

How does customer affiliative behaviour shape the outcomes of employee emotion regulation? A daily diary study of supermarket checkout operators

David Holman

Manchester Business School, david.holman@mbs.ac.uk

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Abstract

Although employees' frequently regulate their emotions when serving customers, few studies have examined how customer behaviour shapes the outcomes of employees' emotion regulation. Drawing on existing literature, this paper tests two alternative models of customer affiliative behaviour, employee emotion regulation (surface acting, deep acting) and employee outcomes (emotional exhaustion, objective task performance). In one model, customer affiliative behaviour is a mechanism that mediates the relationship between employee emotion regulation and outcomes, and in the other model it moderates this relationship. The models were tested on data drawn from a daily diary study of 49 supermarket checkout operators and store performance records. The findings from multilevel analyses make a significant contribution to understanding how a key part of the social context during service interactions (i.e., customer affiliative behaviour) is a mechanism and moderator of employee emotion regulation. Results show that the effects of deep and surface acting on employee well-being are mediated by customer affiliative behaviour, and that the relationship between surface acting and task performance is mediated by customer affiliative behaviour and emotional exhaustion. In addition, customer affiliative behaviour moderated the relationship between deep acting and emotional exhaustion, and the indirect effect of deep acting on task performance through emotional exhaustion.

Service employees often have to manage their emotional feelings and expressions to meet organisational rules concerning the emotions that they are required to display towards customers. This process, known as emotional labour, is usually performed using one of two emotion regulation strategies. Surface acting involves changing the outward expression of emotion to produce a faked emotional display, whereas deep acting involves altering felt emotion to produce a genuine emotional display (Hochschild, 1983). Using emotion regulation strategies can have important consequences for employees, as studies show that surface acting typically has negative effects on employee well-being and task performance, while deep acting has benign or mildly positive effects on these outcomes (Hülshager & Schewe, 2011).

Despite strong evidence that employee emotion regulation is related to employee outcomes, relatively little is known about how this relationship is shaped by the social context because emotion regulation research has tended to focus on intra-individual processes such as individual effort (Côté, 2005; Holman, Martinez-Iñigo, & Totterdell, 2008). A key part of the social context in which employees perform emotion regulation is customer behaviour which can be defined as the affiliative and non-affiliative behaviours that customers use towards service employees (Groth, Hennig-Thurau & Wang, 2013; Wiggins, 1979). Affiliative customer behaviours typically involve being friendly and respectful and in the context of this study (service interactions at supermarket checkouts) includes smiling, maintaining eye contact, being polite and engaging in short friendly conversations (Gutek, 1997; Rafaeli & Sutton, 1990). Non-affiliative customer behaviours involve being hostile or uncivil (Groth & Grandey, 2012). In this study, the focus is on affiliative customer behaviours, as few studies have addressed affiliative customer behaviour and employee emotion regulation (cf. Grandey, Dickter & Sin, 2004; Rupp & Spencer, 2006) and non-affiliative customer behaviours were rare in the study context.

In the few studies examining customer affiliative behaviour and employee emotion regulation, two types of model have been proposed (See Figure 1). In one type of model, customer affiliative behaviour is a mechanism through which emotion regulation affects employee well-being (Brotheridge and Lee, 2002; Holman et al., 2008). For example, a field study of doctors by Martinez and colleagues found that satisfaction with patient interaction mediated the relationship between surface acting and emotional exhaustion (an indicator of low employee well-being; Maslach & Jackson, 1981) (Martinez, Totterdell, Alcover & Holman, 2007). In the other type of model, customer affiliative behaviour moderates the effects of emotion regulation on employee well-being. For instance, Wessel and Steiner (2015) found that customer politeness (a type of affiliative behaviour) reduced the negative effects of surface acting on emotional exhaustion in a sample of department store workers and in a sample of nurses.

--- Figure 1 about here---

Existing research on customer affiliative behaviour and emotion regulation has significant limitations. Crucially, both models have not been tested concurrently, which makes it difficult to compare their relative validity. Current models are also limited in scope, as the main criterion variable is employee well-being. This means that the role of customer affiliative behaviour in shaping the effects of emotional regulation on outcomes such as employee performance is not known. However, if each model is extended to include task performance as an outcome of employee well-being (Cropanzano, Rupp, & Byrne, 2003; Hülshager & Schewe, 2011), then there are strong theoretical and empirical reasons to believe that customer affiliative behaviour may either be part of the chain through which emotion regulation influences task performance or that it might act to moderate the indirect

effect of emotion regulation on employee performance through employee well-being (See Figure 1). A further limitation of current studies is that they provide little empirical support that customer affiliative behaviour shapes the effects of deep acting. For example, neither Martinez et al (2007) or Brotheridge and Lee (2002) found any evidence that deep acting was related to emotional exhaustion through customer affiliative behaviour, while Wessel & Steiner's model (2015) does not cover deep acting. Lastly, although emotion regulation has been shown to have daily within-person effects (Totterdell & Holman, 2003), the validity of either model at the daily within-person level has yet to be established. Overall, these limitations mean that we do not have a sound knowledge of how customer behaviour shapes the effects of emotion regulation (either as a mediator or moderator and particularly at the daily level) and that it is imperative to test these models concurrently using identical measures and a common sample to reduce study-to-study variation (Johns, 2006). The main aim of this paper is therefore to test two models of customer affiliative behaviour, emotion regulation and employee outcomes.

To address this aim, I conducted a study of supermarket checkout operators that collected data from two sources. The first source is a self-report diary study that captured checkout operators' daily experiences of emotional regulation, customer affiliative behaviour and well-being. The second source is store performance records, from which I obtained an objective measure of checkout operators' daily task performance, namely, items scanned each minute per employee. This was the main measure of task performance used by supermarket managers to evaluate the performance of checkout operators.

This paper makes a number of significant contributions to the literature on employee emotion regulation. First, this study advances our theoretical and empirical understanding of the role of social factors in emotion regulation by testing two models of the relationship between customer affiliative behaviour and employee emotion regulation. This complements

studies of emotion regulation that have focused on other parts of the social context such as relationships with colleagues (Bono, Foldes, Vinson & Muros, 2007; Grandey, Foo, Groth, & Goodwin, 2011). Second, the paper provides new insights into customer affiliative behaviour as a mechanism through which employee emotion regulation affects employee outcomes (Brotheridge and Lee, 2002; Martinez et al., 2007) and the contextual moderators of employee emotion regulation (cf. Wessel & Steiner, 2015). Third, the criterion space of existing models of customer affiliative behaviour and employee emotion regulation is extended by examining their joint effects in relation to employee performance and not just employee well-being (cf. Côté, 2005; Martinez et al., 2007). Lastly, this study contributes to the small but growing literature on daily emotion regulation that illuminates its short-term within-person effects (e.g., Beal, Weiss, Barros & McDermid, 2005) and thus complements the far greater number of person-level studies of emotion regulation that show its more long-term effects (Hülshager & Schewe, 2011).

