

Period Pain and Emotional Labour

Investigating the Relationship Between Period Pain and Emotional Labour and The Role of

Presenteeism and Adjustment Latitude

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Abstract

To answer a growing call for more research on the influence of menstruation at work, especially in emotionally demanding professions, this study investigates the relationship between period pain and emotional labour to help inform effective workplace policies. Drawing from the Conservation of Resources (COR) theory (Hobfoll, 1989), which states that individuals strive to obtain, maintain, and protect their resources and that the threat of possibly losing resources causes stress, the primary objective of this cross-sectional study is to examine whether there is a relationship between period pain and emotional labour (surface acting and deep acting). In addition, we investigate whether this relationship can be partly explained by presenteeism and what the role of adjustment latitude is in this relationship. We conducted a cross-sectional study using an online survey from which data was analysed using a multiple regression analysis (N = 250). The findings indicate that period pain is positively related with both surface acting (b = .58, p < .001) and deep acting (b = .37, p < .001). Presenteeism did not mediate the relationship between period pain and either form of emotional labour, neither surface acting (p = .28) nor deep acting (p = .78). However, presenteeism was found to be positively related to period pain (b = 1.54, p < .001). Adjustment latitude did not significantly moderate the relationship between period pain and presenteeism (95% CI [-.002, .01]), but did relate negatively to presenteeism (b = -.20, p < .01). This study contributes to the understanding of how menstruating employees allocate resources to manage period pain in the workplace. Further research is essential for a more comprehensive understanding and more effective workplace policies.

Keywords: adjustment latitude, emotional labour, period pain, presenteeism

Introduction

Pain associated with menstruation varies among individuals but is widespread, with 45-90% of individuals reporting some form of discomfort related to menstruation (Cook & van den Hoek, 2023; Grandey et al., 2019). However, the high prevalence of period pain is frequently overlooked. For instance, data on non-attendance due to menstruation in the Netherlands has only recently been collected as of last year (NOS, 2023). This national sample found that a significant portion of individuals had been absent from work due to their menstruation. Meanwhile, research from Schoep and colleagues (2019) found that period pain causes a great deal of productivity loss. The biggest contribution of this productivity loss was not absenteeism but going to work while experiencing period pain, called presenteeism. Additionally, individuals who experience a menstrual cycle represent a significant and growing portion of the people globally employed (CBS, 2022; International Labour Conference, 2009). Notably, when these individuals go to work while experiencing their menstruation, they tend to face additional work or labour related to their physical state (Sang et al., 2021), illustrating an effect on their daily and working lives. However, as stated by Cook and Van Den Hoek (2023), there is a notable lack of research in this area. Historically, women tended to not be the main group selected for research, especially within the work environment, because of their hormonal fluctuations which were believed to contaminate the research (Rodin & Ickovic, 1990). At present the effect of period pain on an individual's life is acknowledged throughout the scientific field (Chen et al., 2018; Frick et al., 2009; Tanaka et al., 2013). Nonetheless, the causes of different forms of period pain are still unclear, as is the best course of treatment (Klein et al., 2014; Sharghi et al., 2019). Demonstrating that the specific effects of period pain on individuals (working) lives is still scarce. This study aims to address the existing knowledge gap regarding period pain and its effects by examining related variables.

There is a call for more research on how individuals can be better supported to manage menstruation related pain and discomfort at work (Howe et al.,2023). In practice, companies are trying to pay more attention to menstrual policies, including flex time and/or leave entitlements (Baird et al., 2021; Bhandari, 2024). However, due to the lack of theoretical knowledge it is unclear whether these policies help and on what factors they need to focus. Specifically, research by Grandey and colleagues (2019) called for scientific insights on one form of additional labour, namely emotional labour, to better understand how managers can help enhance performance while protecting employee's health. Emotional labour can be defined as "the management of feelings and emotional displays in response to emotion work requirements" (Zapf et al., 2021). Scientific insight into a possible relationship

between period pain and emotional labour is especially important when considering that most individuals who experience a menstruation seem to work more in occupations that are higher in emotional labour, such as nursing and teaching. Moreover, these occupations are consequently linked to high levels of stress and burnout (Bhave & Glomb, 2009; Fouquereau et al., 2018; Prentice, 2013). Additionally, presenteeism presents as a critical factor to consider. Presenteeism is defined as the phenomenon in which "people, despite complaints and ill health that should prompt rest and absence from work, still turn up at their jobs" (Aronsson et al., 2000). Period pain has been found to relate positively to presenteeism (Cook & Van Den Hoek, 2023; De Arruda et al., 2024). The organizational outcome, in terms of productivity loss, of the relationship between period pain and presenteeism has previously been studied by Schoep and colleagues (2019). However, the effects of the relationship between period pain and presenteeism at an individual level, such as emotional labour, has yet to be thoroughly investigated. Therefore, present study will explore the role of presenteeism in the relationship between period pain and emotional labour. Additionally, present study will look at the role of a possible intervention, adjustment latitude. Adjustment latitude refers to the flexibility that employees receive to adjust their work to their health needs (Johansson and Lundberg, 2004). While adjustment latitude has not been specifically studied in relation to period pain, it holds potential to assist individuals in navigating challenges associated with menstrual discomfort. For example, previous studies indicated that adjustment latitude supports employees in managing health challenges and improving their ability to work (Johansson et al., 2006). The research question of this study is: "Is there a relationship between period pain and emotional labour, and can this relationship be (partly) explained by presenteeism? What is the role of adjustment latitude in this process?". Herewith, providing valuable insights for further research and practical use for organizations that are striving for better HRM practices.

Since individuals need to invest personal resources to manage their period pain, while work is an essential resource providing both livelihood and a sense of purpose, we use the Conservation of Resources (COR) Theory to explore a possible relationship between period pain and emotional labour. The Conservation of Resources Theory assumes that individuals strive to obtain, maintain, and protect their resources and that the threat of possibly losing resources causes stress (Hobfoll, 1989). In addition, this theory states that the threat of losing resources is more salient than the gain of resources. This means that individuals will often engage in behaviours related to preserving their resources. Moreover, COR theory suggests that interventions should be based on enhancing resources and eliminating vulnerability to resource loss (Hobfoll & Freedy, 2017).

