged employee would be more likely to respond this way and expend the extra time and effort required to satisfy the customer. Bad customer service might be an employee who became frustrated with the customer and transferred the call to someone else. This behavior would be more characteristic of an employee who only puts forth minimum effort.

It is estimated that 5 million Americans are currently employed at about 66,000 call centers, a number that is continuously growing as more companies move call center jobs back to the U.S. (Witsil, 2014). The number of call center jobs is expected to grow by about 18% over the next few years and demand for representatives to fill these positions will exceed the supply (Ballard, 2012). This industry expansion is fueled by technological advancements, rising overseas labor costs, and customer demands for better service (Ballard, 2012). Since most simple calls, such as resetting a password or ordering an item, have become automated, the more complicated calls that are left demand a more advanced level of product knowledge and communication skills (Zeitlin, 2012). Thus, we see a reversal of call center offshoring. Because of these future trends, it is important for HR professionals to find ways to improve call center working conditions, reduce attrition, and improve worker satisfaction.

Mood and its influence on engagement

Based on the research previously discussed, finding ways to increase or spread employee engagement will result in positive benefits in all of these areas. One variable that may affect engagement and be easier to stimulate in a call center environment is mood. Mood can be defined as an unconscious affective state responsible for how energy
is expressed. It is related to emotion, but also differentiated by its nature and persistence. Whereas emotions are reactions immediately following a stimulus, mood is longer-lasting and more diffuse than specific (Ekkekakis, 2013). It can be about nothing specific or everything. As a result, it is difficult to determine the cause of a mood but they tend to persist for a significant amount of time.

An example is someone who wakes up in an anxious mood. Rather than attributing this affective state to a stimulus, the mood could very well be caused by something general, such as the anticipation of future events or a series of embarrassing moments from the day before (Ekkekakis, 2013). Even so, moods are produced through select experiences and can be strengthened or weakened through the aggregate of emotional reactions (Bartel & Saavedra, 2000). However, unlike these emotional reactions, moods are made apparent by more subtle and pervasive effects that may be unrelated to the mood’s initial origin (Bartel & Saavedra, 2000). These diffuse effects manifest themselves through an individual’s behaviors and thoughts.

Much previous research has made clear the positive association of positive affect and engagement (Bledow et al., 2011; Schaufeli & Van Rhenen, 2006; van Wijhe et al., 2011). Intuitively it makes sense that to do one’s job with vigor, dedication, and absorption, one must derive some level of happiness from the performance of their tasks. Interestingly, one study found that negative affect can also be associated with engagement. In what the authors termed the affective shift model, if a negative mood at the beginning of the day is followed by a positive mood in the afternoon, there is a positive relationship with engagement (Bledow et al., 2011). Another way of interpreting
the study is that a positive mood is associated with engagement even if a negative mood precedes it. This leads us to our second and third hypotheses.

*Hypothesis 2:* The frequency of positive moods experienced will be positively associated with engagement

*Hypothesis 3:* The frequency of negative moods experienced will be negatively associated with engagement

*Mood and performance*

We know that positive mood is associated with engagement and that engagement is associated with higher work performance. However, positive mood alone has been shown to come with its own performance benefits. Research has revealed that positive affect leads to greater work effort by causing employees to be more cooperative, (Bledow et al., 2011; Gouaux, 1971; Griffitt, 1970) more likely to help (Isen & Levin, 1972), and display more organizational citizenship behaviors (George, 2000; Lee & Allen, 2002). It has also been found to increase motivation (Erez & Isen, 2002), perceived well-being (Diener et al., 2003) and task performance (Ashby et al., 1999). In particular, a recent study showed that positive mood of call center employees led to greater customer satisfaction (Rothbard & Wilk, 2011). This may be due to the influence mood has on one’s cognitive appraisal. An employee in a positive mood is more likely to interpret events favorably. In the situation of dealing with a difficult customer, this assists with the emotional labor aspect of the job. As discussed previously, the ability to convey positive
emotions and not get frustrated when negative situations arise is a necessary skill for all call center employees. This leads to the fourth hypothesis.

\textit{Hypothesis 4:} Positive mood is related to greater employee performance

\textit{Mood contagion}

One interesting characteristic of mood is that it can be spread to others. Mood contagion is the term used to describe the unconscious transfer of mood among individuals through their interactions (Neumann & Strack, 2000). This occurs through behavioral mimicry which leads to emotional convergence among group members (Bakkar, 2006; Johnson, 2008). For example, an employee who comes to work energetic and smiling, and who enthusiastically greets everyone as she enters the office, causes other coworkers to unconsciously mimic her smile and actions as well. There is much evidence from past research that facial expressions are affected by emotional stimuli (Lee & Wagner, 2002). As a result of this behavioral mimicry, the coworkers will interpret their own behaviors as an expression of their own happiness (Johnson, 2008). Several studies have exhibited the phenomena that making a particular facial expression can evoke its corresponding emotion (Kraft & Pressman, 2012; Lewis & Bowler, 2009). Thus, the emotional state of individuals in the office would converge to a slightly happier level. This well-researched effect has real world implications for supervisor behavior in the workplace.