Theory and hypotheses

Two theoretical models of the relationship between employee emotion regulation, customer behaviour and employee outcomes can be proposed (see Figure 1). In one model customer behaviour acts as a mechanism and in the other model customer behaviour acts as a moderator. I will first discuss the relationships in each model as they pertain to employee well-being and then as they pertain to task performance.

Across both models emotional exhaustion is used to indicate low employee well-being (Maslach & Jackson, 1981). Emotional exhaustion is a state of emotional depletion and fatigue that closely resembles other forms of low psychological well-being such as job-related depression and anxiety (Cropanzano et al., 2003; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). With regard to task performance, this paper focuses on the efficient

performance of a task that is core to the delivery of customer service in supermarket checkout operators, i.e., scanning goods. This task involves picking up goods, identifying the barcode, scanning the bar code and giving the goods back to the customer. Checkout operators are normally required to perform this task as quickly as possible to minimize customer waiting times.

Customer affiliative behaviour as a mechanism

Models of customer affiliative behaviour as a mechanism through which emotion regulation influences employee well-being are generally based on Côté's (2005) social interaction model (Holman et al., 2008). According to Côté's model, emotion regulation affects employee well-being in a three stage process. In the first stage, employee emotion regulation influences the employee's display of positive affect. Surface acting produces faked displays of positive affect, whereas deep acting produces genuine displays of emotion.

In the second stage, customers appraise an employee's emotional display and use this to guide their behaviour (van Kleef, 2009). Research suggests that individuals use others' emotional displays to appraise others' motives and characteristics. Displays of positive emotions by others, for instance, can be interpreted as evidence of an affiliative motive (Parkinson, Fischer, & Manstead, 2005) or of a trustworthy and likeable character (Clark, Pataki & Carver, 1996). Research also indicates that people can differentiate between faked and genuine displays of positive emotion, possibly because they are able to detect subtle bodily differences between faked and genuine affective displays (Ekman, 2003; Groth, Hennig-Thurau & Walsh, 2009). Grandey et al. (2005) found that faked expressions of positive affect produced by surface acting were rated by observers as less authentic than genuine expressions of positive affect produced by deep acting. This implies that a customer's appraisal of an employee's faked display of positive emotion may cause the

customer to doubt whether the employee's interpersonal motives are sincere and genuinely affiliative (Collins & Miller, 1994) or to believe that the employee lacks interest in them (Grandey et al., 2005). Negative appraisals of employee motives may violate a customer's social exchange norms (e.g., reciprocity, courteous treatment) and make the customer less likely to respond with affiliative behaviour (Cropanzano & Mitchell, 2005; Moskowitz, Ho & Turcotte-Tremblay, 2007; Tracey, 2004). In contrast, when employees deep act, customers are more likely to appraise employees' displays of positive emotion as authentic and indicative of affiliative motives. In turn, this may make customers more likely to reciprocate with affiliative behaviours.

In the third stage, customer affiliative behaviour affects employee well-being. There is strong empirical and theoretical evidence that receiving affiliative behaviours from others is associated with higher employee well-being (Humphrey, Nahrgang, & Morgeson, 2007; Viswesvaran, Sanchez, & Fisher, 1999). In particular, Zimmermann, Dormann and Dollard (2011) found that supportive customer behaviours were associated with higher employee well-being. According to stress theories, this relationship occurs because receiving affiliative behaviours helps employees to conserve and protect resources (e.g., energy, core self-beliefs) which if lost or threatened elicit a stress response (Hobfoll, 2001; Lazarus, 1999). For example, customer affiliative behaviours may foster feelings of self-worth in employees because they provide positive feedback to employees on service performance (Mottet, Beebe, Raffeld, & Medlock, 2004). Customer affiliative behaviours may also help employees conserve energy, as such behaviours are relatively undemanding to deal with (Dormann & Zapf, 2004). As a consequence, customers' affiliative behaviours are unlikely to deplete employees' energy resources and, hence, are likely to be associated negatively with employees' feeling emotionally exhausted (Hockey, 1997; Lee & Ashforth, 1996).

In sum, it can be proposed that customer affiliative behaviour is a mechanism through which employee emotional regulation strategies affect employee emotional exhaustion. In particular, surface acting decreases customers' use of affiliative behaviours, which results in higher levels of employee emotional exhaustion; whereas deep acting increases customers' use of affiliative behaviours, which in turn lowers employee emotional exhaustion. The first two hypotheses are:

Hypothesis 1a. The positive relationship between surface acting and emotional exhaustion will be mediated by affiliative customer behaviour.

Hypothesis 1a. The negative relationship between deep acting and emotional exhaustion will be mediated by affiliative customer behaviour.

Customer affiliative behaviour as a moderator

An alternative model is that customer affiliative behaviour moderates the effects of employee emotion regulation on employee well-being (Wessel & Steiner, 2015). Before these moderating effects are explained, two basic assumptions of the model need to be stated. One assumption is that employee emotion regulation strategies directly affects employee well-being because the cognitive effort involved in regulating emotions depletes energy reserves which, if not replenished, leads to feelings of emotional exhaustion (Hobfoll, 1998; Zapf, 2002). Experimental studies show that surface acting is much more effortful than deep acting because suppressing ongoing emotions requires more cognitive effort than preventing the development of emotions, as occurs during deep acting (Gross & John, 2003; Richards & Gross, 2000). Surface acting is therefore likely to deplete energy reserves at a faster rate, and have a more negative effect on well-being, than deep acting. This has been confirmed by

meta-analytic findings which show that surface acting has a strong negative relationship with well-being, whereas deep acting has a non-significant relationship with well-being (Hülshager & Schewe, 2011).

A further assumption of this model is that deep and surface acting can occur in the presence and absence of affiliative customer behaviour. Although deep acting increases the likelihood of customers' using affiliative behaviour (Côté, 2005), deep acting may not always be associated with customer affiliative behaviour. Some customers may not respond affiliatively to the genuine displays of emotion resulting from deep acting because they are in a negative mood (Forgas, Dunn & Granland, 2008) or because they have an individual disposition such as low agreeableness that inhibits affiliative responses (McCrae & Costa, 1989). Likewise, although surface acting lowers the likelihood of customers using affiliative behaviours, there may be instances when it is associated with affiliative behaviour by customers. This may happen when customers believe that employees' faked emotional displays are genuine, or when customers hold beliefs that they should behave in an affiliative manner irrespective of the employee's behaviour.