Theoretical Framework

Emotional Labour

Regarding period pain, in the view of the Conservation of Resources (COR) Theory, period pain can be regarded as a stressor, depleting personal resources as individuals allocate their resources to cope with the physical discomfort related to their period (Hobfoll, 1989; Gervais, 2016). Consequently, the experience of period pain may exacerbate the demand of emotional labour in the workplace. Occupations that are high in emotional labour are, for example, nurse specialist and teachers. There are two important ways in which individuals managing emotional displays at work are surface acting and deep acting (Grandey & Sayre 2019; Zapf et al., 2021). Managing emotional displays through surface acting involves suppressing authentic feelings to meet work requirements, while deep acting involves the attempt to align true feelings with job demands (Zapf et al., 2021). Regarding period pain, pain is inherently a negative emotion, and this has implications for the managing of emotional displays (Minami & Ide, 2015).

Period pain may exacerbate the demand of emotional labour because greater effort is needed to conform to the (emotional) demands of the workplace by constantly hiding symptoms related to period pain. Leal and colleagues (2022) coined the term "sickness surface acting" to describe the mechanism by which employees try to suppress sickness symptoms, suggesting a possible relationship between pain and surface acting. A study by Lee and Madera (2019) further supports this, they found that surface acting is associated with suppressing negative emotions, meanwhile they found that deep acting was associated with genuinely feeling the positive emotions that are expressed. Consequently, due to the inherent negative emotion of period pain, this finding might suggest that individuals who experience period pain will undertake in more surface acting rather than deep acting. Moreover, based on COR theory it can be hypothesised that the effort to manage negative emotions related to period pain might deplete emotional resources, leaving fewer resources available to attempt to genuinely feel positive emotions (Hobfoll, 1989). In addition, the persistent experience of pain has been found to lead to a loss of sense of self, this might make it more difficult to align felt emotions (Lundberg et al., 2007). This means that individuals who experience period pain are likely to struggle with genuinely aligning with their job demands and may resort to merely displaying the expected emotions without feeling them. So, period pain would relate negatively to deep acting, but positively to surface acting (see Figure 1).

Hypothesis 1: Period pain is positively related to surface acting.

Hypothesis 2: Period pain is negatively related to deep acting.

Presenteeism

In line with COR theory, individuals may perceive the potential loss of resources if they take time off work, especially since the monthly occurrence of period pain, resulting in presenteeism. Previous research has studied presenteeism by viewing the illness as a stressor and work as a means to resources (Chen, Lu & Cooper, 2021; Ferreira et al., 2019; Henderson & Smith, 2021). By continuing to work despite the pain, individuals attempt to avoid the potential resource losses associated with absenteeism. A survey by Tschacher et al. (2022) found that employees hesitate to call in sick when symptoms are related to period pain. Similarly, research by Léon-Laris et al (2024) found that 58.4% of their participants considered that calling in sick due to period pain might imply consequences in their professional environment. Other studies found that perceived illegitimacy of their sickness absence leads to presenteeism (Johns, 2009; Ruhle & Süß, 2019). Indeed, results from previous studies indicated that period pain relates positively with presenteeism (Cook & Van Den Hoek, 2023; De Arruda et al., 2024). In addition, through the additional effort to still turn up at their job while managing period pain, presenteeism might mediate the relationship between period pain and surface acting, and between period pain and deep acting (see Figure 1). This additional effort depletes resources, making it more difficult for individuals to genuinely feel and express emotions, diminishing the use of deep acting and increasing the use of surface acting (Hobfoll, 1989).

Hypothesis 3: Presenteeism mediates the relationship between period pain and surface acting.

Hypothesis 4: Presenteeism mediates the relationship between period pain and deep acting.

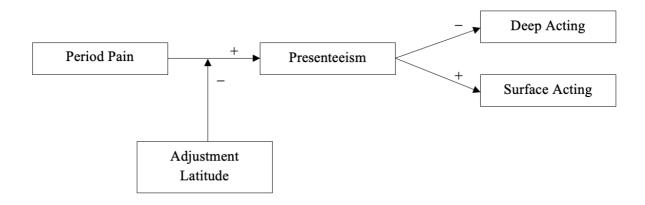
Adjustment Latitude

Another premise of the COR theory is that individuals strive to gain and protect resources to reduce the impact of stressors. For these strivings individuals may use other resources. For example, Cook and van den Hoek (2023) found that working remotely and presenteeism correlated negatively. The ability to work remotely falls under the concept of adjustment latitude, which refers to the opportunity of an employee to adjust work to their health and control how and when a work task should be performed (Johansson et al., 2006). Different studies found that adjustment latitude decreases presenteeism (Johansson & Lundberg, 2004; Gerich, 2014). These findings suggest that adjustment latitude acts as a resource in managing stressors like period pain. Consequently, adjustment latitude may

decrease the effect of period pain on presenteeism as it diminishes the experience of feeling unwell at work resulting from period pain (see Figure 1).

H5: Adjustment latitude moderates the relationship between period pain and presenteeism, such that the relationship is stronger when adjustment latitude is low (versus high).