In fact, several studies have shown that leader mood particularly influences employee mood (Sy et al., 2005; Volmer, 2012). According to one study by Anderson et
al. (2003), this transfer of mood occurs because of the social hierarchy. Lower status individuals are prone to adopting the mood of higher status individuals, or, in other words, subordinates are naturally inclined to mimic the mood of their leader or supervisor (Anderson et al., 2003). Leaders, by definition, are those who hold the power and responsibility to influence others. Therefore, it makes sense that subordinates naturally pay more attention to, or have a heightened awareness of, the expressions and behavior of a leader (Johnson, 2008). Subordinates may also have more opportunities to see the expression of a leader’s mood when they receive instructions and feedback (Volmer, 2012). It is assumed that this same phenomena would be present in a call center environment, despite its unique qualities. The next hypothesis follows:

**Hypothesis 5**: Supervisor mood will be related to aggregate subordinate mood

*Engagement contagion*

We would expect mood to be contagious in a call center environment, but could engagement also be contagious? Past research provides strong evidence that engagement contagion exists in the workplace (Bakker, Demerouti, & Schaufeli, 2005; Salanova et al., 2005). Whether it is the crossover of engagement from team to individual (Bakkar, Emmerik, & Euwema, 2006), or between work partners (Bakker & Xanthopoulou, 2009) research shows that people who work together share affective experiences which manifest themselves in similar motivational patterns (Salanova et al., 2005). As with mood contagion, leaders are particularly influential when it comes to the sharing of motivational and affective behaviors (George, 2000). Through the social interaction of
employees it is possible for engagement to spread from one individual to the collective group.

Evidence for the spread of affective states among work groups has been produced in many different studies (Barsade & Gibson, 2012; Bartel & Saavedra, 2000). One study in particular showed that the affective tone of a group is conceived when most of the individual group members experience the same emotion (Bartel & Saavedra, 2000). This homogeneity of affective states within a group is a result of the subtle but continuous spread of emotions between members (Barsade, 2002). In another experimental study, confederates were used to enact varying affective conditions within their group. The group that was exposed to positive emotion, not only displayed a contagion effect, but also experienced improved group processes, such as cooperation and task performance (Barsade, 2002). If these motivational behaviors can be produced through contagion, it seems reasonable to expect that engagement will function in a similar way.

Given the unique environment of call centers, where the job characteristics do not provide the necessary conditions for high levels of engagement (vigor, dedication, and absorption), one might think it unlikely that the contagion effect would occur. As far as we know, there is no research on engagement contagion in an environment of low engagement. However, based on the irrefutable research supporting the spread of affective experiences, the following hypothesis was formulated:

_Hypothesis 6:_ Supervisor engagement will be related to aggregate subordinate engagement.
Although two distinct concepts, both mood and engagement contagion support the idea that the emotional state of an individual can infect or spread to others unconsciously (Bledow et al., 2011). Translated to the workplace, this means that a single manager can have the power to improve the satisfaction and performance of her employees. Nowhere is this more important than in an environment characterized by low engagement, high stress, and high turnover. The expanding call center industry is the perfect example for these kinds of unpleasant working conditions. Through the investigations proposed in this study, we will have evidence of the importance of mood and engagement within the call center environment. Furthermore, it will explore the possibility of mood contagion and engagement contagion in this specific setting. From the results, we can identify which has a stronger effect in order to give recommendations on how to improve the conditions of call center workers.
METHOD

Participants and Procedures

This study was conducted using archival data obtained from the call centers of a large American retailer. Its archive includes information on about 3,700 agents collected daily over a one-year period. The participating company removed any identifying information prior to sharing the data to ensure anonymity.

The department and supervisor of each call center agent was listed, making it possible to investigate any contagion effect between each supervisor and their subordinates. To take into consideration any differences that the time of year may have had (i.e. large number of new hires in the beginning of the year, department transfers throughout the year, etc.) information was analyzed at several different dates throughout the one-year period: February 3, 2015, August 3, 2015 and February 1, 2016.

Measures

Mood

Agents were asked once a day during their work shift, “How are you feeling today?” Responses were collected using a 5-point scale with a range of Frustrated (1), Exhausted (2), So so (3), Good (4), and lastly, Unstoppable (5).

Engagement

Agents were asked to report their daily engagement level through their response to one of eight statements, received at random each day. The statements were indicative
of general engagement themes such as motivation to go above and beyond at work, telling others positive things about the company, and wanting to remain at their job. Responses were collected using a 6-point scale from *Strongly Disagree* (1) to *Strongly Agree* (6).