Research from a social exchange perspective suggests that the presence or absence of affiliative customer behaviours will moderate the direct effects of deep and surface acting on employee well-being (Wessel & Steiner, 2015). Social exchange theory asserts that reciprocity is a core expectation in many social relationships (Gouldner, 1960) such as that between employee and customer (Houston, Gassenheimer & Moskulka, 1992). The expectation of reciprocity means that when people use affiliative behaviours towards others, they expect complimentary behaviours in return (Sadler, Ethier & Woody, 2011). The fulfilment of reciprocity norms typically gives rise to positive emotions and perceptions of fair treatment both of which increase employee well-being and reduce emotional exhaustion (Cropanzano & Mitchell, 2005). In contrast, violations of reciprocity norms can lead to

negative emotions and perceptions of unfair treatment and result in greater emotional exhaustion (Bakker et al., 2000; Judge & Colquitt, 2004).

Applied to customer service interactions, social exchange theory means that employees may perceive the display of positive emotions resulting from surface acting as an affiliative behaviour, particularly when they believe that they are faking emotions ‘in good faith’ to improve the customer experience (Zapf, 2002). When customers respond with affiliative behaviours, reciprocity norms are fulfilled for the employee, and the positive emotions that arise from this may help to buffer some of the negative consequences on employee well-being that result from the effort involved in surface acting (Wessel & Steiner, 2015). As such, the effects of employee surface acting on emotional exhaustion should be lower when surface acting occurs in the presence of customer affiliative behaviour than when surface acting occurs in the absence of customer affiliative behaviour. Similar processes should occur with regard to deep acting. In particular, deep acting may increase emotional exhaustion when employees perceive that their displays of positive emotion have not been reciprocated with affiliative behaviours from customers. In such cases, the small increases in emotional exhaustion arising from the effort of deep acting will be compounded by the increases in emotional exhaustion arising from the violation of reciprocity norms. In contrast, deep acting should lower emotional exhaustion when employees perceive their positive emotional displays have been reciprocated with affiliative behaviour from customers. In these cases, any small increase in emotional exhaustion arising from deep acting will be countered by the boost to emotional exhaustion from reciprocity norms being fulfilled. The second hypotheses are:

Hypothesis 2a. The positive relationship between surface acting and emotional exhaustion will be stronger when affiliative customer behaviour is low than when affiliative customer behaviour is high.

Hypothesis 2b. The relationship between deep acting and emotional exhaustion will be negative when customer affiliative behaviour is high but positive when customer affiliative behaviour is low.

Extending the models to include task performance

Theoretical and empirical evidence indicates that emotional regulation and emotional exhaustion affect task performance (Cropanzano et al., 2003). As such, a parsimonious way of extending the above models to include task performance is to conceptualise task performance as a direct outcome of emotional exhaustion. To explain the effects of emotional exhaustion on the performance of work tasks that require speed, accuracy and efficiency (e.g., scanning goods at a checkout), cognitive and motivational perspectives can be drawn on. Cognitive resource allocation theories propose that negative affective states, such as emotional exhaustion, lead to cognitive resources being shifted from performance tasks to coping tasks that help the employee to deal with negative affect (Beal et al., 2005). Experimental evidence suggests that the reallocation of resources can decrease awareness of visual cues (Friedman & Förster, 2010; Matthews, David, Westerman & Stammers, 2000; Murray & Janelle, 2003) and contribute to failures in spatial working memory, a main component of which is a visuo-spatial sketchpad that holds information on what is seen (Shackman et al., 2006). Emotional exhaustion may therefore reduce the performance of the scanning task in checkout operators as it results in cognitive resources being allocated away

from visual-perception processes and reduces the ability of employees to quickly locate items or find the barcode that needs scanning.

From a motivational perspective, theories of the psychological contract emphasize the mutual obligations of employee and organization toward each other (Rousseau, 1995). When the organization breaches the psychological contract, employees respond by reducing their effort and commitment toward their obligations, such as performing effectively (Meyer, Becker, & Vandenberghe, 2004). Daily emotional exhaustion might be perceived by employees as evidence of an unfair workload and, as such, to breach the organization's duty to care for and treat employees fairly (Cropanzano et al., 2003). In turn, these daily breaches of the psychological contract might reduce an employees' commitment to performing effectively and thereby lower task performance (Conway & Briner, 2002).

Empirical support for these cognitive and motivational explanations comes from daily diary studies show that daily affect is associated with employee task performance (Totterdell & Holman, 2003). Miner and Glomb (2010) reported that daily positive hedonic tone was associated with reduced call times in call centres, while Rothbard and Wilk (2011) found that daily negative affect was associated with fewer calls taken per hour in call centres.

Conceptualizing task performance as an outcome of emotional exhaustion has implications for both of the models outlined above. For the model of customer behaviour as a mechanism, the implication is that the relationship between emotion regulation and task performance is indirect and occurs through both customer behaviour and emotional exhaustion (see Figure 1). For the model of customer behaviour as a moderator, an implication is that the effects emotion regulation on task performance are indirect and occur through emotional exhaustion, and that these indirect effects are moderated by customer behaviour. More specifically, the indirect negative effects of surface acting on task performance (through emotional exhaustion) should be stronger when customer affiliative behaviour is low than when

customer affiliative behaviour is high; whereas the indirect effects of deep acting on task performance should be positive when customer affiliative behaviour is high but negative when customer affiliative behaviour is low. The following hypotheses are set:

Hypothesis 3 The indirect effects of emotion regulation (surface acting and deep acting) on task performance will be mediated by customer behaviour and emotional exhaustion.

Hypothesis 4a The indirect negative relationship between surface acting and task performance (through emotional exhaustion) will be stronger when customer affiliative behaviour is low than when customer affiliative behaviour is high.

Hypothesis 4b The indirect relationship between deep acting and task performance (through emotional exhaustion) will be positive when customer affiliative behaviour is high but negative when customer affiliative behaviour is low.

Method

Overview and sample

Data were collected using a paper-based daily diary survey over a two week period. The survey was completed by participants twice a day, once after the first half of the shift (e.g., during the lunch break) and once after the second half of the shift. Employee performance data were collected from computerized store records.

