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PORTFOLIO OF EVIDENCE- AN INVESTIGATION OF THE FOURTH
INDUSTRIAL REVOLUTION IN A CASE OF MINING SECTOR

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Acronyms used

- BUM- Business Unit Manager
- GM- General Manager
- COO- Chief Operating Manager
- CEO- Chief Executive Officer
- RM- Regional Manager
- MBA- Masters in Business Administration
-

Introduction

Current position and Industry

My name is Gopolang Cross, I'm currently a Senior Superintended at Fraser Alexander Tailings Pty (Ltd). Fraser Alexander Tailings PTY (Ltd) provides outsourced services and related infrastructure to move, manage and add value to minerals, waste and water. Fraser Alexander Tailings Pty (Ltd) provides customised solutions to the mining Industry.

Career aspirations

My short term goal is to be a Regional Manager and completing my PGDM on record time. The long term goal is to study Masters in Business Administration (MBA), for me learning is a journey, I try to better myself academically as it keeps the mind active and healthy. My other long term goals are becoming a BUM, GM, and COO and eventually elevating to the CEO position for this company one day.

Duties and Responsibility:

- Responsible for supporting the Regional Manager to manage, optimize and continually improve the operation of Hydro Mining and deposition as well as ensuring the safety of the employees.
- Plan, organize and implement projects to improve the process (Both Asset Optimization and Continuous Improvement projects).
- Maintain and improve the site and evaluation all system.
- Undertake good client relations and develop strategy to secure business
- Complete Asset Optimization and month end reports
- Maintaining discipline of the team and setting out instructions
- Cost control, Operational budgets and Identifying, planning and excursion of CE jobs
- Complete Asset Optimization and month end reports (dam audit, Vigilance, SHEQ Audit, HMS and etc.).
- Managing and coordinating financial, budget and cost related aspects of contracts
- Maintain discipline on site
- Liaison with clients and other external role players and interest groups
- Handling all related administrative, Operational and responsibilities in HR, Finance and Safety
- Putting together mining plans and or deposition plans on a monthly basis.

Industry assessment

The world is moving into the new development phase, forcing organisations or companies to invest largely into technology, which includes adopting the Fourth Industrial Revolution, (herein **Industry 4.0**). According to (Moore. 2019), the Fourth Industrial Revolution refers to the continuous mechanisation of traditional assembling and mechanical practices or works, utilizing current brilliant innovation. This essentially centres on the utilization of large-scale M2M and Internet of Things (IoT) arrangements to give the likes of increased automation, improved communication and monitoring, just as keen machines that can dissect and analyse issues without the requirement for human intercession.

Just like any other situation, the use of the Industry 4.0 also bears both the advantages and disadvantages. They relate to the economy, organisations, politics and social. However, for the purpose of this paper, the focus is only on the organisations. The organisation referred to is my current employer, namely: Fraser Alexander Tailings Pty (Ltd) as stated above.

Advantages:

Industrial developments do not come overnight. It regularly takes numerous years for the mechanical advancements that such upsets make conceivable to be appropriately perceived and their traits misused. The more extended term effect of the second mechanical insurgency on mining and mining efficiency can perhaps be acknowledged to some degree by taking a gander at improvements in mining gear but the fact that as old drivers of productivity weakens and play out, new one will emerge to take up the baton of productivity growth in mining cannot be over looked. Below are the advantages of the Industry 4.0 and how they have affected the production in Fraser Alexander Pty (Ltd):

- Increased productivity- Machines and other technologies brought by the Industry 4.0 can operate 24-hours a day without getting tired and with limited or no error, in a nutshell the Fourth Industrial Revolution deals away with human- fatigue and error thus the realisation of an increased productivity which Fraser Alexander Tailings Pty (Ltd) also enjoys
- Efficiency and quality in processes- Technology is different from other factors of production such as land or labour force, it has non-exclusive and instant diffusive features. It also limits human-error. Thus the Industry 4.0 can save the resources, improve the production efficiency and eventually benefit the profits in economic growth (LI Guoping *et al.*, 2017:631). Since the introduction of the Industry 4.0, the company lowered the time it spends on production.