**Performance**

Performance was assessed through the Net Promoter Score, which measures customer satisfaction. The Net Promoter Score is a percentage calculated by finding the difference between the number of positive customer ratings and the number of negative customer ratings and dividing by the total number of calls per day. Scores range from -1 to +1, such that if an agent takes 15 calls per day and receives all positive customer ratings their score would be +1.

**Data Analyses**

SPSS software was used to conduct regression analyses using the various measures.

To determine the relationship between (*Hypothesis 1*) engagement and performance, the individual agent engagement scores were regressed with the Net Promoter score. A similar method was used to investigate (*Hypothesis 2*) mood and its relationship with performance.

In order to show the relationship between (*Hypothesis 3*) positive mood and engagement, the aggregate of positive moods (a mood score of 4-5) experienced during one work week was calculated for each individual agent and regressed with their aggregate engagement.
score. The same process was followed for (4) negative mood (a mood score of 1-3) and engagement.

HLM software was used to conduct hierarchical linear modelling analyses. This type of analysis was used to create a two-level model, with within-person variables (i.e. subordinate daily mood and daily engagement) at the first level and between-group variables (i.e. aggregate subordinate mood and aggregate subordinate engagement), as determined by supervisor, at the second level. Essentially this type of modeling allowed us to examine whether changes in subordinate mood or engagement were related to their respective supervisor’s mood or engagement.

The equation for our model to investigate the (5) mood contagion effect and the (6) engagement contagion effect between each supervisor and their subordinates was:

Level 1: Subordinate mood\(_{ij}\) = \(\beta_{0j} + r_{ij}\)

Level 2: \(\beta_{0j} = \gamma_{00} + \gamma_{01}*(\text{Supervisor mood}_j) + u_{0j}\)
RESULTS

Effect of Engagement on Performance

A simple linear regression was calculated to predict performance based on engagement at two different dates throughout the year, Time 1 (August 3, 2015) and Time 2 (February 1, 2016). The regression of performance on engagement at Time 1 demonstrated a non-significant relationship ($\beta = -.02, p = .8$). In other words, engagement did not explain variance in performance scores. The regression at Time 2 was also non-significant ($\beta = -.05, p = .58$). Thus, Hypothesis 1 was not supported.

Effect of Mood on Engagement

In order to show the relationship between positive mood and engagement, the aggregate number of positive moods experienced in a one week period (August 3, 2015 to August 7, 2015) was calculated. A simple linear regression was then conducted to predict engagement based on this aggregate positive mood. A strong, significant relationship was found ($\beta = .73, p < .001$). For every one point increase in positive mood, an employee experienced a 3.96 point increase in engagement. Therefore, employees who experienced positive moods more frequently throughout the work week were more engaged.

In the same way, the aggregate number of negative moods experienced in a one week period (August 3, 2015 to August 7, 2015) was calculated to investigate the relationship between negative mood and engagement. A strong significant relationship was also found ($\beta = -.73, p < .001$). The relationship between negative mood and...
engagement was negative, as predicted. For every one point increase in negative mood, an employee experienced a -3.96 point decrease in engagement. In other words, employees who experienced negative moods more frequently throughout the work week were less engaged. These results support both Hypothesis 2 and 3.

**Effect of Mood on Performance**

A simple linear regression was also used to predict performance based on mood at three different dates throughout the year, Time 1 (February 3, 2015), Time 2 (August 3, 2015), and Time 3 (February 1, 2016). The regression of performance on mood was not significant at Time 1, ($\beta = .03, p = .57$). Therefore, mood did not explain variance in performance scores. Similarly, the relationship between the two constructs proved to be not significant at Time 2, ($\beta = -.01, p = .86$). The regression of performance on mood at Time 3 was also not significant, ($\beta = -.10, p = .25$). Thus, Hypothesis 4 was not supported.

**Contagion Effect of Supervisor Mood on Subordinate Mood**

Hierarchical linear modeling (HLM) analyses were conducted to determine whether any contagion effect existed between supervisor mood and their subordinates’ mood. HLM analyses were taken at three different dates throughout the year Time 1 (February 3, 2015), Time 2 (August 3, 2015), and Time 3 (February 1, 2016). At Time 1, there was found to be no significant effect of supervisor mood on subordinate mood, ($\gamma = -.03, p = .82$). The calculated intraclass correlation coefficient (ICC) showed that there was a lot of variance within the group (ICC = .002). This means that the average group
mood was not a reliable estimate of individual employee’s mood. At Time 2, there was also no significant relationship between supervisor mood and subordinate mood, \((\gamma = .06, p = .73)\). An ICC equal to .0008 was calculated. Lastly, at Time 3 there was no effect, \((\gamma = -.40, p = .28)\), with an ICC of .0005. Because none of our regressions were significant we can determine that supervisor mood is not related to changes in their group’s mood. Also, the ICCs calculated at each time were very small. A high ICC would be expected if subordinate mood was influenced by the mood of their supervisor. Thus, there was no supporting evidence for a contagion effect of mood, as predicted by Hypothesis 5.