Participants were supermarket checkout operators from two U.K. stores. Each store was from a separate supermarket chain. At both stores, the operator's role mainly involved scanning customer goods at the checkout, processing payment and interacting with the

customer. Operators were required to scan goods as quickly as possible. Managers at both stores monitored operators' scanning performance in an almost identical way. The key metric was items scanned per minute and operators were only provided feedback if their performance was consistently below average. Operator training and managers at both stores emphasized the need to express positive emotions towards customers. In total, 49 checkout operators consented to participate in the study, which is above the minimum threshold of 30 persons recommended for diary studies analyzed using multilevel analysis that focus on level-1 relationships (Scherbaum & Ferreter, 2009). Twenty-five participants were from Supermarket A and 24 were from Supermarket B (respectively, a 71% and 69% response rate). The average age was 44 years and average tenure was 7 years. Two thirds were female. Sixty-one percent were part-time. Part-time employees worked two to three days per week and could also work half-shifts.

The daily-level sample size was 345 (178 from Supermarket A and 167 from Supermarket B). When constructing the daily-level sample from the diary and store performance data, it was important to ensure that the time period from each source matched. Across both supermarkets it was only possible to obtain daily performance scores. As such, to ensure a match between the daily diary data and performance data, I used the average daily score from the diary data (e.g., the average score for the first and second parts of the shift) and the daily performance score. I excluded data when the time period covered by the daily diary data did not match that covered by the performance data (this represented five percent of the data). Eighty per cent of all diary entries were completed, a compliance rate that compares favorably with other diary studies (Miner & Glomb, 2010; Rothbard & Wilk, 2011).

Procedure

After access was secured through store managers, participants were approached in person a week before the study started and received an overview of the study and a study information sheet. The purpose of the study was explained as an examination of the causes of well-being in checkout operators. Participants were given a diary booklet a day before the study that contained 14 days of surveys with the date provided for each day. Participants were asked to complete the days that matched the dates they worked so diary data could be matched with performance data. Each day contained two set of questions, each set to be completed at the end of the first and second part of the shift. A researcher was present on each day of the study to remind participants to complete the diary and to check that participants were completing the diary after their shift.

Daily measures

Daily-level measures were constructed from the diary data. The main study variables were emotion regulation (i.e., surface acting, deep acting), customer affiliative behavior and emotional exhaustion. All the items for these measures used a five-point Likert scale ranging from 1 (Not at All) to 5 (A Great Deal) and invited participants to consider how they had behaved or felt in the previous part of their shift.

Daily emotion regulation. Surface acting and deep acting were assessed using items from Brotheridge and Lee's (2003) measures of emotion regulation. Surface acting was a three-item scale and an example item is 'How often did you pretend to show emotions that you did not really have?' Deep acting was a three-item scale and an example item is 'How often did you make an effort to feel the emotions that you need to display towards customers?' Cronbach's alpha were .87 and .91 respectively.

Daily customer affiliative behaviour. A three item measure of customer affiliative behaviour asked participants to identify the extent to which customers had smiled, made eye contact and engaged in short conversation. These affiliative behaviours were selected as customers use them frequently during short service interactions such as those at supermarket checkouts (Gutek, 1997), as they can be readily detected by employees, and because they can have a significant effect on employee outcomes (Pugh, 2001; Tsai & Huang, 2002; Zapf, 2002). Cronbach's alpha was .83.

To further assess the validity of the customer affiliative behaviour measure I conducted a separate study in a different service organisation in which 87 customer interactions of 17 shop workers ($M=5.1$ interactions/employee) were observed and rated by a senior employee on each item of the customer behaviour measure. Over a five day period, interactions were selected such that the shop worker did not know they were being observed. At the end of each interaction, the shop worker was asked to rate the customer's behaviour on each of the three items. Employee and observer ratings correlated at $r = .85$, indicating employee perceptions of customer affiliative behaviour are accurate and reliable.

Daily emotional exhaustion. Emotional exhaustion was a three item scale that used relevant items from the Maslach Burnout Inventory (Maslach & Jackson, 1981). An example item is 'To what extent did you feel work has been a strain for you?' Cronbach's alpha was .87.

Daily level controls. Lag variables for all the main study variables were also created (the previous mean score in the time series).

Daily performance measure

A measure of items scanned each minute per employee was collected from computerized store records. This was the main metric by which operator performance was evaluated and was viewed by managers as the best measure of performance available. Items scanned per minute was seen to be a better measure of performance than the number of customers served each minute per employee, as this could vary considerably depending on the number of items purchased by a customer. The measure of items scanned per minute was normally distributed with no outliers.

Person level variables. Variables for gender, age, tenure, organization and part-time contract were constructed. The person level (i.e., level-2) measures of the main study variables used the same items as the daily level-1 variables.

Statistical analysis

As the data have a two-level structure (days nested within persons), multilevel structural equation modeling (MSEM) in Mplus was used (Muthén & Muthén, 2004) as this improves the accuracy of path coefficient estimation by partitioning variance into between and within-person sources and accounting for measurement error (Marsh et al., 2009).

The analysis process was conducted in three steps. In the first step I examined the validity of the measurement model by conducting a multilevel CFA on a model containing level-1 (i.e., daily level) latent variables of all the main study variables except performance. This model was compared to a measurement model that included latent variables at level-1 and level-2 (even though the level-2 sample size might be considered too small to model level-2 latent constructs, Maas & Hox, 2005) (Muthén & Muthén, 2004). To assess model fit, a range of fit indices were used including the root mean squared error of approximation

(RMSEA), the standardized root mean squared residual (SRMR) and the comparative fit index (CFI). Benchmarks for good model fit are indicated by values of RMSEA < .06, SRMR < .06, and CFI > .95 (Hu & Bentler, 1999).

In the second step, to test the indirect effects hypotheses (H1a-1b, H3a-3b) in the absence of interaction terms, I constructed two structural MSEM models. The first, structural Model 1, only included level-1 latent variables and contained direct paths: from deep and surface acting to customer affiliative behavior, emotional exhaustion and task performance; from customer affiliative behavior to emotional exhaustion and task performance; and from emotional exhaustion to task performance. To test for indirect effects I followed Rucker, Preacher, Tormala and Petty (2011) who recommend that to demonstrate mediation it is sufficient to show that the indirect effect is significant and that it is not necessary to first demonstrate a relationship between the independent and dependent variable (Preacher, Zyphur & Zhang, 2010). As the distribution of the indirect effect ab is typically non-normal, its significance was calculated by using bootstrapping to obtain bias corrected 95% confidence intervals (Bauer, Preacher & Gil, 2006; Preacher & Selig, 2010).

Diary data contain time-based dependencies, particularly autocorrelation. To account for autocorrelation in structural Model 1, I included a first order lag for each of the main study variables (Bolger, Davis & Rafaeli, 2003). All lags were significant ($p < .05$). Other possible time-based dependencies include day of week effects and time of day effects (Binniwies, Sonnentag & Mojza, 2009). When dummy variables representing these time-based factors were added, none were significant, so were not included in the models in the interests of parsimony and to reduce the complexity of the model. Person-level controls (gender, age, tenure, organization, part-time) were tested but not included in the final models as none showed a significant pattern of association with the main study variables. The second structural model created in step 2 was Model 1a, which was the same as Model 1 but included

latent variables at level-2 with the same paths between them as occurred between level-1 variables.

