

Consequences of employee personality in the hospitality context: A systematic review and meta-analysis

Abstract

Purpose – Personality provides a critical perspective for human resource managers on differences between employees. This study aims to systematically and meta-analytically synthesize the consequences of employee personality in the hospitality context.

Design/methodology/approach – After an extensive literature search, 105 empirical studies on the consequences of the big five personality factors (BFF; agreeableness, conscientiousness, extraversion, neuroticism, and openness) along with proactive personality (PP) in the hospitality context were included for a systematic review and meta-analysis.

Findings – The review highlighted a steady increase in the number of studies on hospitality employee personality. Job satisfaction and organizational citizenship behavior were identified as the most significant consequences for employee personality in the hospitality context. Five dimensions of personality traits varied in their consequences and differed from proactive personality.

Research implications – The study provides insightful implications and suggestions for future studies in terms of methodological approaches, research topics, and dimensions of employee personality that will extend the theoretical framework of individual differences.

Originality/value – This study represents the first attempt to systematically investigate the consequences of employee personality in the hospitality context. The results reveal discrepancies in the relations between the dimensions of BFF and PP with a variety of consequences. These results offer research directions for hospitality scholars investigating employee personality.

Keywords: Big five factors of personality (BFF), proactive personality (PP), systematic review, meta-analysis

Paper type: Research paper

1. Introduction

In the hospitality and tourism environment, understanding employee personality can not only enhance the efficiency of human resources management policies and practices but can also ensure the provision of high-quality service to customers (Barrick and Mount, 1991; Bildat, 2013). To sustain customer satisfaction and business success, hospitality organizations heavily rely on the interpersonal interactions between employees, their peers, and customers (Kim *et al.*, 2015). While the debate around the influence of individual differences and organizational interventions has been ongoing, many studies have captured the significant consequences of employee personality in the workplace (Bellou *et al.*, 2018; Grobelna, 2019). Particularly, the big five factors of personality (BFF) have been widely employed as a theoretical framework (Leung and Law, 2010). At the organizational level, employee personality has been found to be a self-directing factor that influences hiring decisions, job performance management, and other organizational interventions to enhance employee positive behaviors and the service experiences of customers (Hurtz and Donovan, 2000). Employees with a particular personality trait could be the most suitable people to perform a job or service (Major *et al.*, 2006). Studies on hospitality employees have found the relationship between specific personalities and job requirements that provided the best fit (Presenza *et al.*, 2020; Tews *et al.*, 2009). However, the studies' results were inconsistent with respect to the influence of each

personality dimension and its effect on employee outcomes. These differences could cause confusion for both researchers and practitioners trying to apply what is known about employee personality in future research and practice.

Additionally, studies in management have not only investigated the influence of a single dimension of personality but also the effects of combinations of various traits within a personality. Because of this combined effect approach, the concept of proactive personality (PP) has recently been attracting much attention from researchers examining the role of employee personality in the hospitality context. Because of the conceptual overlap of PP with four of the dimensions of BFF (conscientiousness, extraversion, neuroticism, and openness; Fuller and Marler, 2009; Spitzmuller *et al.*, 2015), it is necessary to acknowledge PP in the model of BFF as a combined trait dimension of personality. Studies found that the PP of an employee played a significant role in the success of an individual's career and an organization's business (e.g., Seibert *et al.*, 1999). Employees with PP have a behavioral tendency to show initiative and to contribute to meaningful changes within the work environment. More importantly, while each trait of the BFF refers to the thought and behavioral tendency to react to one's surroundings, PP is more "*considered as a compound personality trait*" that promotes a strong tendency within an individual to change the environment in order to achieve goals (Fuller and Marler, 2009, p. 341). Investigating the effects of employee personality with a single trait approach or with a compound approach would thus influence the resulting recommendations to organizations (Spitzmuller *et al.*, 2015). Therefore, the inclusion of PP in this study is expected to provide a better understanding of how isolated and combined dimensions of personality traits could influence employee work outcomes.

Given the significance of employee personality as an emerging research topic in the hospitality literature (Ali *et al.*, 2019), it is essential to provide a comprehensive assessment and understanding of the results of previous empirical studies. A study that systematically reviews what has been done in the past can provide insights into historic patterns and suggestions for future research (Chon and Zoltan, 2019; Kim *et al.*, 2018). To date, there is no systematic review study on employee personality in the hospitality and tourism context. This study firstly aims to provide a holistic overview and to define the research gaps among prior empirical studies regarding the impact of employee personality on work outcomes. Both BFF and PP are integrated as the underlying theoretical framework that identified which studies could be included in this systematic review. To achieve a broader picture of studies on the topic, the review encompassed all empirical studies in both hospitality and tourism databases and non-hospitality and tourism sources. This study is believed to be the first in the field of hospitality and tourism to examine the effects of employee personality on their work outcomes.

Thus, this study aims to provide a systematic and meta-analytical review of previous empirical studies on employee personality in the hospitality and tourism context in order to identify the historical trends, the gaps in the literature, and to synthesize the effects of BFF and PP on the individual and organizational consequences in the workplace. To achieve these objectives, the study will find the answers to two research questions:

1. What approaches and contexts have previous empirical studies considered when investigating the influence of employee personality on their work consequences?
2. What are the relationships between the employee personality traits of agreeableness, conscientiousness, extraversion, neuroticism, openness, and PP, and what are their attitudinal and behavioral consequences?

The results of this study are expected to contribute significantly to the literature and the consideration of employee personality in human resource management in the hospitality and tourism industry. The next section will present the theoretical background for the model of BFF, PP, and work consequences.