Figure 1
Schematical View of The Hypotheses



Method

Participants

A priori power analysis was conducted to determine the required sample size, considering parameters including alpha error probability (0.05), power (0.80), effect size (f^2 = 0.03), and the number of tested predictors (1) (Faul et al., 2007). This indicated that a sample size of 256 participants was needed to achieve sufficient statistical power. We followed criteria from an earlier study that researched period pain by Cook and Van den Hoek (2023). The inclusion characteristics of participants were individuals who menstruate, are 18 years or older, working at least 20 hours per week, have a supervisor, and are not in long-term sick leave. Participants were recruited through social media outreach (Instagram, LinkedIn and WhatsApp), direct contact with companies and universities, and distributing the survey among social networks. In addition, we used snowball sampling to expand the participant pool. Participation was voluntary, data was gathered anonymous, and the study obtained ethical approval from the Ethics Committee of the faculty of Social Sciences, Utrecht University (UU-SER 24-0640). Questionnaire of the present study was offered via Oualtrics (2019), and participants could respond through their own phone, laptop etc. When opening the questionnaire, respondents were provided information about the study after which they had to give informed consent to be able to participate further (see Appendix A). Next, participants were asked to fill out questionnaires assessing demographic information, background information (e.g. children). 382 respondents started the questionnaire. However, 132 participants were excluded due to incomplete responses or not meeting the inclusion criteria, this means that 250 participants were eventually included. The mean age of the group was 30 years (SD = 8.1), the mean years of work experience was 9 years (SD = 8.2), and they worked on average 32 hours (SD = 5.7). Notably, most participants responded that they obtained a higher vocational (33.6%) or university degree (53.2%), and most of the participants (74,4%) did not have children.

Measures

Qualtrics (2019) was used to create a survey with the following items. Questionnaires can be found in Appendix B.

Emotional labour (surface acting and deep acting)

To assess to what extent individuals manage their emotional displays present study used the Dutch Questionnaire on Emotional Labour (D-QEL) (Briët et al., 2005). For the purpose of this study, we included a subset of questions focusing on surface acting and deep acting to maintain survey compactness. Participants rated their agreement with each statement on a 5-point Likert scale, ranging from 1 = "strongly disagree" to 5 = "strongly agree". Example items included "I put on a mask to display the right emotions for my job" (surface acting) and "I work hard to feel the emotions that I have to show" (deep acting). Following Kline (1999) the reliability analysis yielded satisfactory internal consistency for the selected items (surface acting, $\alpha = .88$; deep acting, $\alpha = .93$).

Period pain

Secondly, to measure the amount of period pain an individual experiences, present study used two items adapted from previous research by Cook and Van Den Hoek (2023). Participants reported the severity of period pain, "In the past six months, how much menstrual pain and symptoms have you experienced?", and its impact on work performance over the last six months, "To what extent did menstrual pain and symptoms interfere with your work (both paid and domestic) in the past 6 months?". Responses were measured on a scale ranging from 1 = "none at all" to 5 = "very severe". Reliability analyses yielded satisfactory internal consistency with $\alpha = .85$ (Kline, 1999).

Presenteeism

Thirdly, to assess the extent to which an individual went to work while feeling unwell, present study used a subset of five items adapted from Cook & Van Den Hoek (2023). Participants indicated the frequency of behaviours related to attending work despite experiencing symptoms, for example "I worked the whole day/full workday even though I experienced symptoms". Measured on a 5-point Likert scale, ranging from 1 = "never" to 5 = "very often.". Reliability analyses yielded satisfactory internal consistency with $\alpha = .84$ (Kline, 1999).

Adjustment latitude

Lastly, an individual's ability to adjust their work to their health and control how and when a work task should be performed was assessed using the measurement of Johansson and colleagues (2004). We adjusted the original measurement to measure the extent that participant engaged in each element instead of asking what elements apply. Consequently, the question stated "What opportunities do you have for adjusting your work if you do not feel well?" and included the seven ways that were originally used in the measurement: doing only the necessary work and postponing the rest; choosing among work tasks; getting help from one's colleagues; working at a slower pace than usual; taking longer breaks; shortening the working day; and postponing the work and going home. With these seven options, participants are asked in what extent they possess the adjustments ranging from 1 = "never" to 5 = "always". Reliability analyses yielded satisfactory internal consistency with $\alpha = .84$ (Kline, 1999).

Data analysis

After removing participants who did not complete the survey or did not meet the requirements (N = 188), outliers were examined. The category "does not apply" was merged with "never" in the presenteeism scale, as both capture the same meaning. Period pain was also re-coded because score "4" was missing. No assumptions were violated.

The hypothesised moderated mediation model (see Figure 1) was tested in two models that used a bootstrapping approach to assess the significance of the direct and indirect effects of the variables (Hayes, 2013). Model 1 tested the relationship between period pain and surface acting. Model 2 tested the relationship between period pain and deep acting. Moderated mediation analyses tests conditional indirect effect of adjustment latitude (i.e. moderator) on the relationship between period pain (i.e. independent variable) and surface acting and deep acting (i.e. dependent variable) through presenteeism (i.e. mediator). The "PROCESS" macro, model 7, v3.5.3 (Hayes, 2013) in SPSS bias-corrected with 95% confidence intervals. Significant effects are supported by the absence of zero within the confidence interval.

Results

Descriptive statistics and intercorrelations of variables are presented in Table 1. Regarding the main variables, small, medium and large correlations were observed (Evans, 1996). Period pain was positively correlated with surface acting (r = .45, p < .001) and presenteeism (r = .69, p < .001). Interestingly, period pain also correlated positively with deep acting (r = .35, p < .001) and period pain correlated negatively with adjustment latitude (r = .18, p < .001). The dependent variable surface acting was strongly and positively correlated with the other dependent variable of deep acting (r = .73, p < .001). Furthermore, surface acting was positively correlated with presenteeism (r = .37, p < .001) and negatively correlated with adjustment latitude (r = -.28, p < .001). Similarly, deep acting was also positively correlated with presenteeism (r = .27, p < .001) and negatively correlated with adjustment latitude (r = -.25, p < .001). Finally, presenteeism was negatively correlated with presenteeism (r = -.25, p < .001).