In the third step, two structural models were created to test Hypotheses 2a and 2b concerning moderation effects. These models were the same as structural Model 1 but structural Model 2a included an additional path from a newly created latent interaction term (surface acting and customer behavior) to emotional exhaustion, whereas structural Model 2b included an additional path from a newly created latent interaction term (deep acting and customer behavior) to emotional exhaustion (Muthén & Muthén, 2004). Mplus does not provide standard model fit statistics when latent interaction terms are modeled.

Improvements in model fit can be estimated by examining the change in the Log Likelihood. To probe interaction effects in multilevel models I followed the procedure set out by Preacher, Curran & Bauer (2006) that identifies the regions of significance for the moderator (i.e., the upper and lower point at which the slope of the main effect becomes significant) and tests the significance of the slope for the main effect at different levels of the moderator (e.g., -1 SD, SD and +1 SD). Models 2a and 2b also enable moderated mediation (Hypothesis 4a and 4b) to be tested by following a procedure set out by Preacher, Rucker, & Hayes (2007) which tests for the significance of the indirect effect of emotion regulation on task performance (through emotional exhaustion) at different levels of the moderator. In addition, Models 2a and 2b provide a concurrent test of both indirect effects and moderated effects hypotheses and thus simultaneously test customer affiliative behavior as a mechanism and moderator. To examine the relative strength of indirect and moderating effects within these models, I used a model constraint procedure in Mplus that establishes whether one path coefficient is significantly greater than another (Muthén & Muthén, 2004).

In all structural MSEM models, level-1 variables were group-mean centered following the recommendation of Enders & Tofighi (2007) when testing level-1 mediation and level-1

moderation and because the primary focus was on within-person effects. Random effects could not be included on the main study variables, as the maximum likelihood estimation failed to converge. This is not uncommon in complex multilevel models (e.g., Beal, Trougakos, Weiss, & Green, 2006).

Results

Table 1 shows the means, standard deviations and daily within-person correlations. Recall that the analysis had three steps. The first step tested the measurement model. The results indicated that the four factor (level-1 only) measurement model had a good fit to the data ($\chi^2 = 62.36$, $df = 48$, $CFI = .99$, $RMSEA = .03$, within $SRMR = .04$) and was superior to a level-1 single factor model ($\chi^2 = 1015.45$, $df = 54$, $CFI = .05$, $RMSEA = .23$, within $SRMR = .18$) and a level-1 and level-2 four factor model ($\chi^2 = 1790.89$, $df = 96$, $CFI = .98$, $RMSEA = .03$, within $SRMR = .04$, between $SRMR = .073$). All factor loadings in the measurement model were significant (at $p < .001$) and all factor correlations were significantly different from one (Anderson & Gerbing, 1988). These results indicate that the measures have good convergent and divergent factor validity.

----- Table 1 & 2 about here-----

The second step of the analysis involved testing structural models to examine Hypotheses 1a, 1b and 3. These hypotheses were primarily concerned with the mediating role of customer affiliative behaviour. The results revealed that structural Model 1 (containing level-1 variables only) had a good fit to the data ($\chi^2 = 140.52$, $df = 116$, $CFI = .98$, $RMSEA = .09$, within $SRMR = .05$) and was a better fit than structural model 1a that contained level-1 and level-2 variables ($\chi^2 = 887.92$, $df = 237$, $CFI = .77$, $RMSEA = .03$, within $SRMR = .05$,

between SRMR = .32). Given the better fit, we report the results from Model 1. The relationships between the main study variables in Model 1 can be seen in Table 2 (and were not affected by the exclusion of level-2 variables). Hypothesis 1a stated that surface acting would have a positive indirect effect on employee emotional exhaustion through customer affiliative behaviour. This hypothesis is supported as the positive indirect effect of surface acting on emotional exhaustion through customer affiliative behaviour was significant ($\beta = 0.07$, 95% CI LL = 0.01, UL = 0.14). In particular, surface acting was negatively related to affiliative customer behaviour ($\beta = -.36$, $p < .01$) which in turn was negatively related to emotional exhaustion ($\beta = -.19$, $p < .05$). Hypothesis 1b stated that deep acting would have a negative indirect effect on employee emotional exhaustion through customer affiliative behaviour. This hypothesis is supported as the negative indirect effect of deep acting on emotional exhaustion via customer affiliative behaviour was significant ($\beta = -0.04$, 95% CI LL = -0.09, UL = -0.01). Specifically, deep acting was positively related to affiliative customer behaviour ($\beta = .19$, $p < .01$) which in turn was negatively related to emotional exhaustion ($\beta = -.19$, $p < .05$).

Hypothesis 3 stated that emotion regulation would have an indirect effect on task performance through both customer affiliative behaviour and emotional exhaustion. The total indirect effect from surface acting to task performance through both customer affiliative behaviour and emotional exhaustion is negative and significant ($\beta = -0.03$, 95% CI LL = -0.070, UL = -0.001) but the total indirect effect from deep acting to task performance through both customer affiliative behaviour and emotional exhaustion is not significant ($\beta = 0.02$, 95% CI LL = -0.001, UL = 0.054). Hypothesis 3 is therefore partially supported.

The third step of the analysis involved testing structural Models 2a and 2b. These models were used to examine Hypotheses 2a-2b and 4a-4b concerning the moderating role of customer affiliative behaviour. Hypotheses 2a stated that customer affiliative behaviour

would moderate relationship between surface acting emotional exhaustion. The results did not confirm this hypothesis (see Table 2). The relationship between the interaction term (surface acting and customer affiliative behaviour) and emotional exhaustion in structural Model 2a was not significant ($\beta = -.04$, *ns*). Model fit also became significantly worse (Δ Log Likelihood = -130.28, *df* 1, $p < .01$). Hypotheses 2b stated the relationship between deep acting and emotional exhaustion will be negative when customer affiliative behaviour is high but positive when customer affiliative behaviour is low. The results for structural Model 2b (see Table 2) revealed a significant relationship between the interaction term (deep acting and customer affiliative behaviour) and emotional exhaustion ($\beta = -.22$, $p < .05$). Model fit improved significantly (Δ Log Likelihood = 19.14, *df* 1, $p < .05$). Figure 2 shows the slope of the main effect at different levels of the moderator, i.e., customer affiliative behaviour. Probing the interaction further revealed that the slope of the main effect was significant when the moderator was at +1 SD ($-.40$, $p < .01$) but not at -1 SD ($.08$, *ns*), that the 'region of significance' for the moderator occurred when the moderator was lower than 0.85 and greater than 3.46, and that the moderator ranged in value from 1.63 to 5.00. This indicates that deep acting has a significant negative relationship with emotional exhaustion when customer affiliative behaviour is high, i.e., at or above 3.46. However, there is no evidence that deep acting has a positive relationship with emotional exhaustion when customer affiliative behaviour is low. This is because the lower end of the region of significance (0.85) is below the lowest possible score for the moderator (i.e., 1.00). Hypothesis 2b is therefore partially supported.