2. Theoretical background

2.1. Big Five Factors of personality

Since McDougall (1932) first defined personality as five distinguishable traits – intellect, character, temperament, disposition, and temper – in 1932, there has been extensive development of personality theory and its implications (Costa and McCrae, 1992). The BFF model has become among the most seminal theoretical frameworks within which organizational studies have examined the effects of personality (Leung *et al.*, 2011). According to this model, the personality of an individual is a dynamic mental structure and process which can determine the emotions and behavior of the individual towards their surrounding environment. Because personality traits differ, each individual has a different way of thinking, acting and presenting their attitudes and emotions in different situations. In the BFF model, there are five dimensions of personality: agreeableness, conscientiousness, extraversion, neuroticism, and openness (Table I).

[Please place Table I about here]

Working in a fast-growing hospitality industry requires individuals to have particular qualities, including type of personality (Baum, 2019). Customers can have diverse backgrounds and demands that vary. Thus, the consideration of employee personality appears to be an important criterion for human resource management practices, including recruitment, selection and performance management. A specific personality could be a strength or a weakness in enabling an employee to perform at their highest capacity and competency (Barrick and Mount, 1991). Thus, it is essential to investigate the relations between personality traits and their potential consequences in the workplace.

2.2. Proactive personality

PP is defined as an attitudinal and behavioral tendency toward changing the environment that an individual is dealing with (Leung and Law, 2010). People with PP actively manage a situation in order to achieve their goals in the workplace. According to Bateman and Crant (1993), proactive people can benefit organizations through their desire to seek solutions to emerging issues, their creativity, and their initiative at work.

In relating to the model of BFF, the concept of PP has a conceptual overlap with four of the five BFF dimensions – conscientiousness, neuroticism, extraversion, and openness (Fuller and Marler, 2009). The meta-analysis of Spitzmuller *et al.* (2015) found a partial correlation of PP with the BFF. The combination of personality traits within the concept of PP could provide a better approach for scholars to investigate the influence of personality on employee proactive behaviors at work (Fuller and Marler, 2009). The organizational literature shows an increasing number of studies focusing on a self-starting approach rather than an organizational starting one (Koopmans *et al.*, 2011). In the self-starting approach, individuals are encouraged to actively participate in decision-making processes and to make favorable changes to their working environment and conditions (Spitzmuller *et al.*, 2015). In this way, proactive behavior can be developed among members of organizations, with organizations, in turn, benefiting from their employees' job performance and organizational engagement.

In hospitality and tourism organizations, employees frequently interact with customers to perform their tasks. The uncertainty of customer service is not only challenging for employees, but also makes it difficult for managers to monitor and sustain a high quality of service (Kim *et al.*, 2015). Thus, hospitality organizations rely on the spontaneity of employees to maintain the required standard of customer service. Employees with PP – who are not constrained by the impact of the working environment – are able to creatively find effective solutions for different situations (Hornig *et al.*, 2016). However, the hospitality and tourism literature has few studies investigating the influence of employee PP on work consequences (e.g., Akgunduz *et al.*, 2020; Zhao and Guo, 2019; Zhu *et al.*, 2017). Thus, systematically identifying the role of PP in the context of hospitality and tourism is likely to reveal further theoretical and practical implications.

2.3. Consequences of employee personality

The theory of personality has been used as a framework to predict the attitude and behavior of individuals (Alarcon *et al.*, 2009; Leung and Law, 2010). Personality traits are normally considered to be relatively stable characteristics that help to determine thoughts and behavioral intentions (Costa and McCrae, 1992). According to social cognitive theory (Bandura, 1986), there is a process of continuous interaction between an individual, their surrounding environment, and their behavior. The way in which individuals react and interact with contextual factors reflects, in part, their personality traits (Anderson *et al.*, 2003; Woods *et al.*, 2018). In the work environment, employee personality underpins their attitude and behavior toward different organizational conditions, which are their work consequences. Thus, in the present study, drawing upon theories of personality, Person–Environment Fit, Person–Job Fit, and previous empirical studies, the consequences of employee personality have been divided into two types: attitudinal and behavioral.

2.3.1. Attitudinal consequences of employee personality

Employee personality has been viewed as profoundly influencing employee attitudes toward their jobs and organizations (Leung and Law, 2010). Different dimensions of BFF and PP have distinct effects on these attitudinal consequences (Spitzmuller *et al.*, 2015). The first attitudinal consequence investigated in this paper is job satisfaction (Gui *et al.*, 2020). According to the theory of Person–Environment Fit (Kristof, 1996), organizations and individuals attempt to achieve the best fit between employee personality and organization expectations (Bellou *et al.*, 2018). The concept of job satisfaction refers to the pleasure experienced by employees when they find a match between their expectations and what they experience in their job (Ashton, 2018). From the attitudinal perspective, the degree of satisfaction may vary according to an employee’s environment outside of work and their personality (Ariyabuddhiphongs and Marican, 2015; Yildirim *et al.*, 2016).

Employee organizational commitment, which is another attitudinal consequence of employee personality (Gui *et al.*, 2020), is developed when employees feel involved with and loyal to an organization (Lee *et al.*, 2020). The tendency to develop commitment to an organization can enhance the work performance of employees so that they contribute more to the organization’s success (Kim *et al.*, 2019; Rathi and Lee, 2016). The third attitudinal consequence of employee personality is emotional exhaustion (Morris and Feldman, 1996). Working under prolonged exposure to work pressure, hospitality employees can feel anxious, depressed, and trapped within their job. In a meta-analytical study by Lee *et al.* (2011), personality was found to be a significant predictor of emotional exhaustion. Experiencing work stressors was considered a key aspect of burnout, which caused the intention of employees to leave organizations. In the context of the hospitality and tourism industry, a few studies have concluded that both personal and organizational factors have an impact on employee emotional exhaustion (Rathi and Lee, 2016; Taormina and Kuok, 2009).

Turnover intention, the fourth attitudinal consequence of employee personality, represents an employee's intention to leave the organization (Schmitt *et al.*, 2008; Xu and Cao, 2019). Given the cost of employee turnover in the hospitality industry (Hinkin and Tracey, 2000), it is important for organizations to understand what contributes to employees' actual turnover, such as employees' turnover intention.