Table 1.Correlations and Descriptive Statistics

		n	Mean	SD	1	2	3	4
1	Period Pain	250	6.09	2.39				
2	Surface Acting	250	10.88	3.56	.45**			
3	Deep Acting	250	5.52	2.52	.37**	.73**		
4	Presenteeism	250	18.17	5.54	.69**	.37**	.27**	
5	Adjustment Latitude	250	13.87	3.71	18**	28**	25**	25**

^{**}*p* < 0,01

Hypotheses Testing

Hypothesis 1 stated that period pain would be positively related to surface acting. To test this hypothesis, a multiple regression analysis was performed in model 1 with period pain as independent variable and surface acting as dependent. In accordance with the hypothesis, results of model 1 indicated that more period pain correlated with more surface acting (b = .58, SE=.12, 95%CI [.34, .81], t(250) = 4.77, p<.001). This indicates that the experience of

more period pain is related to higher levels of surface acting. Therefore, Hypothesis 1 was supported.

Secondly, Hypothesis 2 stated that period pain would be negatively related to deep acting. To test this hypothesis, a multiple regression analysis was performed in model 2 with period pain as independent variable and deep acting as dependent variable. However, results from model 2 showed that more period pain was found to correlate with more deep acting (b = .37, SE=.09, 95%CI [.19, .56], t(250) = 4.00, p<.001). Similarly to surface acting, this result indicates that the experience of more period pain is related to higher levels of deep acting. Therefore, Hypothesis 2 was not supported.

Moreover, Hypothesis 3 stated that presenteeism mediates the effect of period pain on surface acting. We tested the mediation effect using model 1 with the mediated moderation in which period pain was the independent variable, surface acting the dependent, and presenteeism the mediator. Findings did reveal that although period pain was positively related to presenteeism (b = 1.54, SE = .13, 95%CI [1.29, 1.80], t(250) = 11.93, p < .001), presenteeism did not relate to more surface acting (b = .06, SE = .06, 95%CI [-.05, .17], t(250) = 1.07, p = .28). This means that higher levels of period pain do not lead to higher levels of surface acting through presenteeism. Therefore, Hypothesis 3 is not supported.

Finally, Hypothesis 4 stated the same mediation of presenteeism between period pain and deep acting. We tested the mediation effect using model 2 with the mediated moderation in which period pain was the independent variable, deep acting the dependent, and presenteeism the mediator. Similarly, the model did not support the mediating role of presenteeism on the relationship between period pain and surface acting. Presenteeism did not relate to more deep acting (b = .01, SE=.04, 95%CI [-.07, .09], t(250) = .28 p = .78). This means that higher levels of period pain do not lead to higher levels of deep acting through presenteeism. Therefore, Hypothesis 4 is not supported.

Lastly, Hypothesis 5 stated that the opportunity of an employee to adjust work to their health moderates the relationship between period pain and presenteeism, such that the relationship is stronger when adjustment latitude is low (versus high). We tested this hypothesis with the moderated mediation model 1 and 2. Findings from both models revealed that adjustment latitude did not significantly moderate the relationship between period pain and presenteeism (b = .00, 95% CI [-.002, .01]). This means that higher levels of adjustment latitude did not make the effect of period pain on presenteeism lower and lower levels of adjustment latitude did not make the effect of period pain on presenteeism higher. Therefore, Hypothesis 5 is not supported. Notably, adjustment latitude did relate negatively to presenteeism (b = -.20,

SE=.08, 95%CI [-.35, -.05], t(250) = -2.68 p<.01). This means that more adjustment latitude relates to less presenteeism.

Discussion

There is a growing call to provide menstruating employees with appropriate support at work (Howe et al., 2023). Especially in emotionally demanding professions, as individuals who experience a menstruation often work in these occupations (Bhave & Glomb, 2009; Fouquereau et al., 2018; Prentice, 2013). To contribute to this, we investigated the relationship between period pain and emotional labour. In the present study we investigated whether presenteeism can (partly) explain for the relationship between period pain and emotional labour, and whether adjustment latitude can mitigate the process. Hypotheses were formed using the Conservation of Resources (COR) Theory (Hobfoll, 1989). In line with COR, it was predicted that period pain would positively associate with surface acting, but negatively associate with deep acting because the additional effort to work through the pain depletes resources. Furthermore, it was expected that both relationships between period pain and both forms of emotional labour would be mediated through presenteeism. We expected this because individuals, despite experiencing period pain, often continue to work to avoid potential resource losses associated with absenteeism (Schoep et al., 2019; Tschacher et al., 2022). Lastly, it was hypothesised that adjustment latitude would negatively moderate the relationship between period pain and presenteeism since being able to adjust work to health needs would allow employees to better manage their work conditions. We collected data among N = 250 participants and analysed the data using the "PROCESS" macro, model 7, (Hayes, 2013) in SPSS. In line with the hypotheses, results showed that higher levels of period pain relate positively with higher levels of surface acting. Similarly, but in contrast to the hypothesis, higher levels of period pain relate with higher levels of deep acting. Furthermore, findings revealed no significant mediating effect of presenteeism in the relationship between period pain and surface acting nor between period pain and deep acting. The moderating effect of adjustment latitude on the relationship between period pain and presenteeism was not significant, suggesting that higher levels of adjustment latitude do not mitigate the effects of period pain on presenteeism. In what follows, we discuss the theoretical and practical contributions of this study.

Theoretical Contributions

First, this study offers insight in how menstruating employees who experience pain allocate resources to prevent losses in their professional effectiveness. Results of the present study showed that higher levels of period pain relate positively with surface acting, which involves the suppressing authentic feelings to meet work requirements. This aligns with COR (Hobfoll, 1989), as period pain can be regarded as a stressor depleting health-related

resources causing individuals to allocate their emotional resources to cope with the physical discomfort related to their period. Moreover, this is consistent with the concept of "sickness surface acting" by Leal and colleagues (2022), and with Lee and Madera's (2019) research finding that negative emotions associated with period pain requires greater efforts to suppress authentic feelings to meet work requirements.