- Greater safety for workers by reducing jobs in dangerous environments-
The mining industry has gained notoriety for being a risky business, with health risks that are changed and regularly quite serious. Despite the fact that the objective of zero harm has not yet been accomplished, it remains the standard that mining companies keep on striving towards hence the adoption of the Industry 4.0 (Mining review Africa, 2020). Ever since Fraser Alexander Pty (Ltd) invested in the use of technology, fatality rate dropped.
- Increased client satisfaction- Nothing can ever be compared to the joy of seeing a smile on a client's face. Glory to the Industry 4.0, the company's clients are satisfied as they receive quality products timeously. This has also be bringing businesses to the company.

Disadvantages:

The Industry 4.0 has effects on production, management and society and are generally talked about its capability to disrupt current works and behaviours. Below are the disadvantages of the Industry 4.0 and how they have affected the production in Fraser Alexander Pty (Ltd):

- Lack of qualified staff- With regards to the expanding strain to cater the new client demands and to utilize the advanced technologies brought by the Industry 4.0, convenient advancement and supporting facilities are needed (Li Guoping *et al.*, 2017:630). This calls for more and more qualified labourers that can catch up with and participate in this trend. Fraser Alexander Tailings Pty (Ltd) is no exception, it is also facing this challenge as most of its workers particularly those in production are not educated due to the injustices of the past and are not familiar with technology.
- Dizzying speed of change and the need to adapt- Everybody from the top management to the low or first level managers, including production workers are on their toes trying to acclimatize with the new working environment. A shift to a more virtual workplace whereby office space is no longer a necessity and usage of machines which might result in errors, lowering the production and significantly affecting the profitability.
- High maintenance cost- The cost of acquisition plus all the directly attributable cost, such as installation, transportation, etc. may be too high. The machine also need to be repaired and serviced overtime and it consumes a lot of electricity (Mining safety).

At the start of the process, a McKinsey Global report affirmed that up to 800 million positions will have vanished by 2030 because of automation. However, this may

likewise be a chance, because as technology rises, so will new professions that will create millions of jobs in new fields.

The Fourth Industrial Revolution is joined by a capitalization impact in which the interest for new goods and services builds, hence prompting the making of new occupations, businesses, and even industries. Take the mobile application industry for instance. This industry possibly started in 2008 when Steve Jobs, the author of Apple, let outside engineers make applications for iPhone. With its fast turn of events, as indicated by the economic analyst App Annie, the portable application market arrived at 1.89×10^{12} USD in 2015, with a normal development pace of 114 percent from 2014 to 2016.

Coping methods for firms

- Flexible human resource management- Managers should upgrade the training of staff and assist them with improving their abilities so they can collaborate their work and work with those smart technologies.
- Organization reform- Mandatory Management will change into Cooperate Management. Simply by this change can ventures work with productivity, adaptability, and loaded with acculturated climate.
- Manufacturing mode change- Firms need to change their current mass and cost-saving production mode to receive smart, useful, advanced and programmed production mode. Smart, associated and adaptable processing plants will get predominant in future modern production

New role: Operations Manager

Implement innovative technology to lead multiple projects, against scope, safety, time, quality, cost and productivity standards, through translation and achievement of strategic and financial goals, stakeholder's management, complex commercial management, operational delivery and oversight.

Responsibilities

Business/Functional Management

Participate in setting the strategy for the division, and lead the setting of the project strategy. Report to senior management on strategic project goals and performance. Executing multiple projects to support sustainability of the broader business, including reputation and meeting industry and market requirements.

Financial, Commercial and Contracts Management

Assist with site inspections and finalisation of tenders in conjunction with commercial/estimating team. Negotiate with client on new work, current contract and variation orders, with inputs from QS and Commercial Manager. Contributing to final commercial close-out of projects.

Risk Management and Compliance

Ensure the company's policy on social responsibility is adhered to. Align to client requirements and ensure compliance throughout the project implementation.