2.3.2. Behavioral consequences of employee personality

The personality of hospitality employees can lead to divergent behavioral consequences in the workplace. According to Thomas *et al.* (2010), the theory of Person–Environment Fit can explain whether individuals cope with work environment issues and achieve a fit between their personality and work conditions. This may lead to different behavioral consequences for organizations. Firstly, organizational citizenship behavior (OCB), which represents the discretionary behavior of employees to enhance the functioning of an organization (Chiaburu *et al.*, 2011), is a behavioral consequence of employee personality (Gui *et al.*, 2020). This behavior is practiced by employees, even when it is not described in the reward system or duty requirements. In the hospitality industry, OCB is beneficial to organizations as employees represent the business image and, when OCB is high, provide high-quality service to satisfy customers (Buil *et al.*, 2019; Munap *et al.*, 2013).

The second behavioral consequence of employee personality is job performance (Gui *et al.*, 2020; Xu and Cao, 2019). In the organizational context, employee job performance refers to the productivity of employees based on their ability to complete assigned work (Afsar *et al.*, 2018). For employees in the hospitality and tourism industry, providing customer service is a significant part of their job descriptions. Superior service performance requires them to complete both prescribed tasks and contextual duties (Bradshaw, 2017; Tracey *et al.*, 2007).

The third behavioral consequence of employee personality is emotional labor (Morris and Feldman, 1996). When interacting with others, hospitality employees perform emotional labor (either deep acting or surface acting) when they manage the expression of their feelings and emotions to present a positive attitude to customers (Chang, 2011). The theory of Person–Job Fit (Kristof, 1996) provides the foundation of the decision by employees and organizations to find the best fit based on employee personality and job requirements (Bellou *et al.*, 2018). At a certain level, employees might present a positive facial expression and pleasant greetings (surface acting) rather than their real inner feelings (deep acting; Kim, 2008). These aspects of emotional labor have been found to relate to employee personality in the hospitality context (Ehigie *et al.*, 2012; Sohn and Lee, 2012).

The next two sections present the methods used for the present research and the results of our systematic review and meta-analysis of the relationships between employee personality traits and their consequences.

3. Methodology

3.1 Literature search

In order to identify relevant studies for the review, we searched electronic databases (e.g., EBSCO Hospitality, Tourism Complete, and Google Scholar). The search terms were a combination of “personality,” “Big Five,” “trait,” “extraversion,” “extroversion,” “agreeableness,” “openness,” “conscientiousness,” “neuroticism,” and “proactive personality” along with “hotel,” “travel,” “tourism,” “restaurant,” “cruise,” and “airline.” The studies retrieved from the search were

published in hospitality and tourism journals (e.g., *International Journal of Contemporary Hospitality Management*, *International Journal of Hospitality Management*, *Cornell Hotel and Restaurant Administration Quarterly*) as well as in non-hospitality (e.g., marketing and business) journals such as the *Leadership and Organization Development Journal* and the *International Journal of Philosophy and Social-Psychological Sciences*.

3.2 Criteria for paper inclusion

For the present study, we set several inclusion criteria to guide our paper selection. To be considered for inclusion, the study had to be:

1. an empirical study that employed the theoretical framework of BFF or PP;
2. an empirical study that had the participation of employees or students in the hospitality and tourism industry in their survey;
3. published in form of journal articles, theses/dissertations, or conference papers;
4. present correlations between the dimensions of BFF and PP with other variables;
5. written in English.

The selection process involved three steps (Figure 1). We began with 9,327 papers discovered on two databases (Google Scholar and Hospitality & Tourism Complete). After eliminating duplicates, 628 potential papers remained. In stage 2, we assessed the studies based on their titles and abstracts (337 papers were excluded in this stage, $K = 291$). We then checked the full text of the remaining articles leading to the exclusion of a further 186 papers. The final sample consisted of 105 articles.

[Please place Figure 1 about here]

3.3 Coding

The coding procedure was conducted by three of the study authors (the leading, the second and the third authors). Inconsistencies among coding decisions were solved by having discussions among all the authors. Microsoft Excel 2019 was used to improve our efficiency. Simply put, two types of data were recorded:

1. The descriptive information of each study (e.g., author names, year of publication, paper source, sample size, country, types of research design, research methods).
2. The relation between personality and its outcome(s) per study (e.g., types of personality, outcome variables, instruments, scale reliabilities of all recorded variables and correlation coefficients).

Special attention was paid to the following issues that emerged during this process. When studies did not provide Cronbach's alpha reliability scores for the independent variables or dependent variables, the average reliability for these variables was calculated from other selected studies that had utilized similar instruments. Consistent with previous meta-analytic reviews (e.g., Lapierre *et al.*, 2018), for studies in which authors applied the same dataset and reported the same correlation in more than one study, the correlation in question was recorded only once. Due to concern for secondary sampling error (Hunter and Schmidt, 2004), combined correlations with less than three individual studies were not included in our meta-analysis.

3.4 Data analysis

In our meta-analysis, we calculated effect size using the procedure suggested by Hunter and Schmidt (2004), which helped to correct for measurement error utilizing the reliability scores and sample sizes reported in each included individual study. Pearson Product–Moment Correlation Coefficient was employed as the primary effect size metric when synthesizing data across individual studies. The magnitude of mean corrected effect size was assessed according to Cohen’s (1988) criterion, where $r < 0.3$ is deemed as low magnitude, $0.3 < r < 0.5$ moderate, and $r > 0.5$ high.

The stability of each mean corrected effect size was evaluated by the calculation of its 95% confidence intervals. A mean corrected correlation was considered statistically significant when its 95% confidence interval excluded zero. In addition, with the aim of examining the heterogeneity of effect sizes, for each mean corrected effect size, we calculated its 80% credibility interval and Q-statistics. According to Eby *et al.* (2013), when a credibility interval is small and excludes zero, it reflects the likelihood of unexamined systematic discrepancies among the samples. Similarly, if a Q-statistic is significant, it also indicates that moderators are operating in the correlation (Zhu *et al.*, 2020).