Furthermore, we expected that higher levels of period pain would relate negatively to deep acting due to the inherent negative emotion and depletion of emotional resources related to period pain. Contrary to our hypothesis, present study found that higher levels of period pain also relate positively with deep acting. This unexpected result indicates that individuals attempt to genuinely align their emotions with job demands as a coping mechanism. Although we expected a negative relationship based on one premise of COR, referring to the depletion of emotional resources through the additional coping that is required with physical discomfort (Hobfoll, 1989). Another premise of COR stated that investment is more when gains are anticipated (Hobfoll, 1989). In the emotional labour literature, research shows that deep acting has been associated with greater self-efficacy and emotional congruence (Ashforth & Humphrey, 1993; Grandey, 2003). In other words, although the investment is greater, the anticipated outcomes are also better for deep acting compared with surface acting. It might thus be that menstruating employees are more motivated to invest extra resources to enact in deep acting because they anticipate more fulfilment. Moreover, both relationships of period pain and surface acting, as well as period pain and deep acting, suggest that the experience of period pain goes hand in hand with increased emotional labour - either through suppressing authentic feelings to meet work requirements or through an attempt to align true feelings with job demands. The findings indicate that individuals who experience period pain manage their feelings and emotional displays more in response to emotion work requirements, suggesting additional efforts in the workplace. This could be because both forms are a form of acting, and therefore they are not authentic. Huppertz and colleagues (2020) indeed found that surface acting related negatively to feeling authentic and deep acting did not relate to feeling authentic. Further research could explore the role of authenticity in the relationship between period pain and emotional labour (see .

Second, present study contributes to the presenteeism literature (Cook & Van Den Hoek, 2023; De Arruda et al., 2024) by exploring the role of presenteeism in the relationship between period pain and emotional labour. We hypothesized that period pain would relate with emotional labour through presenteeism because individuals tend to still go to work in order to protect work-related resources (Chen, Lu & Cooper, 2021; Ferreira et al., 2019; Henderson & Smith, 2021). However, in contrast to expectations, presenteeism did not

mediate the relationship between period pain and surface acting nor between period pain and deep acting. A theoretical implication referred from the absence of mediation can be that the relationship between period pain and emotional labour is not primarily driven by the additional effort exerted to attend work while experiencing pain (i.e. presenteeism). Nevertheless, period pain showed a strong positive relationship with presenteeism. This is in line with previous findings from Cook and van der Hoek (2023) and indicates that individuals with higher levels of period pain are more likely to engage in presenteeism. A possible explanation for presenteeism then not leading to more emotional labour could be due to possible benefits resulting from going to work (Lohaus et al., 2021). For example, going to work while experiencing period pain might divert from the negative emotions (Miraglia and Johns, 2018). Further research could investigate possible resources that help navigate the relationship between period pain, presenteeism, and emotional labour.

Lastly, our study adds to the literature on the effects of adjustment latitude (Johansson & Lundberg, 2004; Gerich, 2014) and on the relationship between period pain and presenteeism (Cook & Van Den Hoek, 2023; De Arruda et al., 2024). We expected that adjustment latitude moderated the relationship between period pain and presenteeism. In accordance with COR theory (Hobfoll, 1989), adjustment latitude was expected to mitigate the effect of period pain on presenteeism because it acts as a resource in managing stressors like period pain. In contrast to our expectations, the present study did not find a significant moderating effect of adjustment latitude on the relationship between period pain and presenteeism. This implies that in the present study higher levels of adjustment latitude did not alter the relationship between period pain on presenteeism. Nevertheless, present study did find a negative relationship between adjustment latitude and presenteeism. This finding is in line with previous research that found that adjustment latitude decreases presenteeism by providing employees with flexibility in their work arrangements (Johansson & Lundberg, 2004; Gerich, 2014). Gerich (2014) suggested that individuals with high adjustment latitude experience better general working conditions and greater autonomy, which could lead to improved health conditions and fewer health complaints. Future research could further explore this relationship by investigating whether adjustment latitude indeed leads to better working conditions and increased autonomy, thereby reducing presenteeism. Additionally, examining the type of job and its influence on adjustment latitude and presenteeism could offer valuable insights. However, the results of present study imply that while adjustment latitude may influence presenteeism independently of period pain, it does not appear to alter the relationship between period pain and presenteeism.

Limitations

Some limitations need to be noted. First off all, the generalizability of the results is limited by the characteristics of present study's sample. Although the sample size was in line with the power analysis, participants were predominantly well-educated (86,8% obtained higher vocational or university degrees) and childless (74.4%). This homogeneity in the sample restricts the applicability of the findings to the broader population (Tin & Bui, 2024). Specifically, because an individual's education influences their future occupation. Previous studies found that the educational level negatively influences the amount of routine in their work, the intensity of manual labour, the number of resources, the number of demands, and the cognitive skill required for their work (Farkas et al., 1997; Goos et al., 2014; Hardy et al., 2018; Solomon et al., 2022). Therefore, the type of work performed by most of the current sample may not be representative of the menstruating population in the Netherlands and we should be cautious in generalising the current findings. Secondly, present study relied on selfreported measures for all variables. Even though participation was anonymous which diminishes the social desirability bias (Joinson, 1999), biases can still occur with selfreporting. Research indicates that pain recall can be inaccurate and influenced by various factors, such as time and levels of pain (Daoust et al., 2017; Gedney & Logan, 2006). One study on women with endometriosis did show relatively accurate pain recall but indicated that greater passive coping and lower pain at recall could lead to overestimation (Nunnink & Meana, 2007). Moreover, recent results from a study by Anvari and colleagues (2022) suggests that there is an upward bias in initial responses, referred to as an initial elevation phenomenon. This bias results in higher scores on the first response given on a survey. Therefore, validity of current study can be threatened by a recall bias and initial elevation phenomenon. Future research could account for these biases by using daily diary or experience sampling techniques, as these models reduce the time between pain experience and reporting, enhancing accuracy (Ohly et al., 2010).

