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Examining Co-Worker Relations as a Mediator of Career Development and Job Satisfaction in a Selected University

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Abstract:

Job satisfaction remains a persistent challenge for organisations, including higher education institutions, because non-academic staff members provide essential support functions. Although career development is a determinant of job satisfaction across multiple sectors, research on its operational mechanisms in higher education institutions in developing nations remains scarce. The study examines how co-worker relationships affect the relationship between career development and job satisfaction among non-academic staff at a South African university of technology. The researchers used a quantitative research design to gather data from 280 non-academic staff members who completed a structured questionnaire. The researchers used regression-based mediation analysis to assess the proposed relationship model. The results show that career development directly benefits job satisfaction and provides an indirect benefit through co-worker relationships. The relationship between career development and job satisfaction showed that co-worker relations partially mediated career development's impact on job satisfaction. The study demonstrates how businesses should manage their resources through career development programmes, which also help employees build beneficial relationships at work. The findings provide valuable guidance to managers and human resource professionals who want to improve employee satisfaction while increasing organisational productivity.

Keywords:

Career Development, Co-worker Relations, Higher Education, Job Satisfaction, University

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Introduction

Higher education institutions have been struggling in terms of job satisfaction. Job satisfaction is a key ingredient in attaining workplace objectives (Suriadi et al., 2024). Higher education institutions are key players in society because they produce graduates for industry, and are also key in community service, research and innovation. However, in these institutions job satisfaction remains a perennial problem which threatens the attainment of these outputs which are of significance in an economy (Ayodo, 2022). Mampuru et al. (2024) assert that the efficiency of higher education institutions is largely dependent on job satisfaction. Yusuf and Nuraeni (2023) are of the view that higher education institutions are now more concerned on keeping their staff satisfied with their jobs. This is because job satisfaction is key to employee retention and performance.

Job satisfaction has been identified as the dominant intrinsic motivator that contributes positively towards staff retention across all levels in education institution, although focus is perceived to be mainly on academics overlooking the non-academic staff (Molokwane, 2005). Non-academic staff are regarded as non-teaching staff or support staff. Muleya et al. (2022) assert that there is potential for attaining job satisfaction amongst non-academic staff through career development. Otache and Inekwe (2022) is of the view that universities need to treat all staff members as assets. This includes more emphasis on career development and job satisfaction. Kasalak et al. (2022) assert that universities compared to other institutions largely rely on job satisfaction for performance. This is supported by Ayodo (2022), who found that job satisfaction can unlock a lot of opportunities for universities.

However, there is a plethora of knowledge gaps existing. First, most research on job satisfaction has targeted academic staff resulting in a gap on job satisfaction and career development in universities (Suriadi et al., 2024). Second, Muleya et al. (2022) point out that most research traditions have focused on job satisfaction and career development in higher education institutions in Europe, Asia and America, resulting in gap in Africa. Third, research on job satisfaction and career development has focused on linear relationships, while this may be mediated by another factor (Ayodo, 2022). Hence, this research closes this gap by interrogating the mediating role of co-worker relations on the influence of career development on job satisfaction at a selected university of technology in KwaZulu-Natal, focusing on non-academic staff. This study was guided by the following research objectives:

1. To determine the influence of career development on job satisfaction at the university.
2. To identify the influence of co-worker relations on career development at the university.
3. To establish the influence of co-worker relations on job satisfaction at the university.

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Literature Review

Super's career development theory

The research was guided by Dold Super's career development theory. The theory is based on self-concepts related to leadership identity and gender stereotypes. Super's work is usually used to explain career choice and development. According to the theory, career development is a lifelong process of making career decisions. The theory also shows that career development is a necessary ingredient for motivation, job satisfaction and performance (Super & Jordaan, 1973). The theory provides an essential mechanism for elaborating why career development may influence co-worker relations. Career development is a lifelong process through which employees develop their self-concepts within work roles, according to the theory. This assumption shows that career development does not only improve employees' skills or promotion prospects; it also shapes how employees understand their place, value, and future within the organisation (Greer et al., 2024). According to the theory, once employees perceive that the organisation supports their career growth, they will experience role clarity, confidence, psychological security, and a sense of organisational belonging. This therefore fosters encouraging knowledge-sharing, peer support, mentoring, and cooperation among colleagues. The theory was used in this study because it has been used to substantiate the effects of job satisfaction on performance (Greer et al., 2024).