4. Results

4.1 Sample descriptions

Table I provides an overview of our sample profile. First, more than half the studies (51%) in the present review were published in non-hospitality journals, and the rest (49%) were in either hospitality or tourism journals. In terms of research subjects, almost half the sample (47%) focused on hotel employees, and approximately 20% of the studies involved workers from the restaurant sector. Most of the studies were from the North America or South America (37%), followed by Asia (34%), and the rest were from other continents.

[Please place Table II about here]

The studies concentrating on BFF represented more than 80% of the total studies, and these studies were fairly equally distributed across the five traits (see Figure 2). The studies investigating the influence of PP were less than 17% (16.19%).

[Please place Figure 2 about here]

Goldberg’s (1999, 2001) and Costa and McCrae’s (1992) scales were the most widely used instruments used to measure BFF followed by those of John *et al.* (1991, 1999). The most popular instrument to assess PP was Seibert *et al.*’s (1999) scale. Regarding research design, the great majority (95%) of the studies employed a one-shot study design (cross-sectional studies); the longitudinal studies included in our sample were only five. The data of around 80% of our sample studies were analyzed using regression and correlation methods. SEM (20%) was also a commonly applied data analysis method for empirical studies that explored the impact of personality on work-related outcomes. Only one sample adopted a multilevel analysis technique, such as HLM.

[Please place Figure 3 about here]

Figure 3 shows the number of publications from 1985 to 2020. The earliest individual work involving BFF in the present review was Ferris *et al.* (1985) on airline employees published in a non-

hospitality journal, *Journal of Vocational Behaviour*. The first hospitality journal to include studies on employees' personality was the *International Journal of Contemporary Hospitality Management*. There were no PP-related studies published until 2007. The number of studies on hospitality employees' personality dramatically increased from 2003, peaking in 2011. In 2012, the number of these studies noticeably decreased, followed by a steady growth from then to 2020. Overall, there was a general increasing trend for the publication of studies on both the BFF and PP of hospitality employees.

4.2 Meta-analytic findings of the influence of personality on hospitality employees' work outcomes

In order to explore the influence of hospitality employees' personality (both BFF and PP) on their work-related outcomes, we aggregated data from 105 studies. The work outcomes influenced by personality were categorized into two broad groups: attitudinal outcomes and behavioral outcomes. We also meta-analytically evaluated the relations between these outcome variables and personality, and the findings are shown in Tables III and IV. As noted earlier, because of potential secondary sampling error, the findings of any synthesized associations of less than three individual studies were not exhibited or interpreted. The total number of studies (K), the cumulative sample size (N), the mean correlation (r), the average corrected correlation (ρ), the 95% CI, the 80% CR, and the Q-statistics of each meta-analytical relation were reported.

4.2.1 Attitudinal outcomes

Among attitudinal outcome variables utilized in individual studies, the variables with three or more studies included organizational commitment, job satisfaction, emotional exhaustion, and turnover intention.

Organizational commitment

Agreeableness ($\rho = .27$), conscientiousness ($\rho = .36$), extraversion ($\rho = .32$), and openness ($\rho = .21$) were found to be significantly and positively correlated to organizational commitment. There was a negative relation between neuroticism ($\rho = -.14$) and organizational commitment, but the negative association was not significant since its 95% CI included zero (95% CI: [-.18, .04]). Conscientiousness ($\rho = .36$) was the trait most strongly related to organizational commitment. Apart from conscientiousness, the Q-statistics for all the personality–organizational commitment relations were significant and the credibility intervals were wide and/or contained zero, suggesting significant heterogeneity among effect sizes for the relations between these traits and organizational commitment. We were unable to perform a meta-analysis on the PP–organizational commitment relation since it was not examined frequently enough ($K < 3$).

Job satisfaction

Apart from neuroticism, all the BFF had a significant positive relation with job satisfaction. The negative correlation between neuroticism and job satisfaction was weak ($\rho = -.05$) and nonsignificant since its 95% CI contained zero (95% CI: [-.15, .01]). Openness was found to have the strongest effect on job satisfaction ($\rho = .53$). Apart from agreeableness, the Q-statistics for all the personality–job satisfaction relations were significant and the credibility intervals were wide and/or contained zero, suggesting significant heterogeneity among effect sizes for the relations between these traits and job satisfaction. We were unable to perform a meta-analysis on the PP–job satisfaction relation since it was not examined frequently enough ($K < 3$) to be involved in our meta-analyses.

Emotional exhaustion

Apart from neuroticism, all the BFF showed weak ($\rho < .3$) negative relations with emotional exhaustion. In contrast, neuroticism ($\rho = .53$) had a strongly significant positive association with emotional exhaustion. The Q-statistics related to the relations of emotional exhaustion with conscientiousness and extraversion were significant and the credibility intervals were wide and/or contained zero, suggesting significant heterogeneity among effect sizes for the relations between these two traits and emotional exhaustion. We were unable to perform a meta-analysis on the PP–emotional exhaustion relation since it was not examined frequently enough ($K < 3$) to be involved in our meta-analyses.

Turnover intention

Only the associations of turnover intention with extraversion and neuroticism were eligible to be included in our meta-analyses since they were each drawn from three or more individual studies. Both had a weak negative relation with turnover (<0.3), and the association between neuroticism and turnover intention was not significant (95% CI: [-.13, .06]). The Q-statistics related to this correlation were significant and the credibility intervals were wide and/or contained zero, suggesting significant heterogeneity among effect sizes for the relation between neuroticism and turnover. The Q-statistics related to extraversion–turnover intention were nonsignificant.

[Please place Table III about here]

4.2.2 Behavioral outcomes

The behavioral outcome variables utilized in three or more individual studies included job performance, OCB, and emotional labor (surface acting and deep acting).