Future Research

Based on the findings of this study, there are some avenues for future research worth mentioning. First of all, it would be interesting to examine whether authenticity plays a role in the relationship between period pain and emotional labour. For example, previous research suggests that deep acting, despite requiring significant additional effort, can lead to greater self-efficacy and emotional congruence (Grandey, 2003). However, the presence of pain might make authentic work behaviour more challenging due to the negative nature of pain (Minami & Ide, 2015). Thereby, increasing the need for both types of emotional labour. On

the other hand, research by Grandey and colleagues (2012) found that a supportive work climate, characterized by authenticity, can buffer again the strain from emotional labour. Therefore, authenticity could also diminish the use of emotional labour. Similarly, future research could examine the role of a supportive work environment in mitigating the effects of period pain on emotional labour as this climate may foster effective management of strain resulting from period pain. Secondly, future research could resume the exploration of the relationship between period pain and presenteeism. Present study found that adjustment latitude did not influence this relationship, but perhaps the work environment can influence this relationship. For example, Cook and Van Den Hoek (2023) found that public beliefs in the organisation influenced this relationship, but it was unclear as to why these public beliefs influenced the relationship between period pain and presenteeism calling for further investigation. Perhaps that these public beliefs relate to levels of support that are offered in the working place (Betancourt et al., 1992). By further exploring the relationship between period pain and emotional labour and the one between period pain and presenteeism, future studies can provide a more comprehensive understanding and offer valuable insights for developing interventions to support employees.

Practical Implications

The present study provides some practical implications for the workplace. First, employers should recognize the effects of period pain on emotional labour and presenteeism. Recognizing that emotional labour intensifies during the menstrual phase implicates that more resources are needed such as a supportive work environment to cope with these effects (Grandey et al., 2012). Similarly, employers should be aware that period pain can lead to presenteeism, which has been found to contribute more to productivity loss than absenteeism (Schoep et al., 2019). Consequently, it is important to foster an open dialogue about menstrual health in the workplace, reducing the stigma associated with discussing this topic and creating a supportive work environment. In addition, present study showed that adjustment latitude can decrease presenteeism which offers employers a potential intervention for presenteeism among their employees. However, results indicate that this may not significantly influence the relationship between period pain on presenteeism. Thus, employers could recognize that while adjustment latitude can decrease presenteeism, it does not serve as a universal remedy.

Conclusion

The present study offers a deeper understanding of the effects of period pain at work. Specifically, we found that individuals who experience more period pain engage in more

emotional labour in the forms of surface and deep acting, suggesting additional efforts in the workplace. In addition, higher levels of period pain relate to more presenteeism but presenteeism does not relate to more surface or deep acting. According to the current study, adjustment latitude does not influence the relationship between period pain and presenteeism. However, higher levels of adjustment latitude do relate to lower levels of presenteeism. This may indicate that the possibility to adjust one's work to personal circumstances decreases the chance of being present at work while feeling ill. Based on the current findings, we can conclude that it makes sense for employers to understand the effects of period pain and its impact on emotional labour and presenteeism. The current study provides a first step towards a better understanding of the effects of period pain at work, but much more research is needed to investigate underlying mechanisms and moderators of the impact of period pain at work.

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Appendix A

Purpose of the study and informed consent

Beste deelnemer,

Hartelijk dank voor uw deelname aan dit onderzoek. Dit onderzoek gaat over de relatie tussen menstruatiepijn en werkgerelateerde uitkomsten. Om u te helpen een weloverwogen beslissing te nemen over uw deelname, wordt in deze brief uitgelegd wat het onderzoek inhoudt en wat uw rechten als deelnemer aan het onderzoek zijn. Als u vragen of zorgen heeft, aarzel dan niet om contact met ons op te nemen.

Doel van het onderzoek

In dit onderzoek kijken wij naar de invloed van menstruatiepijn op prestaties en de manier waarop emoties worden ervaren. Volgens eerder onderzoek wordt menstruatie nog steeds gestigmatiseerd op het werk, wat een significante negatieve invloed kan hebben op iemands gevoelens en gedrag op het werk. Met dit onderzoek willen we meer inzicht krijgen in de effecten van menstruatie op het welzijn en de prestaties van werknemers. Op die manier hopen we de kenniskloof met betrekking tot menstruatie en de mogelijke effecten ervan op het werk te dichten. Wij voeren dit onderzoek uit in het kader van onze masterthesis aan de Universiteit Utrecht.

Uitvoering van het onderzoek

Deelname aan het onderzoek is alleen mogelijk als u menstrueert en ten minste 20 uur per week werkt. Let op, u kunt niet deelnemen aan het onderzoek als u geen leidinggevende heeft en/of wanneer er sprake is van (ziekte)verlof voor de langere termijn. Het invullen van de vragenlijst duurt ongeveer tien minuten. Naast algemene vragen naar bijvoorbeeld leeftijd worden er vragen gesteld die gaan over menstruatiepijn, de mate waarin u presteert op uw werk en op welke manier u uw emoties ervaart. Ook worden er vragen gesteld over uw werk en werkomgeving. Het onderzoek is goedgekeurd door de Ethische Toetsingscommissie van de faculteit Sociale Wetenschappen van de Universiteit Utrecht. Dit garandeert dat deelname aan dit onderzoek geen risico's of bijwerkingen met zich meebrengt voor de deelnemer.

Uw rechten

Uw deelname aan dit onderzoek is geheel vrijwillig. U kunt op elk gewenst moment, zonder opgave van reden en zonder voor u nadelige gevolgen, stoppen met het onderzoek. In dit onderzoek wordt niet gevraagd naar uw persoonlijke gegevens. Om deel te nemen aan dit onderzoek moet u toestemming geven aan het eind van deze pagina. Nadat u toestemming hebt gegeven, kunt u beginnen met de vragenlijst. Als u geen toestemming geeft, wordt u automatisch doorgestuurd naar het einde van de vragenlijst en wordt u bedankt voor uw tijd. De verzamelde informatie zal op geen enkele manier tot u te herleiden zijn. De verzamelde data wordt bewaard in overeenstemming met de richtlijnen met betrekking tot de gegevensbescherming en zal alleen beschikbaar zijn voor het onderzoeksteam.