Super's theory assumes that career development is not an individual process. The theory elaborates that the employees construct and express their self-concept within an organisational setting. The theory also elucidates that the benefits derived from career development do not automatically transfer to job satisfaction (Super & Jordaan, 1973). The theory states that supportive workers are an essential ingredient in career development, which in turn yields job satisfaction. The co-worker relations are critical in the relationship between career development and job satisfaction in terms of peer support, knowledge-sharing, mentoring, encouragement, and cooperation, according to Super's theory (Greer et al., 2024). Hence, the need for this research to use co-worker relationships as a mediating variable.

Social exchange theory

The social exchange theory was also used in this research. The social exchange theory was propounded by with Homans in 1958 and later developed by Blau in 1964 (Lee et al., 2023). The theory asserts that relationships at the workplace are based on reciprocity. For example, where employees perceive organisational support, employees are likely to perform efficiently and effectively (Lee et al., 2023). In this research social exchange theory contributes by indirectly elaborating that career development can signal organisation's investment in employees' growth. This becomes evidence of institutional support,

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and they are likely to reciprocate through positive workplace attitudes and behaviours, including cooperation, trust, commitment, and constructive engagement with colleagues (Xuecheng et al., 2022).

This theory was included in this research because it also justifies the mediating role of co-worker relations in the interaction of job satisfaction and career development. While Super's theory explains career development as a lifelong process through which employees develop and express their occupational self-concept, social exchange theory explains how such career support becomes translated into positive social relations at work. In a nutshell, the theory elucidates that career development may enhance job satisfaction because it creates a sense of obligation, trust, and mutual support that improves co-worker relations (Xu et al., 2022). Hence, there was need to include co-worker relations as a mediator, since the benefits of career development are partly channelled through improved reciprocal relationships among employees before influencing job satisfaction.

Career development and job satisfaction

Studies have indirectly shown the influence of career development and job satisfaction. For example, Prayudi and Komariyah (2023) demonstrate that career development enhances job satisfaction. This is concurred by Seno et al. (2023) who state that job satisfaction is dependent on career development. However, other studies indicate that the influence of career development on job satisfaction is dependent on other factors such as financial rewards, organizational culture and supervision (Hasan et al., 2022). This is corroborated by Andi et al. (2022) who show that the relationship between career development and job satisfaction is not linear, as it is dependent on other factors. Seno et al. (2023) is of the view that research on career development and job satisfaction should focus on combining career development with other strategies to enhance job satisfaction

These studies on career development and job satisfaction create an important debate. In as much career development is widely recognised as beneficial, its effect on job satisfaction may be strengthened, weakened or explained through other workplace experiences. For example, in the higher education context, this debate is of critical importance given that non-academic staff often work in interdependent administrative systems where career growth is experienced not only individually but also socially through interaction with colleagues.

Career development and co-worker relations

Multiple researchers have investigated indirectly the influence of career development on co-worker relations. Some researchers have alluded that this relationship is positive (Larasati & Wisesa, 2023). This is substantiated by Abugre & Acquaah (2022) who indicate that career development leads to good co-worker relations. However, other researchers have indicated that career development and co-worker relations have a negative relationship, as career development yields jealous and conflicts at the

workplace (Gaire, 2023). This is also observed by Horak et al. (2024) who submit that the relationship between career development on co-worker relations is not always positive. Other researchers argue that the relationship between career development on co-worker relations, is dependent on multiple factors such as reward system, leadership style and organizational culture (Huaman-Ramirez & Lahlouh, 2023). This is supported by Quadri (2022) who observes that career development alone cannot enhance co-worker relations. The contrasting findings elaborate that career development can either promote cooperation or trigger competition, depending on how it is managed and experienced in the workplace. In higher education settings where non-academic staff often depend on teamwork and administrative coordination, fair and supportive career development is likely to improve co-worker relations.