Job performance

We performed meta-analyses on the relations of job performance with agreeableness, conscientiousness, extraversion, and neuroticism. Positive associations were found for agreeableness, conscientiousness, and extraversion, while neuroticism was negatively correlated with job performance. All these personality traits had a significant influence on job performance, but the effect sizes were weak ($\rho < .3$). The Q-statistics related to all these personality–job performance relations were significant and the credibility intervals were wide and/or contained zero, suggesting significant heterogeneity among effect sizes for the relations between these traits and job performance. We were unable to perform a meta-analysis on the relations of job performance with openness–PP since both were not examined frequently enough ($K < 3$) to be involved in our meta-analyses.

Organizational citizenship behavior (OCB)

Only the associations of OCB with conscientiousness and PP were eligible to be included in our meta-analyses since they were each drawn from three or more individual studies. Both were significantly and positively related to OCB. Compared to PP ($\rho = .29$), conscientiousness ($\rho = .45$) showed a relatively stronger effect size. The Q-statistics related to the PP–OCB correlation were significant, and the credibility intervals were wide and/or contained zero, suggesting significant heterogeneity among effect sizes for the relation between PP and OCB. The Q-statistics related to conscientiousness–OCB were nonsignificant.

Surface acting

All the BFF exhibited nonsignificant or weak relations with surface acting ($\rho < 0.1$). Only extraversion was found to be significantly correlated to surface acting, but the effect size ($\rho = .08$) of its positive relation with surface acting was near zero. The Q-statistics related to all the personality–surface acting relations were significant, and the credibility intervals were wide and/or contained zero, suggesting significant heterogeneity among effect sizes for the relations between these traits and surface acting. We were unable to perform a meta-analysis of PP–surface acting since it was not examined frequently enough ($K < 3$) to be involved in our meta-analyses.

Deep acting

All the BFF showed nonsignificant or weak relations with deep acting. Agreeableness, extraversion, and openness were significantly and positively associated with deep acting, though the effect sizes were very weak ($\rho < .2$). Conscientiousness (95% CI: [-.08, .07]) and neuroticism (95% CI: [-.14, .00]) demonstrated negative relations with deep acting; however, these relations were nonsignificant. The Q-statistics related to all the personality–surface acting relations were significant, and the credibility intervals were wide and/or contained zero, suggesting significant heterogeneity among effect sizes for the relations between these traits and deep acting. We were unable to perform a meta-analysis of PP–deep acting since it was not examined frequently enough ($K < 3$) to be involved in our meta-analyses.

[Please place Table IV about here]

5. Discussion and implications

5.1 Conclusions

The aims of this study were to provide a systematic and meta-analytical review of previous empirical studies on employees' personality traits in the hospitality and tourism context so that research trends and gaps could be identified, and the effects and outcomes of each personality trait could be synthesized. The results of reviewing 105 empirical studies published during 1985–2020 provide important implications for researchers and practitioners as follows.

5.2 Theoretical implications

The results of our systematic review provide some insights into the trends and gaps in personality traits literature. First, this study highlights that although the first study of personality traits in hospitality and tourism industry employees was performed in 1985, it was published in a non-hospitality and tourism journal. It was not until 2006 that a study of personality traits in hospitality employees was published in a hospitality-related journal. However, the present review found a trend of increasing publication of these types of study in hospitality and tourism journals (Table II).

Second, in terms of study context, it is noticeable that hotel employees ($K = 49$) were the most popular samples for personality trait studies. Therefore, there is scope for researchers to conduct studies on employees in other hospitality sectors (e.g., restaurant workers) to provide a more comprehensive understanding of personality traits among hospitality and tourism employees. Moreover, most studies were conducted in America ($N = 39$) and Asia ($N = 36$). Hence, it is highly recommended that future research into personality traits be conducted on other continents in order to expand the current understanding.

Third, it should be highlighted that over 80% of personality traits studies focused on BFF, and that the measurements developed by Goldberg (1999, 2001) were largely employed (25%). It was

also observed that the factors extraversion and neuroticism received relatively more attention from researchers (Figure 3). Future research is highly recommended to include the less-examined personality traits in studies so that results can be sufficiently compared. Another point to be highlighted is that, although the number of studies is still small, there is increasing interest in PP among hospitality and tourism researchers. Therefore, researchers are encouraged to include PP in future studies so that results can be compared.

Next, regarding research design, our review revealed that most personality studies adopted a cross-sectional research approach (95%) and employed regression analysis (42%). Although one's personality might be stable, its influence on one's attitudinal and behavioral consequences may change according to the time and context. Therefore, more longitudinal and multilevel studies are encouraged to provide a deeper understanding of personality traits and their consequences in the hospitality and tourism context. Consequently, SEM and HLM analysis techniques are highly recommended for future studies in order to provide more detailed results.

Further, the findings from our meta-analytical review also provide an important reference for future research that wants to conceptualize their theoretical model regarding the consequences of personality traits. As shown in Table III and Table IV, this study provides robust support for personality traits having a significant relationship (although some relationships are nonsignificant) with both attitudinal and behavioral consequences. Specifically, although the effect sizes were moderate, agreeableness had strongest relations with organizational commitment ($p = 0.27$) and job performance ($p = 0.23$). While openness had a strong effect size and a positive significant relation to job satisfaction ($p = 0.53$), it had a weak but significant relation to deep acting ($p = 0.12$). Extraversion had its strongest relation with job satisfaction while introversion was related to emotional exhaustion ($p = 0.23$) and turnover ($p = 0.20$). It should be noted that neuroticism had a strong effect size and a positive significant relation with emotional exhaustion ($p = 0.53$) while having a moderate but negative significant relation with turnover intention ($p = 0.26$). Another important point to be noted is that conscientiousness had a stronger effect on OCB ($p = 0.45$) than that of PP ($p = 0.29$), and a more salient impact on organizational commitment ($p = 0.36$) than all other consequences. Future studies are encouraged to use the results from this study when developing their research frameworks.