**Contagion Effect of Supervisor Engagement on Subordinate Engagement**

HLM analyses were used to identify any contagion effect between supervisor engagement and their subordinates’ engagement. Data from two different dates throughout the year, Time 1 (August 3, 2015) and Time 2 (February 1, 2016), was analyzed. According to the results, there was also no significant effect of supervisor engagement on subordinate’s engagement at Time 1 \((\gamma = .04, p = .68)\) and Time 2 \((\gamma = -.36, p = .33)\). Once again, the small intraclass correlation coefficients, ICC = .001 at Time 1 and ICC = .0004 at Time 2, showed that there was a lot of variance in engagement within the groups. Therefore, subordinate engagement was not related to their respective supervisor’s engagement at all. There was no supporting evidence for a contagion effect of engagement, as predicted by Hypothesis 6.
DISCUSSION

This study was an investigation into the effect of mood and engagement on performance, the relationship between mood and engagement, and the contagion effect of mood and engagement within the unique call center environment. The first hypothesis, that those employees who reported higher levels of engagement would have higher performance ratings, was not supported. The data showed no significant relationship between the two constructs. The fourth hypothesis that those employees who reported greater positive mood would have higher performance ratings, was also not supported.

However, our hypotheses about the relationship between mood and engagement were supported. As predicted in our second hypothesis, there was a very strong positive relationship between positive mood and engagement. This result is consistent with past research showing that the two constructs are alike and that they exhibit a positive relationship. Similarly, the third hypothesis, that there would be a negative relationship between negative mood and engagement, was supported. This outcome was expected due to past research showing positive mood to be a necessary precondition for engagement. Although the experience of positive mood is not sufficient for the state of engagement, it sets the foundation for engagement to occur.

The fifth and sixth hypotheses, that there would be a contagion effect of mood and engagement among supervisors and their subordinates, was not supported with our data.

The non-significant results obtained through many of our analyses, which disproved most of our hypotheses, can likely be explained by the severe limitations of
using archival data. One obvious limitation of this study was the scale used to measure mood. This measure had been previously developed by the retailer and validated against other related measures used internally. Some of these measures assessed related constructs, such as customer satisfaction, which were also developed by the retailer. Therefore, they may not have been completely accurate themselves. The words chosen for the mood measure also seemed quite problematic. First of all, the meaning behind some of the terms was unclear (i.e. Unstoppable). Secondly, it was questionable whether some of these terms were related to mood (i.e. Exhausted) or another construct altogether. Third, the rank order of these terms probably resulted in some inaccuracies when employees reported how they were feeling. For example, So so could have been interpreted to be a more negative mood state than Exhausted, even though So so was designated a higher number on the mood spectrum.

Another major limitation to our study was that we were unaware of the specific working conditions of this retailer’s call centers. The amount of daily interaction between a supervisor and their subordinates is a vital factor in determining whether their mood or engagement levels are contagious. If call center agents rarely saw their supervisor on any given day, it would make sense that no contagion effect would be present. Additionally, other environmental factors could have influenced the contagion effect. The amount of interaction the agents had with their coworkers, the amount of time agents spent on the phone with customers, or the amount of unpleasant customer interactions experienced by each agent could have counteracted any contagion effect that was present. Because we were not able to observe the call center working conditions or ask clarifying questions of those who worked there, our study is limited.
Future Implications

In the future, this study could be repeated with a more valid measure of mood to see if there would be any more significant results. It would also be interesting to conduct an experiment to investigate whether the amount of interaction time between supervisor and subordinates would have any effect on the mood and engagement levels of call center agents.

Although most of the hypotheses of this study were not supported, the two that were have several implications for the call center industry. The strong relationship found between positive mood and engagement may offer a means to increase engagement and performance of call center workers. As stated before, positive mood provides a foundation for engagement and it may be easier for call centers to boost the mood of their employees rather than try to make them more engaged with work that is not very engaging in the first place.

Conclusion

This study was the first to investigate both mood and engagement contagion together in the call center environment. Although there did not appear to be any relationship between mood and engagement and the performance of call center agents, nor a contagion effect of mood and engagement, this is just the first step towards improving the unfortunate working conditions of this industry. We should continue to develop more valid measures of these constructs in order to properly determine the relationships between them and the role supervisors can play in creating a more pleasant
workplace. If it is found that these relationships truly do not exist, then researchers should look to other areas to improve call center engagement levels and retention rates.
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