Co-worker relations and job satisfaction

Researchers have also investigated the relationship between co-worker relations and job satisfaction. Research by Bella (2023) demonstrates that there is a positive relationship between co-worker relations and job satisfaction. This is supported by Haitao (2022) who establishes that good co-worker relations are essential for high levels of job satisfaction. However, some researchers such as Lee et al. (2023) demonstrate that there is more job satisfaction than co-worker relations. For example, Hanafin et al. (2022) demonstrates that while co-worker relations are key for job satisfaction, other factors such as leadership and supervisory are important as well. This also resonates with Mardhiko et al. (2025) who posits that co-worker relations alone has a weak explanatory power for job satisfaction. House et al. (2022) recommends that organisations need to improve co-worker relations, at the same time implement other initiatives such as good leadership style to enhance job satisfaction. This indicates that the unresolved issue is therefore not whether co-worker relations matter, but how they operate together with career development to shape job satisfaction. Therefore, in this research co-worker relations are expected to improve job satisfaction as they provide the immediate social environment through which employees experience support, belonging and cooperation at work.

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Conceptual framework

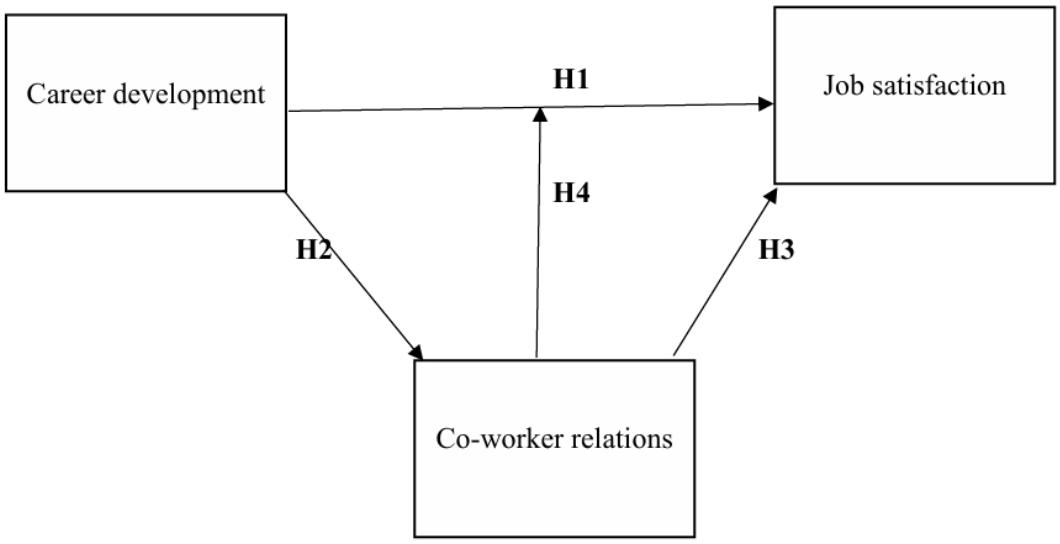

Figure 1: Conceptual Framework

Figure 1 above shows the proposed conceptual framework for this investigation. Career development is the independent variable of this research. Seno et al. (2023) asserts that career development is the process of improving an employee's knowledge, skills and job status. The dependent variable of this research is job satisfaction. According to Andi et al. (2022) job satisfaction is the extent to which an employee is happy and enthused by their job. Finally, co-worker relations is the mediating variable of this research. Co-worker relations are either positive or negative relations between an employee and other employees within the workplace (Gaire, 2023). The gap addressed by this conceptual framework is by showing the relationship between co-worker relations, career development and job satisfaction among non-academic staff in a higher education institution. The following hypotheses were developed:

H1: Career development has a positive influence on job satisfaction.

H2: Career development has a positive influence on co-worker relations.

H3: Co-worker relations have a positive influence on job satisfaction.

H4: Co-worker relations mediate the influence of career development on job satisfaction.

Research Methodology

The research adopted a quantitative research design because it aimed at measuring the mediating role of one variable on the relationship of other two variables. In addition, quantitative research methodology

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was adopted because the research aimed at testing hypotheses. The target population involved 1180 non-academic staff at Durban University of Technology. Sample size was determined using Sekaran and Bougie (2016) sample size table. According to the sample size table, a population of 1180 yields a sample size of 291. Data collection was done with the use of a closed-ended questionnaire. The closed-ended questionnaire was self-administered. The questionnaire was on a five-point Likert scale for other sections other than demographic data. Data analysis was carried out using the Statistical Package for Social Sciences (SPSS) version 30 for Windows. Regression-based procedure was used to test mediation. The first step was to determine direct effect of career development on job satisfaction. The second step involved testing the effect of career development on co-worker relations. Third, the effect of co-worker relations on job satisfaction was tested. The final step involved entering career development and co-worker relations simultaneously to determine the direct effect of career development on job satisfaction as a mediator. The indirect effect utilised bootstrapped confidence intervals based on 5,000 resamples.