Moreover, the effect sizes in our study provide the insight that employees' personality traits in the hospitality and tourism industry have stronger effects on consequences than those found in the meta-analyses of studies of employees from other industries. For example, as in our study, Chiaburu *et al.* (2011) found that conscientiousness ($p = 0.18$) had a weak effect on OCB, but their effect size was smaller than ours ($p = 0.45$). Conscientiousness also presented the largest effect size in relation to job performance in this study ($p = 0.29$) and in Barrick and Mount's (1991) study ($p = 0.22$). However, this study found that neuroticism ($p = -0.26$) and agreeableness ($p = 0.23$) had larger effect sizes than those in Barrick and Mount's (1991) study ($p = 0.08$ and 0.07 , respectively). Moreover, while Judge *et al.* (2002) found that, in relation to job satisfaction, neuroticism ($p = -0.29$) had the largest effect size and openness had the smallest effect size ($p = -0.05$), this study found the opposite results in the hospitality and tourism context ($p = -0.05$ and 0.53 , respectively). Hence, this study encourages more research investigating these relationships in the hospitality and tourism context so that future meta-analysis studies can use them as part of their sample.

Finally, the significant Q-statistics suggested that moderators should be included in future studies of the relationships presented in this study. Although it might be accepted that personality traits are stable over time, there may be conditions that facilitate or constrain the influence of employees' personality traits on their attitude and behavior. Therefore, to fully understand the

influences of personality traits, we recommend that future studies include moderators such as personal factors and contextual factors in their theoretical model.

5.3 Practical implications

Given that organizational outcomes were meta-analytically examined in relation to personality traits, this study provides several important practical implications for hospitality and tourism organizations. First, utilizing the theory of Person–Environment Fit, human resource management in hospitality and tourism organizations should pay attention to the employee selection process, since different personalities can provide different organization-preferred outcomes. The results of this study warn human resource practitioners to be cautious when hiring employees with neuroticism as, in comparison to other traits, they tend to be strongly associated with high emotional exhaustion and low job performance. Since the nature of work in the hospitality and tourism industry requires employees to interact with customers with diverse emotional conditions and demands (Kim *et al.*, 2015), it could be stressful for neurotic employees to maintain emotional stability (Lee and Madera, 2019). If hiring neurotic staff is unavoidable, they should be deployed where customer interaction is less required. However, given that interacting with customers might not be the only cause of emotional exhaustion in neurotic individuals, human resource practitioners and managers should develop strategies to help them cope with their emotion before it affects their performance.

On the other hand, the results of this study show that human resource practitioners should select employees who have traits of conscientiousness, extraversion, and openness as they are more associated with organization-preferred outcomes. However, when making hiring decisions, personality traits are usually not the main criteria as there are key individual competencies within the job specification that determine suitable candidates. Therefore, this study suggests that the human resource management team consider conducting personality tests as reference information in their selecting and hiring process to identify potential employees who best fit the working environment.

Second, human resource management in hospitality and tourism organizations should provide personality training and development programs for existing employees regardless of their personality traits. Since extraverted and open people are enthusiastic and like to experience new things in life, receiving new training and getting to know new people can likely increase their job satisfaction. Such personality training and development programs would be useful for those who are low in extraversion and high in neuroticism, given that they may have met all the job requirements and do well performing their job, but may not thrive emotionally. Human resource practitioners should provide training and development programs that relate to employees' mindfulness and well-being in addition to performance-related training programs.

Moreover, the results in this study showed that conscientiousness is highly associated with OCB and organizational commitment. With the tendency towards working hard and achievement-driven motivation (Chang and Busser, 2020; Costa and McCrae, 1992), organizations can benefit from providing training and development programs for existing employees who are low in conscientiousness to help them achieve their goals at work. Additionally, hospitality and tourism organizations should support all employees with a working environment where they can be themselves, while also providing the means for self-improvement.

5.4 Limitations and future research

A meta-analysis can be a powerful analytical tool with which to explore and estimate the relationships between personality traits and their consequences. However, several limitations

should be considered when drawing conclusion from the results. First, the sample in this study was derived from limited databases. Only articles published in Hospitality and Tourism Complete and Google Scholar were included in the study; hence, some relevant articles might not have been included. Future research should consider a broader range of databases in order to increase the sample size. Second, only quantitative studies written in English were included in the present review. Therefore, to obtain a more complete picture, future studies should include qualitative research in any systematic review as well as studies written in languages other than English to prevent potential sampling bias. Fourth, due to the limited number of studies in some constructs ($K < 3$), this study could not meta-analyze some potential consequences of personality traits. Therefore, to provide a more comprehensive understanding of the consequences of personality traits, future research should consider other constructs, both positive and negative, that were not included in this study due to the insufficient sample size.

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Table I. Big Five Factors of personality (Barrick and Mount, 1991; Costa and McCrae, 1992)

Factor	Description
Agreeableness	Friendliness or likeableness that refers to being cooperative, collaborative, flexible, kind-hearted, and tolerant.
Conscientiousness	Being disciplined, well-organized, responsible, and thoughtful.
Extraversion	Being sociable, eager to engage with people, gregarious, active, and talkative.
Neuroticism	Being insecure, anxious, depressed, and easily emotional.
Openness	Willingness to learn and experience, being creative, open-minded, and intelligent.