Hypothesis 4a and 4b proposed that customer behaviour will moderate the indirect effect of emotion regulation (surface acting and deep acting) on task performance that occurs via emotional exhaustion. With regard to Hypothesis 4a, although the indirect effect of surface acting on task performance was negative and significant ($\beta = -0.31$, 95% CI LL = -0.64, UL =

-0.05), the relationship between surface acting and emotional exhaustion was not moderated by customer affiliative behaviour (see results for test of Hypothesis 2a). This indicates that customer affiliative behaviour does not moderate the indirect effect of surface acting on task performance through emotional exhaustion. With regard to Hypothesis 4b, the indirect effect of deep acting on task performance was moderated by customer affiliative behaviour. Table 3 shows that deep acting has a positive indirect effect on task performance when customer affiliative behaviour is high and that this indirect effect becomes stronger as customer affiliative behaviour increases. For example, when customer affiliative behaviour is at +1 SD, the indirect effect is $\beta = 0.18$ (95% CI LL = 0.02, UL = 0.38) but when customer affiliative behaviour is at +2 SD, the indirect effect increases to $\beta = 0.29$ (95% CI LL = 0.23, UL = 0.63). However, there is no evidence that the indirect effect of deep acting on task performance is negative when customer affiliative behaviour is low, as this indirect effect is not significant when customer affiliative behaviour is -1 SD ($\beta = -0.04$, 95% CI LL = -0.15, UL = 0.06) or -2 SD ($\beta = -0.15$, 95% CI LL = -0.38, UL = 0.02). Overall, Hypothesis 4a is not supported, while Hypothesis 4b is partially supported.

----- Table 3 & Figure 2 about here-----

Structural Models 2b and 2a were also used to simultaneously test the indirect and moderating effects of customer affiliative behaviour. The results for structural Model 2b demonstrate that customer affiliative behaviour moderates the effects of deep acting on employee outcomes after having controlled for the indirect effects of customer affiliative behaviour. The results also show that the indirect effects found to be significant in Model 1 are significant in structural Model 2b when the moderating effects of emotion regulation are accounted for. Specifically, the analysis of structural Model 2b found significant indirect

effects for: Hypotheses 1a, surface acting on emotional exhaustion via customer affiliative behaviour ($\beta = 0.64$, 95% CI LL = 0.01, UL = 0.13); Hypothesis 1b, deep acting on emotional exhaustion via customer affiliative behaviour ($\beta = -0.35$, 95% CI LL = -0.07, UL = -0.01); and Hypothesis 3, surface acting on task performance via customer affiliative behaviour and emotional exhaustion ($\beta = -0.27$, 95% CI LL = -0.07, UL = -0.01). This demonstrates that the hypothesised moderating and mediating effects of customer affiliative behaviour occur simultaneously.

Finally, the relative strength of the hypothesised indirect and moderated effects were compared using the results from structural Model 2b. For hypotheses with emotional exhaustion as the criterion, effects involving surface acting and customer behaviour tended to be stronger than those involving deep acting and customer behaviour. The indirect effect of surface acting on emotional exhaustion (H1a) was significantly stronger than the indirect effect of deep acting on emotional exhaustion (H1b) ($\beta = 0.10$, $p < .05$) and the moderating effect of customer affiliative behaviour on the relationship between deep acting and emotional exhaustion (H2b) ($\beta = 0.30$, $p < .05$). The indirect effect of deep acting on emotional exhaustion (H1b) was not significantly stronger than the moderating effect of customer affiliative behaviour on emotional exhaustion (H2b) ($\beta = 0.18$, *ns*). For hypotheses with task performance as the criterion, the indirect effect of deep acting on task performance (via emotional exhaustion, H4b) was significantly stronger than the indirect effect of surface acting on task performance (via customer behaviour and emotional exhaustion, H3) but only when customer affiliative behaviour was high. For example, when customer affiliative behaviour was +1SD, the difference between the two indirect paths was $\beta = 0.10$, $p < .05$.

Discussion

By testing two models of emotion regulation, customer affiliative behaviour and employee outcomes, this paper makes a number of significant contributions to the literature on employee emotion regulation. First, the results extend our empirical and theoretical understanding of how customer affiliative behaviour shapes the effects of emotion regulation. Empirically, the study provides new evidence that customer affiliative behaviour is a mechanism through which deep acting influences emotional exhaustion and adds to the existing but limited evidence that surface acting affects employee well-being through customer affiliative behaviour (Martinez et al., 2007). Both these findings offer good support for the 'customer behaviour as mechanism' model which contends that a) employee emotion regulation influences customer affiliative behaviour because customer behaviour during service interactions is guided by appraisals of employee emotional displays, and b) customer behaviour then affects employee emotional exhaustion because customer behaviour is a task demand requiring employee effort (Côté, 2005). However, the direct effects of surface and deep acting on emotional exhaustion suggest that other mechanisms such as cognitive effort are likely to be involved in connecting employee emotion regulation and well-being (Martinez et al., 2007).

With regard to customer affiliative behaviour as a moderator, the results of this study provide new evidence that the relationship between deep acting and emotional exhaustion may only be negative when customers use affiliative behaviour. This may occur because employees perceive that their positive emotional displays have been reciprocated with affiliative behaviour from customers; and because the negative effects of reciprocity on emotional exhaustion counter the small increases in emotional exhaustion that can result from the effort of deep acting. The identification of customer affiliative behaviour as a contextual moderator of deep acting may therefore help to explain why previous studies of the

relationship between deep acting and well-being have shown inconsistent results (Hülshager & Schewe, 2011). However, unlike Wessel and Steiner (2015), this study did not find the relationship between surface acting and emotional exhaustion to be moderated by customer affiliative behaviour. One reason for this difference may be that the effect of surface acting on emotional exhaustion in this study was very strong, with a daily within-person effect of $\beta = .72$ compared to between-person effects of $\beta = .38$ and $-.01$ in each of the studies by Wessel and Steiner (2015). This suggests that employees in the present study experienced surface acting as particularly effortful each day. When this occurs, customers' affiliative behaviour may not be perceived as part of a fair social exchange, so its occurrence may not be sufficient to counter the negative effects of surface acting on well-being over the course of a day.