Regression analysis was used to test linear and mediating relationships. The research adhered to ethics. Ethical principles such as anonymity, privacy, voluntariness and autonomy were strongly adhered to. This was strengthened by ethical clearance obtained from Durban University of Technology Institutional Research Ethics Committee, and the clearance number is 051/20.

Results

This section presents the findings of the study. The section first explores the demographics of the respondents, and results from preliminary tests such as reliability, sample adequacy and factor analysis, to show that data collected had no issues. The section concludes by demonstrating the causal relationships and mediating role through regression analysis.

Biodata	Percentage
Gender	
Female	53.5%
Male	46.7%
Status of employment	
Permanent	46%
Contract	54%
Period of employment	
1-5 years	19.6%

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6-10 years	36.30%
11-15 years	24.6%
16-20 years	15.8%
21 years and above	5%
Age	
20-25	14%
26-30	27%
31-35	24%
36-40	23%
41-45	8%
45 and above	4%
Education	
Matric	35.8%
Diploma/bachelor's degree	47.5%
Honours degree/Btech	14.2%
Masters	2.5%

Table 1: Demographics of Respondents

A total of 280 respondents completed and returned the closed-ended questionnaire. The biodata reveals some key characteristics of the studied population. Regarding gender, the sample was slightly female dominated, with 53.5% female and 46.7% male. In terms of employment status, a majority (54%) are on contract, while 46% hold permanent positions. In terms of the period of employment, the data shows a diverse distribution. The largest group (36.30%) has been employed for 6-10 years, followed by 11-15 years (24.6%) and 1-5 years (19.6%). A smaller percentage have been employed for longer tenures: 15.8% for 16-20 years and only 5% for 21 years or more. The age distribution indicates a relatively young workforce: the largest group (27%) falls in the 26-30 age range, followed by 31-35 (24%) and 36-40 (23%). A significant portion, 14%, are aged 20-25, while 8% are between 41-45, and only a small 4% are 45 or older. The education level highlights a varied educational background within the sample. The largest segment (47.5%) has a Diploma or Bachelor's degree. A notable proportion, 35.8%, have

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completed Matriculation, while 14.2% have Honours degrees or BTech qualifications, and a smaller 2.5% possess a Master's degree.

Reliability tests

Reliability tests were performed using Cronbach Alpha. Table 2 below shows the reliability test scores for each dimension.

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Career development	.857	.806	10
Co-worker relations	.914	.901	10
Job satisfaction	.868	.808	10

Table 2: Reliability Scores

Table 2 presents the reliability scores for three key variables in the study: career development, co-worker relations, and job satisfaction. The Cronbach's Alpha values are all above .80, indicating a high degree of reliability for each scale. Co-worker relations demonstrate the highest reliability with a Cronbach's Alpha of .914. Job satisfaction and career development also have strong internal consistency, with Cronbach's Alpha values of .868 and .857, respectively.

Sample adequacy and factor analysis

To ensure validity and sample adequacy KMO and Bartlett's tests were conducted. Table 3 below shows the results from KMO and Bartlett's tests

	KMO Test	Bartlett's Test
Career development	.827	<.005
Co-worker relations	.858	<.005
Job satisfaction	.834	<.005

Table 3: KMO and Bartlett´s Tests

The KMO values are all above 0.80, indicating that the data is suitable for factor analysis for all three constructs which are career development (.827), co-worker relations (.858), and job satisfaction (.834). KMO values close to 1 are ideal, and values above .70 are generally considered acceptable. These high KMO values suggest that the sample is adequate and there is a strong relationship between the

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variables within each construct, making them amenable to factor analysis. The Bartlett's Test statistics all indicate a significance level of <.005. A significance level less than .05 is typically considered significant.

Regression analysis

Regression analysis was performed to test the relationships amongst study variables. Table 3 shows results from regression analysis.

