

The Influence of Individual Characteristics and Work Environment on Job Satisfaction Mediated by Teamwork: Evidence from UD Surya Pematang Siantar

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ABSTRACT

This study examines the relationships among individual characteristics, work environment, teamwork, and job satisfaction among employees of UD Surya Pematang Siantar. A quantitative cross-sectional census survey involved 52 employees using a structured questionnaire with a five-point Likert scale. The results show that individual characteristics were positively and significantly associated with teamwork ($\beta = 0.515$, $t = 4.252$, $p < 0.001$), while work environment was also positively and significantly associated with teamwork ($\beta = 0.617$, $t = 5.548$, $p < 0.001$). Teamwork was positively and significantly associated with job satisfaction ($\beta = 0.668$, $t = 6.341$, $p < 0.001$). The findings indicate that employee capabilities and supportive working conditions are associated with stronger teamwork, while teamwork is associated with more favorable job satisfaction. Because the original mediation output is unavailable, this revised article does not claim or statistically infer a mediating effect of teamwork. The findings are interpreted as associations within the participating firm and should not be generalized beyond the study context.

INTRODUCTION

Job satisfaction remains an important issue in human resource management because employees' attitudes toward their work are closely associated with important organizational outcomes. Employees who perceive their work positively are more likely to develop favorable attitudes toward their jobs and organizations. Previous research has shown that individual differences are relevant to job satisfaction. In particular, meta-analytic evidence indicates that core self-evaluations, including self-esteem, generalized self-efficacy, locus of control, and emotional stability, are significantly related to job satisfaction (Judge & Bono, 2001). This suggests that employees' individual characteristics should be considered when explaining differences in how employees experience their work.

Individual characteristics are particularly relevant in organizational settings because employees bring different abilities, experiences, expectations, needs, and personal attributes into the workplace. These differences may influence how employees respond to work demands and interact with colleagues. The person-environment fit literature further suggests that the compatibility between individuals and their work-related environments is associated with important employee attitudes and outcomes (Kristof-brown et al., 2005). Accordingly, understanding employees' individual characteristics provides an important basis for explaining how they participate in collective work and experience job satisfaction.

In addition to individual characteristics, the work environment represents an important contextual factor in shaping employees' work experiences. The work environment includes not only physical conditions but also social and interpersonal conditions surrounding employees while performing their jobs. A meta-analysis by (Humphrey et al., 2007) demonstrated that social and contextual characteristics of work contribute additional explanatory power for job satisfaction beyond motivational characteristics of work. This finding indicates that employees' satisfaction is influenced not only by the content of their jobs but also by the broader conditions in which work is performed.

The importance of the work environment becomes even more evident when employees are required to work collectively. A supportive environment can facilitate communication, interpersonal interaction, trust, and coordination among employees. Conversely, inadequate physical conditions or unfavorable relationships with supervisors and coworkers may constrain employees' ability to cooperate effectively. Thus, the work environment may influence employee outcomes not only directly but also through interpersonal processes occurring within work groups. One such interpersonal process is teamwork. Modern organizations increasingly rely on teams because many organizational tasks require coordination among individuals with complementary skills and responsibilities. Team effectiveness research emphasizes that team processes and emergent states are important mechanisms linking individual and contextual inputs to team outcomes (Mathieu et al., 2008). Teamwork involves cooperation, communication, mutual support, trust, and coordination among members in pursuing shared objectives. Consequently, the quality of teamwork may

influence how employees perceive their work and their relationships within the organization.

The relationship between teamwork and job satisfaction has also received empirical support. (Griffin et al., 2001), using data from 4,708 employees across 48 manufacturing companies, found a significant relationship between teamwork and job satisfaction and identified a complex mediational pathway involving teamwork and job-related experiences. Their findings demonstrate that teamwork is not merely a mechanism for accomplishing organizational tasks but may also influence employees' experiences and attitudes toward their jobs. Similarly, research on coworker relationships indicates that social interactions with colleagues are associated with employees' work attitudes and other important outcomes (Chiaburu & Harrison, 2008).