The second significant contribution is that the criterion space of models of customer affiliative behaviour and emotion regulation have been extended to include task performance as well as well-being. Customer affiliative behaviour played a role in shaping the indirect effects of emotion regulation on task performance in two different ways. First, customer affiliative behaviour was part of the mechanism through which surface acting had an indirect effect on task performance. However, the effect of surface acting on task performance through this route was small, particularly when compared to the indirect effect of surface acting on task performance that occurred through emotional exhaustion alone. Second, customer affiliative behaviour moderated the indirect effect of emotion regulation on task performance through emotional exhaustion. Deep acting had a small positive indirect on task performance when customer affiliative behaviour was high and a non-significant effect when customer affiliative behaviour was low. Overall, these findings provide important new evidence that customer affiliative behaviour has a role in shaping the effects of emotion regulation on the performance of customer service tasks that require speed and accuracy, such as scanning goods at a checkout. This role, however, is relatively minor. Further research is

needed to validate these findings and to establish whether customer affiliative behaviour has a more significant role in shaping the effects of emotion regulation on other aspects of daily task performance in customer service roles, such as those concerned with the quality of service.

Another contribution is to extend knowledge of the role of the social context in emotion regulation by showing how employee emotion regulation both shapes a key aspect of the social context (i.e., customer affiliative behaviour) and how the social context shapes the effects of employee emotion regulation. This adds to the growing literature that highlights the role of the social context of emotion regulation (e.g., Bono et al., 2007). However, further research is needed to explore how other types of customer affiliative behaviours influence the effects of emotion regulation, particularly those in which the customer plays an active role in controlling the interaction such as customer support (Zimmermann et al., 2011) as they may have a greater effect on employee perceptions of service interactions as a fair and rewarding social exchange (Muskowitz et al., 2007).

Although this study has a number of strengths (e.g., daily measures, an objective measure of daily performance) a key limitation is the correlational design which means that reverse causality cannot be ruled out. However, in addition to the strong theoretical reasons for the proposed direction of effects and studies reporting no compelling evidence for reverse causal effects (e.g., Hülshager, Lang & Maier, 2010), empirical backing comes from the presence of an interaction effect between deep acting and customer affiliative behaviour which suggests that these variables are prior to emotional exhaustion. Nevertheless, future studies could examine cross-lagged effects using longitudinal or experimental study designs. Second, many of the core constructs covered by this study are multi-dimensional (e.g., performance, well-being, customer behaviour). Further tests of the theoretical models in this paper are needed using measures that reflect the multi-dimensional space of these constructs. In

addition, a wider range of emotion regulation strategies could be contrasted with the 'natural' expression of positive emotions. A particular benefit of this would be to distinguish the effects of authentic positive emotions generated by deep acting (or other emotion regulation strategies) from the effects of 'natural' expressions of positive emotion (Gross, 1998).

Third, the study did not control for store busyness as the data was not available, which may have been important as Rafaeli (1989) found that employees were less likely to display positive emotions when queues were long. However, as data was collected at busy and quieter times of the day, the effects of store busyness may not have unduly affected the findings. Finally, common method variance might have inflated the relations between variables collected using the diary method. However, the superiority of the four factor measurement model over a one-factor model (Mossholder, Bennett, Kemery & Wesolowski, 1998) and the presence of interaction effects indicates that common method variance did not adversely affect the results.

Caution must also be exercised when generalising the results to the person-level and to other service employees and organisational contexts. The small level-two sample size means that it was not possible to model person-level or cross-level effects. This should be addressed in future research. For example, demand-ability models of person-environment fit suggest that the daily effects of emotion regulation may be mitigated or attenuated by an individual's preferences or abilities at regulating emotions (Edwards & Shipp, 2007). The study was also conducted in checkout operators in two stores from separate U.K. supermarket chains. The short standardised nature of customer interaction at supermarket checkouts means that the results may not transfer to service contexts, organizations or cultures in which more attentive and authentic service is expected, or in which service interactions are much longer (Gutek, 1997; Smith & Reynolds, 2001). Indeed, the average length of interaction between checkout operator and customer may increase with the rise of automated checkouts for customers with

few items; although it is difficult to know whether this will increase demands on employees (e.g., fewer rest periods between customers, the need sustain surface acting over longer periods) or reduce demands because longer interactions offer greater opportunity for rewarding customer interactions. Another feature of the study context is that the checkout operators did not receive concurrent feedback on scanning performance. In contexts where concurrent feedback is given, employees may be able to respond to performance decrements by increasing effort, thereby counteracting any detrimental effects of emotion regulation (Hockey, 1997).

Conclusion

This study has extended our empirical and theoretical understanding of the role of customer affiliative behaviour in employee emotion regulation. The empirical evidence provided by this study provides support for theories of customer affiliative behaviour as a mechanism and moderator of emotion regulation in relation to both employee well-being and task performance. This has moved us towards a more integrated theoretical account that may provide a basic theoretical architecture for future studies of customer affiliative behaviour and employee emotion regulation.

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Table 1. Main study variables: Daily level means, standard deviations and correlations (N=345)

	Means	SD	1	2	3	4
1. Customer behaviour	3.47	0.85	-			
2. Surface acting	2.23	0.86	-.31**	-		
3. Deep acting	2.52	1.02	.04	.33**	-	
4. Emotional exhaustion	1.89	0.81	-.33**	.64**	.15*	-
5. Task performance	20.58	2.98	-.08	.13*	-.09	-.02

Note: * $p < .05$, ** $p < .01$. SD = standard deviation.

Table 2: Results for direct and moderated effects

Model 1: Direct effects			
	<i>Customer behaviour</i>	<i>Emotional exhaustion</i>	<i>Task performance</i>
	β	β	β
Emotional exhaustion	-	-	-.43*
Customer behaviour	-	-.19*	-.05
Surface acting	-.36**	.72**	.44
Deep acting	.19**	-.16*	-.06
R^2	19%	55%	9%
Model 2a: Moderated effects			
	<i>Customer behaviour</i>	<i>Emotional exhaustion</i>	<i>Task performance</i>
	β	β	β
Emotional exhaustion	-	-	-.38*
Customer behaviour	-	-.19*	-.04
Surface acting	-.32**	.69**	.36
Deep acting	.18**	-.17*	-.04
SA \times CB	-	-.04	-
ΔR^2		.00	
Model 2b: Moderated effects			
	<i>Customer Behaviour</i>	<i>Emotional Exhaustion</i>	<i>Task Performance</i>
	β	β	β
Emotional exhaustion	-	-	-.41*
Customer behaviour	-	-.19*	-.05
Surface acting	-.35**	.70**	.41
Deep acting	.19**	-.16*	-.05
DA \times CB	-	-.22*	-
ΔR^2		9%	

Note: Level-1 lags and level-2 variables not shown. * = $p < .05$, ** = $p < .01$; Daily level $N = 345$. DA = deep acting, CB = customer behaviour. Unstandardized coefficients shown. Model 1 Fit statistics $\chi^2 = 140.52$, $df = 116$, CFI = .98, Root Mean Square Error of Approximation (RMSEA) = .03, Standardized Root Mean Square Residual (SRMR) = .05. Model 1 vs Model 2a Δ Log Likelihood = -130.28, $df = 1$, $p < .01$, Model 1 vs Model 2b Δ Log Likelihood = 19.14, $df = 1$, $p < .05$.