Table II. Summary of systematic review results (total number of studies = 105)

Aspect	Number of studies	Percentage of studies
<i>Journal</i>		
HT	51	48.57
Other	54	51.43
<i>Industry</i>		
Hotel	49	46.67
Restaurant	19	18.10
Unspecified	37	35.23
<i>Location</i>		
America	39	37.14
Asia	36	34.29
Europe	21	20.00
Africa	7	6.67
Australia	2	1.90
<i>Research focus</i>		
Proactive Personality	17	16.19
BFF (Individual)	87	82.86
BFF (Team)	1	0.95
<i>Measurement scale</i>		
<i>Proactive Personality</i>		
Bateman and Crant (1993)	7	41.18
Seibert <i>et al.</i> (1999)	10	58.82
<i>BFF</i>		
Goldberg (1999, 2001)	22	25.00
Costa and McCrae (1992, 1993)	15	17.05
John <i>et al.</i> (1991, 1999)	10	11.36
Other	41	46.59
<i>Research design</i>		
Longitudinal	5	4.76
Cross-sectional	100	95.24
<i>Analysis technique</i>		
HLM	1	0.95
SEM	21	20.00
Regression	45	42.86
Correlation	38	36.19

Note: HT = hospitality and tourism, BFF = big five personality factors, HLM = Hierarchical Linear Modeling, SEM = Structural Equation Modeling

Table III. The influence of personality on hospitality employees' attitudinal work outcomes

Factor	K	N	r	ρ	SD $_{\rho}$	95% CI	80% CR	Q
Organizational commitment								
Agreeableness	4	872	0.23	0.27	0.37	[0.20, 0.35]	[0.06, 0.50]	25***
Conscientiousness	4	872	0.31	0.36	0.27	[0.29, 0.43]	[0.29, 0.42]	6.01
Extraversion	5	1122	0.25	0.32	0.37	[0.24, 0.37]	[-0.02, 0.59]	54***
Neuroticism	5	1122	-0.10	-0.14	0.72	[-0.18, 0.04]	[-0.52, 0.33]	92***
Openness	4	872	0.18	0.21	0.41	[0.14, 0.29]	[0.04, 0.40]	16***
Job satisfaction								
Agreeableness	3	744	0.11	0.14	0.47	[0.05, 0.24]	[0.15, 0.15]	2
Conscientiousness	3	744	0.16	0.22	0.42	[0.12, 0.31]	[0.06, 0.37]	10**
Extraversion	4	994	0.29	0.40	0.30	[0.31, 0.47]	[0.22, 0.55]	14**
Neuroticism	5	1166	-0.05	-0.05	0.66	[-0.15, 0.01]	[-0.46, 0.34]	63***
Openness	4	3893	0.45	0.53	0.20	[0.51, 0.57]	[0.35, 0.76]	111***
Emotional exhaustion								
Agreeableness	3	509	-0.19	-0.23	0.76	[-0.33, -0.12]	[-0.28, -0.17]	4
Conscientiousness	3	509	-0.20	-0.23	0.78	[-0.33, -0.13]	[-0.40, -0.07]	9**
Extraversion	5	956	-0.19	-0.23	0.79	[-0.30, -0.15]	[-0.49, -0.04]	35***
Neuroticism	6	1128	0.43	0.53	0.14	[0.47, 0.58]	[0.52, 0.52]	3
Openness	3	509	-0.12	-0.15	0.70	[-0.26, -0.05]	[-0.15, -0.15]	2
Turnover intention								
Extraversion	3	620	-0.17	-0.20	0.74	[-0.29, -0.11]	[-0.26, -0.14]	4
Neuroticism	3	707	-0.02	-0.06	0.62	[-0.13, 0.06]	[-0.28, -0.24]	21***

Note: K = number of studies, N = cumulative sample size, r = mean correlation, ρ = average corrected correlation, SD $_{\rho}$ = standard deviation of ρ , CI = confidence interval, CR = credibility interval, Q = Q-statistic, **P<0.01, ***P<0.001

Table IV. The influence of personality on hospitality employees' behavioral work outcomes

Factor	K	N	r	ρ	SD ρ	95% CI	80% CR	Q
Job performance								
Agreeableness	6	1133	0.18	0.23	0.42	[0.15, 0.29]	[0.03, 0.42]	25***
Conscientiousness	7	1374	0.23	0.29	0.39	[0.22, 0.35]	[0.01, 0.57]	52***
Extraversion	6	1133	0.19	0.23	0.44	[0.16, 0.30]	[-0.12, 0.59]	66***
Neuroticism	4	852	-0.21	-0.26	0.80	[-0.16, -0.17]	[-0.46, -0.03]	22***
OCB								
Conscientiousness	3	546	0.36	0.45	0.20	[0.35, 0.54]	[0.45, 0.45]	0.5
Proactive personality	3	984	0.24	0.29	0.35	[0.22, 0.36]	[0.10, 0.49]	21***
Surface acting								
Agreeableness	5	1421	0.01	0.01	0.58	[-0.06, 0.08]	[-0.18, 0.21]	23***
Conscientiousness	5	1421	-0.04	-0.05	0.63	[-0.12, 0.02]	[-0.21, 0.11]	17**
Extraversion	6	1618	0.06	0.08	0.53	[0.01, 0.14]	[-0.05, 0.19]	14*
Neuroticism	6	1618	-0.01	-0.03	0.61	[-0.09, 0.05]	[-0.24, 0.21]	31***
Openness	5	1421	0.03	0.05	0.55	[-0.02, 0.12]	[-0.07, 0.17]	11*
Deep acting								
Agreeableness	5	1421	0.11	0.15	0.48	[0.08, 0.22]	[-0.01, 0.31]	17**
Conscientiousness	5	1421	-0.005	-0.01	0.60	[-0.08, 0.07]	[-0.21, 0.22]	26***
Extraversion	6	1618	0.10	0.12	0.54	[0.06, 0.19]	[-0.30, 0.58]	114***
Neuroticism	6	1618	-0.05	-0.08	0.64	[-0.14, 0.00]	[-0.26, 0.12]	24***
Openness	5	1421	0.07	0.12	0.52	[0.04, 0.20]	[-0.16, 0.39]	35***

Note: K = number of studies, N = cumulative sample size, r = mean correlation, ρ = average corrected correlation, SD ρ = standard deviation of ρ , CI = confidence interval, CR = credibility interval, Q = Q-statistic, OCB = organizational citizenship behavior, *P<0.05, **P<0.01, ***P<0.001