Theoretically, these relationships suggest that teamwork may provide a mechanism through which individual and contextual characteristics are translated into employee job satisfaction. Employees with favorable individual characteristics may be more capable of adapting to others, contributing to group activities, and maintaining constructive interpersonal relationships. At the same time, a supportive work environment can provide the conditions necessary for employees to communicate, trust one another, and coordinate their activities effectively. When these conditions support effective teamwork, employees may experience greater social support, cooperation, and positive experiences in their work, which can contribute to higher job satisfaction.

This relationship is particularly relevant in small and medium-sized enterprises (SMEs), where organizational activities often depend heavily on direct interaction and coordination among employees. Unlike large organizations with highly specialized structures, employees in SMEs may perform multiple operational responsibilities and interact closely with coworkers and supervisors. Consequently, individual characteristics, the work environment, and teamwork can become particularly important components of human resource management in such organizations.

This context is reflected in UD Surya Pematangsiantar, an SME engaged in the trading and distribution of agricultural products. The company employs 52 workers and conducts operational activities involving the handling, storage, and distribution of agricultural products for domestic and international markets. Such operational activities require employees to coordinate their work and interact with one another. Therefore, the quality of individual characteristics, work environment, and teamwork is potentially important for employees' job satisfaction. The preliminary findings from UD Surya Pematangsiantar indicate several conditions that warrant further investigation. Problems have been identified in employee trust and willingness to assist colleagues, as well as in the tendency of some employees to prioritize individual interests over collective interests. In relation to individual characteristics, concerns have been identified regarding employee needs and expectations, particularly perceptions of compensation and career opportunities. The work environment also presents challenges, including limitations in physical facilities and less optimal relationships between employees and supervisors. These conditions indicate that

the organization may need to strengthen teamwork as part of its efforts to improve employees' work experiences.

Although previous studies have established the importance of individual characteristics, work environment, and teamwork for employee attitudes and organizational outcomes, these factors have often been examined through separate relationships. The present study brings these variables together in one empirical model in the context of an Indonesian SME. The study focuses on three relationships that can be supported by the available statistical results: individual characteristics and teamwork, work environment and teamwork, and teamwork and job satisfaction.

Therefore, this study examines the relationships among individual characteristics, work environment, teamwork, and job satisfaction at UD Surya Pematang Siantar. Specifically, the study examines (1) whether individual characteristics are positively associated with teamwork, (2) whether work environment is positively associated with teamwork, and (3) whether teamwork is positively associated with job satisfaction. The study contributes contextual evidence from an Indonesian SME and provides practical implications for employee development, workplace conditions, and teamwork.

LITERATURE REVIEW

Individual Characteristics

Individual characteristics represent differences among employees that may influence how they behave, interact, and contribute within work teams. Individual attributes such as ability and personality can affect team processes and effectiveness. (Barrick et al., 1998), for example, found that team members' ability and personality were related to work-team processes and team effectiveness. Similarly, (Peeters et al., 2006) found that team personality composition was associated with team performance. These findings indicate that individual-level characteristics can influence how employees function within collective work settings.

Work Environment

Work environment refers to the physical and social conditions surrounding employees during work. A supportive work environment can facilitate employees' comfort, communication, and interaction, thereby supporting effective work behavior. Previous research has shown that workplace conditions are associated with employee work outcomes and satisfaction (Al-Omari & Okasheh, 2017; Newsham et al., 2009). In a team-based workplace, a supportive environment can also encourage communication, cooperation, and coordination among employees. Therefore, work environment is considered an important contextual factor that may influence teamwork and job satisfaction.

Teamwork

Teamwork refers to employees' collaborative efforts to coordinate activities and achieve shared goals. Effective teamwork involves cooperation, communication, mutual support, and coordination among team members. Research on work teams emphasizes that team processes are important for

transforming individual inputs into collective outcomes. In addition, teamwork has been empirically associated with employee job satisfaction. (Kalisch et al., 2010) using data from 3,675 nursing staff across 80 patient-care units, found that employees who reported higher levels of teamwork also reported higher job satisfaction.