Klachten, vragen en opmerkingen

Als u vragen of opmerkingen heeft over het onderzoek in het algemeen, kunt u contact opnemen met de mastercoördinator, dr. Veerle Brenninkmeijer (v.brenninkmeijer@uu.nl).

Als u een officiële klacht hebt over het onderzoek, kunt u een e-mail sturen naar de klachtenfunctionaris (<u>klachtenfunctionaris-fetcsocwet@uu.nl</u>). Als u vragen hebt over dit onderzoek kunt u een e-mail sturen naar een lid van het onderzoeksteam. Dit kunt u doen door contact op te nemen met onze teamvertegenwoordiger Debora Brouwer (<u>e.d.brouwer@uu.nl</u>).

Vriendelijke groet, Sanne van Zijl, Juliëtte Hollaar en Debora Brouwer

Hierbij verklaar ik de informatiebrief over het onderzoek gelezen te hebben en akkoord te gaan met deelname aan het onderzoek. Dit betekent dat ik instem met deelname aan het onderzoek en dataverzameling voor onderzoeksdoeleinden.

- o Ik ben 18 jaar of ouder en geef toestemming (1)
- o Ik geef geen toestemming en trek mij terug (2)

Appendix B Questionnaires

Q4	Hoe identificeer je jezelf?
0	Man (1)
0	Vrouw (2)
0	Non-binair (3)
0	Intersekse (4)
0	Anders (5)
0	Wil ik niet zeggen (6)
Q5	Wat is uw leeftijd in jaren?
	J J
A	Wat is uw hoogst behaalde opleiding? Is uw opleiding er niet bij staat, kruist u dan de opleiding aan die het meest op de door u volgde opleiding lijkt. Lagere school (1)
0	MAVO, LBO, VMBO (2)
0	HAVO, MBO (3)
0	VWO (4)
0	HBO (5)
0	WO (6)
	Hoeveel jaar werkervaring heeft u? ond af naar hele jaren

Q8 Wat is de omvang van uw aanstelling in u	ren per w	eek (vo	olgens	uw c	ontr	act)	?		
Q9 Bent u momenteel wegens ziekte afwezig o Nee (2)	?								
o Ja, ziekteverlof (3)									
o Ja, bijzonder verlof (4)									
o Ja, zwangerschapsverlof (5)									
o Ja, WAO (6)									
o Anders (7)									
Q10 Heeft u een leidinggevende functie? o Nee (1) o Ja (2)									
Q11 Aan hoeveel mensen geeft u direct leidir	ng?								
Q12 Heeft u kinderen? o Ja (2) o Nee (3)									
Q13 Hoeveel kinderen heeft u in onderstaand		scatego 2 4		6	7	8	1 0	1 1	1 2
Aantal kinderen van 0 t/m 3 jaar ())								

Aantal kinderen van 4 t/m 12 jaar ()	
Aantal kinderen van 13 jaar en ouder ()	

Q14 Menstruatiepijn

	Helemaal geen (1)	Mild (2)	Matig (3)	Ernstig (5)	Zeer ernstig (6)
Hoeveel menstruatiep ijn en - symptomen heeft in u in de afgelopen 6 maanden gehad? (1)	O	0	0	0	0

Q15 Menstruatiepijn

	Helemaal niet (1)	In kleine mate (2)	Matig (3)	In zekere mate (4)	In zeer grote mate (5)
In welke mate belemmerde n menstruatiep ijn en - symptomen uw werk u in de afgelopen 6 maanden? (1)	O	0	0	0	0

Q16 Vult u de volgende vragen alstublieft in over situaties in de afgelopen 6 maanden, wanneer u symptomen ervaarde.

Probeer u in te beelden hoe deze situaties zijn gedurende de menstruele fase, met alle

klachten/symptomen/gevoelens die daarbij horen.

	Nooit (1)	Zelden (2)	Soms (3)	Vaak (4)	Heel vaak (5)	Niet van toepassing , omdat ik geen symptome n ervaarde (6)
Ik ben gaan werken ondanks dat ik symptome n had (1)	0	0	0	O	0	0
Ik ben gaan werken ook al ervoer ik ernstige symptome n (2)	0	O	0	O	0	O
Ik heb de hele dag/de volle werktijd gewerkt ook al ervoer ik symptome n (3)	0	O	0	O	O	O
Om te kunnen werken heb ik medicijne n ingenome n om acute symptome	0	O	O	O	O	O

n te bestrijden (4)						
Ik heb mezelf naar werk gesleept, ook al ervoer ik symptome n (5)	O	0	0	0	0	0

Q17 De volgende vragen gaan over hoe u terugkijkt op uw gedrag op het werk in de afgelopen 6 maanden.

	Zelden (2)	Soms (3)	Regelmatig (4)	Vaak (5)	Altijd (6)
Het lukte mij om mijn werk zo te plannen dat het werk op tijd af was (1)	0	0	O	0	O
Ik hield voor ogen welk resultaat ik moest behalen op werk (2)	0	0	0	0	o
Het lukte mij om hoofdzaken van bijzaken te onderscheiden (3)	0	0	0	0	0
Het lukte mij om mijn werk goed uit te voeren met zo min mogelijk tijd en inspanning (4)	0	0	O	O	o
Ik maakte een zo optimaal	0	0	0	0	0

mogelijke planning (5)					
Ik ben uit mezelf met nieuwe taken begonnen, als mijn oude taken af waren (17)	0	0	0	0	0
Ik heb uitdagende werktaken op me genomen, als die er waren (18)	0	0	0	0	0
Ik heb gewerkt aan het bijhouden van mijn vakkennis (19)	0	0	0	0	0
Ik heb gewerkt aan het bijhouden van mijn werkvaardighede n (20)	0	0	O	0	0
Ik kwam met creatieve oplossingen voor nieuwe problemen (21)	0	0	O	0	0
Ik nam extra verantwoordelijk heden op mij (22)	0	0	0	0	0
Ik zocht naar nieuwe uitdagingen in het werk (23)	o	0	o	0	0
Ik had een actieve inbreng in werkoverleggen of vergaderingen (24)	0	0	0	0	0

Q18 Om de relevantie van uw antwoorden te optimaliseren voor dit onderzoek, vragen wij u om de volgende stellingen tweemaal in te vullen. In eerste instantie vragen we u om de stellingen te beantwoorden met betrekking tot uw ervaringen tijdens normale werkdagen, buiten uw menstruele fase om. Vervolgens vragen we u dezelfde stellingen nogmaals te beantwoorden, maar dan met betrekking tot uw ervaring gedurende de menstruele fase.