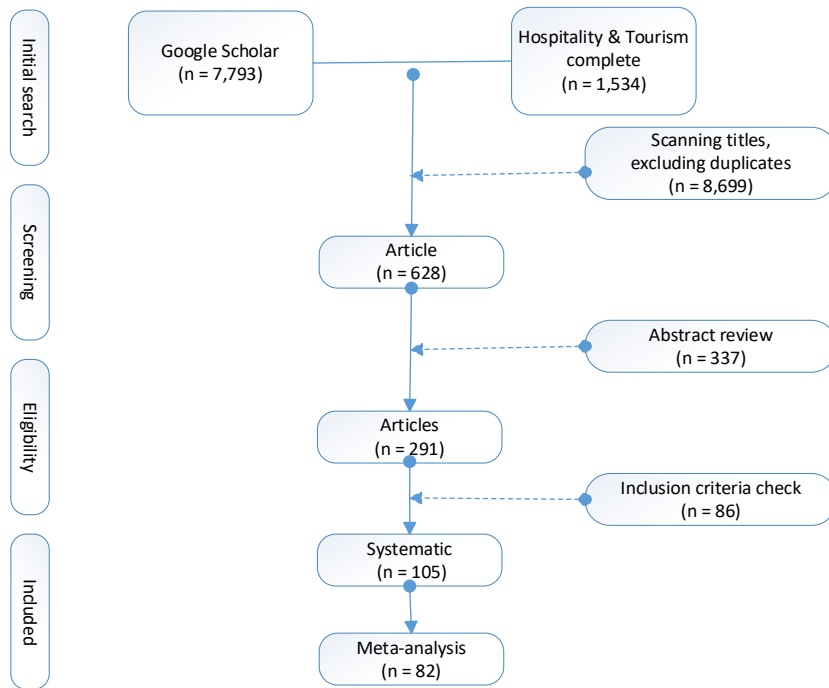


Figure 1. Process of searching for and selecting publications (n = number of articles)

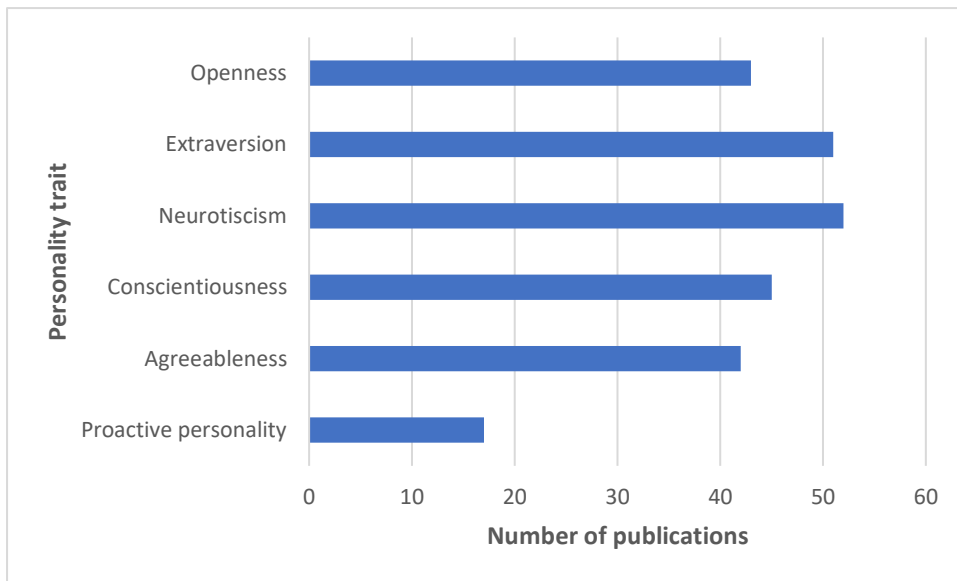


Figure 2. Total number of publications from 1985–2020 on each personality trait

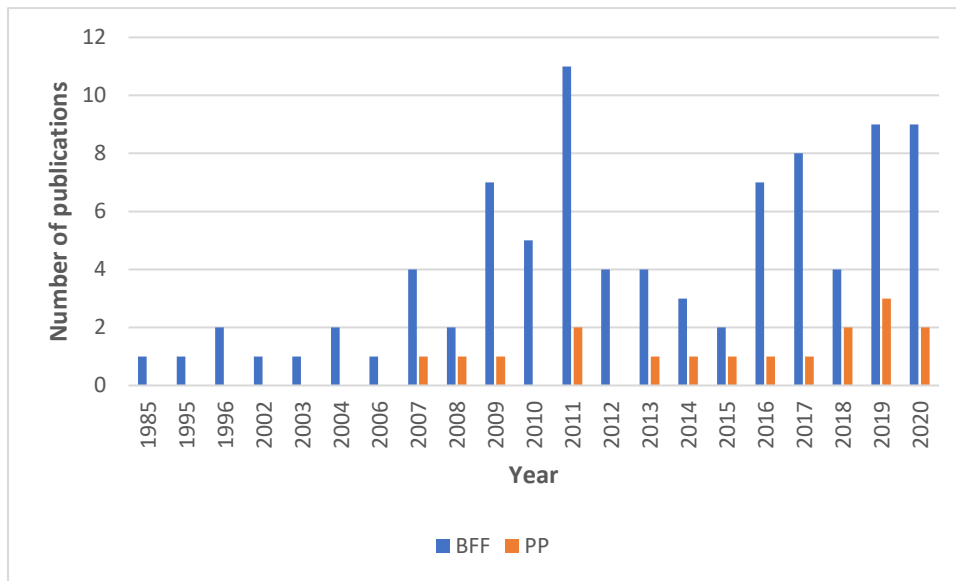


Figure 3. Number of publications each year (1985–2020) on big five personality factors (BFF) and proactive personality (PP)