Job Satisfaction

Job satisfaction refers to employees' overall evaluation of their work and work experiences. It represents an important employee attitude that may be influenced by both individual and organizational factors. Previous research has shown that job satisfaction is associated with employees' perceptions of their work characteristics, social relationships, and working conditions (Faragher et al., 2005; Spector, 1997). Job satisfaction may therefore reflect how employees evaluate various aspects of their work and workplace. In organizational settings, job satisfaction can be influenced by employees' individual characteristics as well as the conditions in which they perform their work. A positive work experience may contribute to more favorable evaluations of the job, whereas unfavorable workplace conditions may reduce satisfaction. Therefore, job satisfaction is positioned as the main employee outcome examined in this study.

Previous Studies and Research Gap

Previous research has demonstrated that individual attributes can influence team processes and effectiveness (Barrick et al., 1998; Peeters et al., 2006), while teamwork has been associated with employee job satisfaction (Kalisch et al., 2010). The present study integrates these relationships in an Indonesian SME context and examines the three component relationships using the available survey results. The study does not make a statistical mediation claim because the original indirect-effect output is unavailable.

Research Framework

Based on the literature, the framework positions individual characteristics and work environment as antecedents of teamwork, while job satisfaction is treated as the employee outcome. The revised framework is intentionally limited to the three relationships for which statistical results are available in the original manuscript.

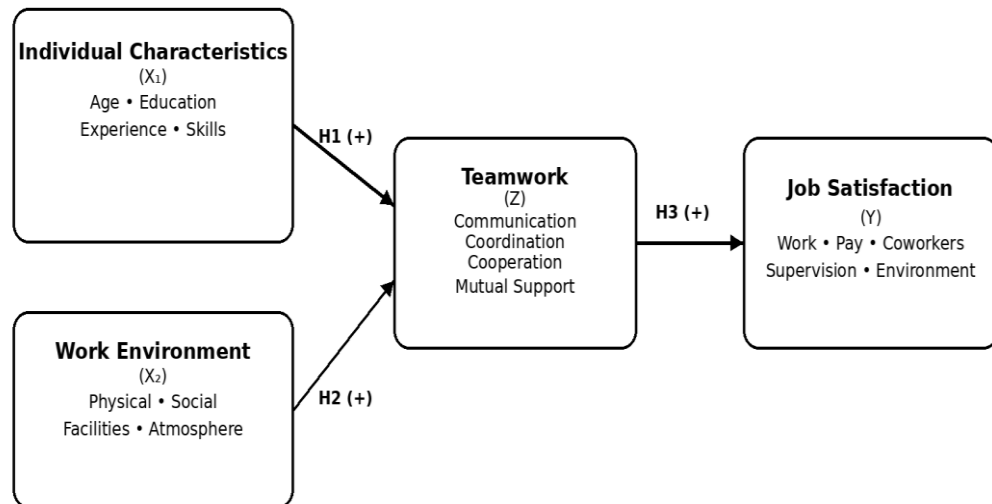


Figure 1. Research Framework

Hypothesis Development

Individual Characteristics and Teamwork

Individual characteristics may influence employees' ability to participate effectively in collaborative activities. Employees' expertise and individual capabilities can affect how they contribute to shared tasks and interact with colleagues. (Sonnentag & Volmer, 2009) found that individual expertise significantly predicted employees' contributions to teamwork processes in professional teams. This suggests that individual capabilities can shape employees' participation in teamwork.

H1: Individual characteristics have a positive and significant association with teamwork.

Work Environment and Teamwork

The work environment provides the conditions in which employees communicate, interact, and perform their responsibilities. A supportive work environment can facilitate cooperation and coordination by creating favorable conditions for employees to work collectively. Research on work environment and teamwork has also reported a significant relationship between workplace conditions and teamwork-related processes (Rachmawati et al., 2021).

H2: Work environment has a positive and significant association with teamwork.

Teamwork and Job Satisfaction

Teamwork enables employees to coordinate responsibilities, exchange support, and work toward common objectives. Effective teamwork may create positive work experiences and strengthen employees' perceptions of their jobs. (Griffin et al., 2001) , based on data from 4,708 employees across 48 manufacturing companies, found a relationship between teamwork and job satisfaction.

H3: Teamwork has a positive and significant association with job satisfaction.