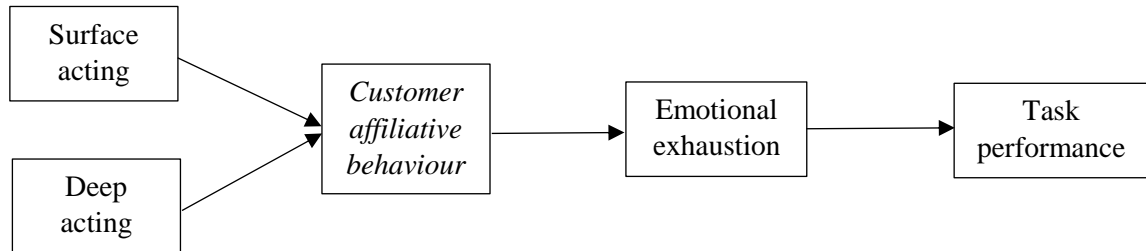
Table 3 . Indirect effects of deep acting on task performance: Moderating effects of daily customer affiliative behavior

Indirect effect				
Daily deep acting – Emotional exhaustion – Task performance				
Level of customer affiliative behaviour (SD)	Indirect effect	95% CI LL	95% CI UL	p-level
-2	-.15	-.38	.02	<i>n.s.</i>
-1	-.04	-.15	.06	<i>n.s.</i>
0	.07	-.01	.18	<i>n.s.</i>
1	.18	.02	.38	.05
2	.29	.23	.63	.01

Note: Daily level N = 345. CI = confidence interval; n.s. = not significant.

Figure 1. Models of emotion regulation, customer affiliative behavior and employee outcomes

Customer behaviour as a mechanism



Customer behaviour as a moderator

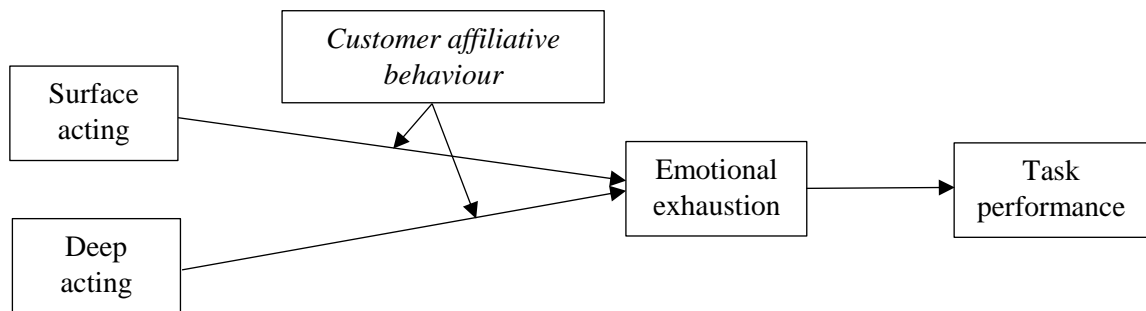
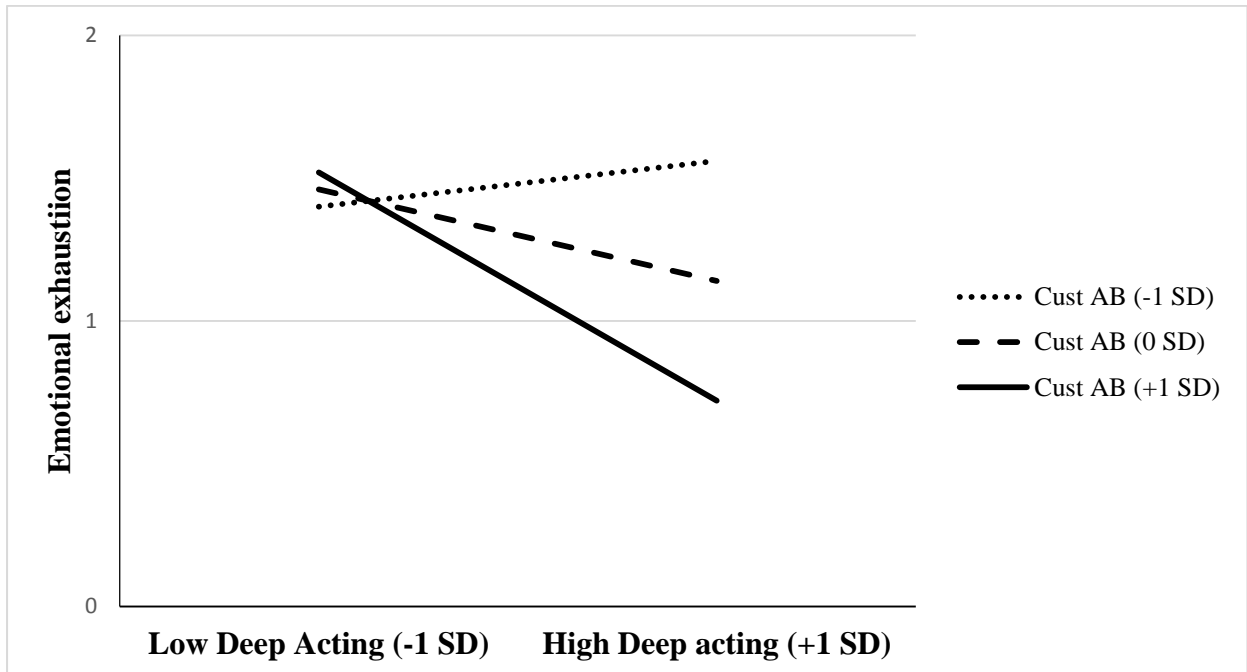


Figure 2. Employee deep acting and emotional exhaustion: The moderating effects of customer affiliative behaviour



Note: Cust AB = customer affiliative behaviour