Model	B	Estimated 95% CI	R	R Square	p-value
Career development x job satisfaction	.602	(0.519, 0.673)	.672	.452	<.05
Career development x Co-worker relations	.402	(0.297, 0.497)	.402	.162	<.05
Co-worker relations x job satisfaction	.577	(0.490, 0.651)	.577	.333	<.05
Career development x Co-worker relations x job satisfaction	.237	(0.148, 0.326)	.857	.735	<.05

Table 4: Regression Analysis

Mediation path	Indirect effect	Bootstrapped 95% CI	Decision
Career development → Co-worker relations → Job satisfaction	0.232	0.148, 0.326	Significant partial mediation

Table 5: Bootstrapping Results

The study found that career development has a positive influence on job satisfaction. This is substantiated by a regression of 0.602. In addition, H1 is supported that career development positively influences job satisfaction ($p<0.05$). This means that an increase in career development leads to an increase in job satisfaction. Regression analysis shows that co-worker relations have a positive influence on job satisfaction ($r = 0.402$). However, compared to career development, the influence of co-worker relations on job satisfaction is inferior. H2 is also supported as it has a p value less than 0.05. Thus, an increase in career development yields an increase in job satisfaction. The regression results also show that co-worker relations positively influence job satisfaction ($r = 0.577$). H3 is also supported with a p value less than 0.05. This means that an increase in co-worker relations positively enhances job satisfaction. Regression analysis also shows that co-worker relations mediate the influence of career

development on job satisfaction. This is supported by PROCESS Macro results. Furthermore, H4 is supported ($p<0.05$). This means that career development has a greater influence on job satisfaction when co-worker relations are present.

Discussion

The research found that career development positively influences job satisfaction. This finding aligns with Prayudi and Komariyah (2023) who also found that there is a positive relationship between career development and job satisfaction. This finding is substantiated by Seno et al. (2023) who state that career development makes employees like their jobs. Hence, Jena and Nayak (2023) recommending organisations to invest in career development of employees to enhance job satisfaction. The research also found that career development enhances co-worker relations. This is contrary to existing knowledge that career development leads to jealous, conflicts and unhealthy competition for employees (Horak et al., 2024). Career development in this research is viewed in the same lens with Abugre and Acquaah (2022) that it results in unity and healthy relationships amongst the employer and other co-workers.

The research also found that co-worker relations enhance job satisfaction. This finding resonates with the existing body of literature (Bella, 2023; Haitao, 2022). This finding confirms research by Lee et al. (2023) that the more positive the co-worker relations the more the job satisfaction. Finally, the research demonstrates that co-worker relations mediate the influence of career development on job satisfaction. This research confirms observations by House et al. (2022) that the relationship between career development and job satisfaction is not linear as it is dependent on other factors. This translates to the higher education context where this relationship is mediated by co-worker relations.

Practical implications

To attain job satisfaction that is critical in attaining competitive advantage, organisations should improve in two areas. First, invest in career development where the non-academic workforce acquires skills that are useful in their day-to-day tasks. Second, organisations should facilitate good co-worker relations by investing in team building exercises and other activities such as sporting. This will inturn improve job satisfaction levels for a sustained competitive advantage.

Limitations and recommendations

This study reveals the mediating role of co-worker relations on the influence of career development on job satisfaction at DUT. There is need for other studies to look at these variables in other universities in other provinces. Furthermore, the study was done quantitatively. There is need to gain deeper understanding by studying these variables quantitatively. In addition, future researchers can also investigator the mediating role of other variables such as gender, on the influence of career development

on job satisfaction. The study recommends that organisations improve career development and co-worker relations to enhance job satisfaction.

Conclusion

The paper sheds light on the occupational progression and contentment of non-teaching staff, and on the influence of colleague relations on their relationships. The results indicated that job satisfaction was significantly predicted by career development, and that this effect was mediated by positive relationships with colleagues. The paper provides evidence that relationships among employees can help explain how people's behaviours in the workplace are framed by human resource practices, as espoused in business and management research. The work reduces the fixed costs of products by answering a question about the introduction of new HRM practices in a country that has not yet been fully explored. The research outcomes highlight the importance of introducing appropriate human resource management strategies in the higher education sector, which is contingent on practical premises. Thus, it is suggested that institutional managers create the conditions to foster a climate that encourages career development, including by building strong relationships among workers. Neither executive nor personnel management policies and practices exist in a vacuum; that is why ongoing training, up-to-date management techniques, and employee-centred policies within an organisation are interconnected concerns that help teams function well. This strategy also supports the organisation's goals, as it creates greater employee satisfaction and commitment than the other methods so far, and is crucial for human resource management. Researchers should consider further empirical investigation by testing additional mediating variables and conducting similar research in other institutions to determine whether the findings can be justified.

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