RESEARCH METHODOLOGY

This study employed a quantitative cross-sectional survey design to examine relationships among individual characteristics, work environment, teamwork, and job satisfaction. The study was conducted at UD Surya Pematang Siantar and involved all 52 employees through a census approach. Data were collected using a structured questionnaire with a five-point Likert scale. Because the study covered the full employee population of the participating firm, the findings describe relationships within this firm rather than a statistically representative sample of SMEs.

The questionnaire measured individual characteristics, work environment, teamwork, and job satisfaction using the dimensions established in the study. The original statistical manuscript reports mean scores and regression results, but the detailed questionnaire file, respondent-level dataset, demographic distribution, and complete validity/reliability output were not retained. Accordingly, the revised manuscript does not invent or reconstruct these statistics. The authors should add the original instrument and respondent characteristics if they become recoverable.

The original manuscript stated that teamwork was a mediating variable. However, the raw respondent-level dataset and the original mediation/bootstrapping output are no longer available. Therefore, the revised analysis is restricted to the direct relationships for which statistical results are documented in the surviving manuscript. The study does not estimate or claim indirect, direct, or total mediation effects.

RESEARCH RESULT

The study involved 52 employees of UD Surya Pematang Siantar. The reported mean scores were 3.79 for individual characteristics, 3.82 for work environment, 3.76 for teamwork, and 3.82 for job satisfaction. The surviving manuscript reports that the normality assumption was met. The multiple regression model predicting teamwork was statistically significant ($F = 18.624$, $p < 0.001$) and explained 43.2% of the variance in teamwork ($R^2 = 0.432$).

The partial regression results showed that individual characteristics had a positive and significant effect on teamwork ($\beta = 0.515$, $t = 4.252$, $p < 0.001$). Work environment also had a positive and significant effect on teamwork ($\beta = 0.617$, $t = 5.548$, $p < 0.001$). These results support H1 and H2. Furthermore, teamwork had a positive and significant effect on job satisfaction ($\beta = 0.668$, $t = 6.341$, $p < 0.001$). The model showed that teamwork explained 44.6% of the variance in job satisfaction ($R^2 = 0.446$), supporting H5.

Table 1. Hypothesis Testing Results

Hypothesis	Relationship	β	t	p	Decision
H1	Individual Characteristics → Teamwork	0.515	4.252	<0.001	Supported

Hypothesis	Relationship	β	t	p	Decision
H2	Work Environment → Teamwork	0.617	5.548	<0.001	Supported
H3	Teamwork → Job Satisfaction	0.668	6.341	<0.001	Supported

Note: β = standardized regression coefficient; t = t -statistic; p = significance level.