Q19 Beantwoord de volgende stellingen alstublieft eerst met betrekking tot uw ervaringen tijdens normale werkdagen, **buiten uw menstruele fase om**.

v	Zelden (1)	Soms (2)	Vaak (3)	Regelmatig (4)
Ik speel toneel tijdens mijn werk (1)	0	0	0	0
Ik zet een masker op om voor mijn werk de juiste emoties te tonen (2)	O	O	O	0
Ik doe alsof ik die emoties heb die ik voor mijn werk moet tonen (3)	O	0	O	0
Ik speel een bepaalde rol om op een gepaste wijze mijn werk te doen (4)	O	0	O	0
Ik doe alsof ik goede zin heb (5)	O	O	O	O
Ik werk er hard aan om de emoties te voelen die ik moet laten zien (6)	0	0	0	0

Ik doe moeite om de emoties				
te voelen die ik	О	0	0	0
aan anderen				
moet tonen (7)				
Ik doe moeite om bepaalde gevoelens op te				
roepen die ik	0	0	0	0
aan anderen				
moet tonen (8)				

Q20 Beantwoord de volgende stellingen alstublieft hieronder met betrekking tot uw ervaringen **tijdens uw menstruele fase.**

	Zelden (1)	Soms (2)	Vaak (3)	Regelmatig (4)
Ik speel toneel tijdens mijn werk (1)	0	0	0	0
Ik zet een masker op om voor mijn werk de juiste emoties te tonen (2)	O	O	0	O
Ik doe alsof ik die emoties heb die ik voor mijn werk moet tonen (3)	0	0	0	0
Ik speel een bepaalde rol om op een gepaste wijze mijn werk te doen (4)	o	O	O	0
Ik doe alsof ik goede zin heb (5)	0	0	0	0

Ik werk er hard aan om de emoties te voelen die ik moet laten zien (6)	0	0	0	0
Ik doe moeite om de emoties te voelen die ik aan anderen moet tonen (7)	0	0	0	0
Ik doe moeite om bepaalde gevoelens op te roepen die ik aan anderen moet tonen (8)	0	0	0	0

Q21 De volgende vragen gaan over hoe u bepaalde aspecten van uw leidinggevende ervaart. Vult u alstublieft het antwoord in dat het beste overeenkomt met uw persoonlijke mening.

	helemaal mee oneens (1)	mee oneens (2)	Niet mee eens en niet mee oneens (3)	mee eens (4)	helemaal mee eens (5)
Mijn leidinggeven de is zich bewust van de emoties van de mensen om hen heen. (1)	O	O	O	0	0
Mijn leidinggeven de weet welke gevoelens anderen ervaren. (24)	0	0	0	0	0

Mijn leidinggeven de kan aan anderen zien hoe zij zich voelen. (25)	o	O	0	O	o
Mijn leidinggeven de kan ervoor zorgen dat een ander zich anders gaat voelen. (26)	o	0	0	O	o
Mijn leidinggeven de kan de emotionele staat van een ander veranderen. (27)	0	0	0	0	o
Mijn leidinggeven de kan de emoties van anderen versterken of afzwakken. (28)	O	0	O	O	O

Q22 Welke mogelijkheden heeft u om uw taken op werk aan te passen wanneer u zich niet lekker voelt?

(Bijna) Nooit (1) Af en toe (2) Dikwijls (3)

Alleen het nodige uitvoeren en andere taken uitstellen (1)	o	0	0
Kiezen tussen mijn verschillende werktaken (13)	o	0	0
Hulp van collega's ontvangen (14)	o	O	0
Op een langzamer tempo werken (15)	o	O	0
Langere of meer pauzes nemen (16)	o	O	0
De werkdag inkorten (17)	o	O	0
Het werk uitstellen en naar huis gaan (18)	o	0	0

Q23 De volgende vragen gaan over hoe druk uw werk is en hoe u zich daarbij voelt.

	(Bijna) nooit (1)	Af en toe (2)	Dikwijls (3)	(Bijna) altijd (4)
Ik heb haast en werk tegen deadlines aan (1)	0	0	0	0
Ik werk door terwijl mijn collega's al naar huis zijn (13)	0	0	0	0
Ik vind het belangrijk om hard te werken, zelfs als ik eigenlijk geen plezier heb in	0	0	0	0

mijn bezigheden (14)				
Ik ben druk en heb veel ijzers tegelijk in het vuur (15)	o	o	o	0
Ik heb het gevoel dat iets in mijzelf me dwingt hard te werken (16)	0	o	0	0
Ik besteed meer tijd aan mijn werk dan aan mijn vrienden, hobby's of andere vrijetijdsactivite iten (17)	0	0	0	0
Ik voel me verplicht hard te werken, ook al vind ik dat niet altijd prettig (18)	0	O	O	0
Ik ben met meerdere dingen tegelijk bezig, ik schrijf bijvoorbeeld een memo terwijl ik eet en met iemand telefoneer (24)	0	O	0	0
Ik voel me schuldig als ik vrij neem van mijn werk (25)	0	0	0	0
Ik vind het moeilijk om me te ontspannen	0	o	0	0

als ik niet aan het werk ben (26)

Q24 U bent aan het einde gekomen van de vragenlijst. We willen u hartelijk bedanken voor uw deelname aan dit onderzoek. Mocht u na aanleiding van de ingevulde vragen nog of opmerkingen hebben, voelt u zich dan vrij om een e-mail te sturen naar: e.d.brouwer@students.uu.nl.