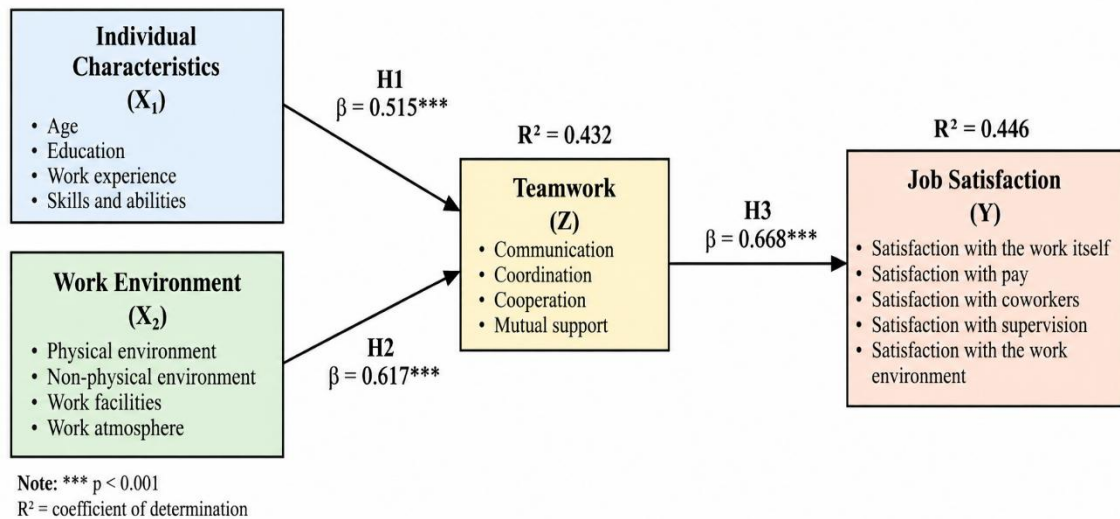


Figure 2: Structural Result of Research Model

DISCUSSION

The findings show that individual characteristics have a positive and significant effect on teamwork. This result indicates that employees' personal attributes can influence how effectively they participate in collective activities. Individual differences in capabilities and other personal characteristics may provide complementary resources that support team functioning. Recent evidence on multicultural teams similarly demonstrates that individual characteristics such as adaptability, cultural sensitivity, cohesion, and diversity are relevant to team outcomes (Guzmán-Rodríguez et al., 2023). In the context of UD Surya Pematangsiantar, this finding suggests that recognizing and developing employees' individual strengths may help improve cooperation and coordination within the workplace.

The analysis also demonstrates that work environment has a positive and significant effect on teamwork. This finding indicates that employees are more likely to work collaboratively when workplace conditions facilitate interaction and coordination. A favorable work environment can provide the social and organizational conditions required for employees to communicate and perform interdependent tasks effectively. The present finding is therefore important for UD Surya Pematangsiantar because improvements in workplace conditions may strengthen teamwork beyond the influence of individual employee characteristics.

Finally, teamwork has a positive and significant effect on job satisfaction. This finding suggests that effective teamwork can create supportive interpersonal relationships and facilitate employees' daily work activities.

Through cooperation, employees can exchange assistance, coordinate responsibilities, and obtain support from colleagues when dealing with work demands. This finding is consistent with the meta-analysis conducted by (Ng & Sorensen, 2008), which demonstrated a positive relationship between coworker support and job satisfaction. Therefore, strengthening cooperation and supportive relationships among employees may contribute to higher job satisfaction at UD Surya Pematangsiantar.

Overall, the findings suggest that individual characteristics and work environment are important foundations for teamwork, while teamwork itself is an important factor associated with job satisfaction. For UD Surya Pematangsiantar, the results imply that human resource practices should not focus only on individual employees but also on creating workplace conditions that enable employees to cooperate effectively.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that individual characteristics and work environment are important factors in strengthening teamwork at UD Surya Pematangsiantar, while teamwork itself contributes significantly to employee job satisfaction. The findings demonstrate that employees' individual characteristics have a positive and significant effect on teamwork, indicating that employees' abilities and personal attributes can support effective collaboration. The work environment also has a positive and significant effect on teamwork, with a stronger contribution than individual characteristics, suggesting that conducive workplace conditions are particularly important in facilitating employee cooperation. Furthermore, teamwork has a positive and significant effect on job satisfaction, indicating that effective cooperation, coordination, and mutual support among employees can contribute to more positive work experiences. Based on these findings, management should strengthen employees' individual capabilities while simultaneously creating a supportive work environment that encourages communication, cooperation, and mutual assistance.

Particular attention should be given to maintaining a workplace that facilitates effective teamwork because teamwork represents an important factor associated with employee job satisfaction. Future research should consider a larger and more diverse sample and examine additional organizational and individual factors that may contribute to job satisfaction. Future studies may also employ longitudinal or more comprehensive mediation designs to further examine the mechanisms through which individual characteristics and work environment influence employee outcomes.

ADVANCED RESEARCH

This study has several limitations. First, the cross-sectional design limits temporal interpretation and does not establish causal direction. Second, the study covers only one firm and 52 employees, which limits external generalizability. Third, the use of self-reported questionnaire data collected at one time point may introduce common method bias. Fourth, the original respondent-level dataset, detailed demographic table, instrument documentation, and mediation/

bootstrapping output were not retained. Consequently, the revised article cannot independently reproduce the original mediation analysis and does not claim an indirect effect. Future research should use larger multi-firm samples, transparent instrument documentation, and bootstrapped mediation analysis based on recoverable respondent-level data.

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