Stakeholder Management (Internal/External)

Balancing internal organisational requirement with internal and external stakeholder requirements, in order to deliver the project successfully. Promote ongoing open communication with clients project Manager to foster good relations between us and the client, through appropriate forums and interfaces.

Operations and Project Management

Plan and set up the project according to contractual and tender requirements, as well as considering best practice and standards for civil / tailings projects. Ensure project is executed within budget, scope, timelines, productivity and SHEQ standards.

SHEQ Management

Ensure that the project site and operational practices are fully compliant to SHEQ requirements, policies, legislation and systems.

Management Operating System and Reporting

Draft and complete a project management report on a monthly basis, including safety, quality, community issues, forecasts to completion, schedule, client relations, production, progress pictures, labour matters, etc.

Technical Management

Ensure relevant quality and technical standards are agreed and implemented through the relevant functions on the project. Understand and implement relevant internal and client policies relating to technical matters.

Staff Management

Ensure appropriate structures are set up for staff requirements/ duties for the contract, and site organisational structure. Manage direct reports with respect to all people management functions. Appropriately hold employees and subcontractors accountable for delivery.

Culture and Climate

Ensure a positive work context is established for all internal and subcontracting staff on the project, to ensure a positive morale and climate for all. Build a culture of continuous improvement and Zero Harm for the duration of the project. Ensure that any conflicts or challenges with client culture is managed appropriately to maintain and enhance client relationship.

Qualifications

National Diploma in Industrial Engineering or Civil Engineering

Project Management qualification e.g. PMI or MDP or management qualification

Experience

8-10 years' experience as Operational Section Manager / Engineering Manager in a mining production environment, preferably on complex projects of at least R5 million a month

At least 5 years mining / production experience, related to re-mining/ tailings projects with emphasis on project management, construction, contract, Financial, risk, commercial, legal, operational planning, safety, implementation and HR Management.

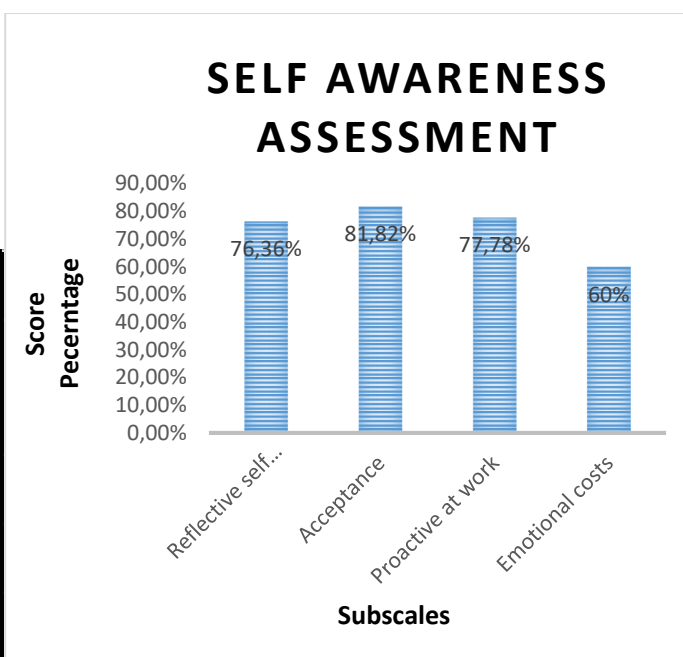
Skills, qualities and abilities required

Expect knowledge and skills in tailings and production management. Excellent contract management skills. Excellent planning skills and proficient with planning tools. Strong persuasion and negotiation skills.

Section three: self-development assessments and skill practices self-awareness self-assessment:

It is very important that you know and understand yourself in order to have a good relationship with yourself and others. When you know yourself, you know what is genuinely important to you and what your values and needs are. You know what aspects of yourself you are willing to make compromises about, and what you can't and don't want to change without giving yourself up.

subscales	Score	Percentage
Reflective self development	42	76,36%
Acceptance	45	81,82%
Proactive at work	35	77,78%
Emotional costs	21	60%



Emotional costs

Self-Improvement developmental plan

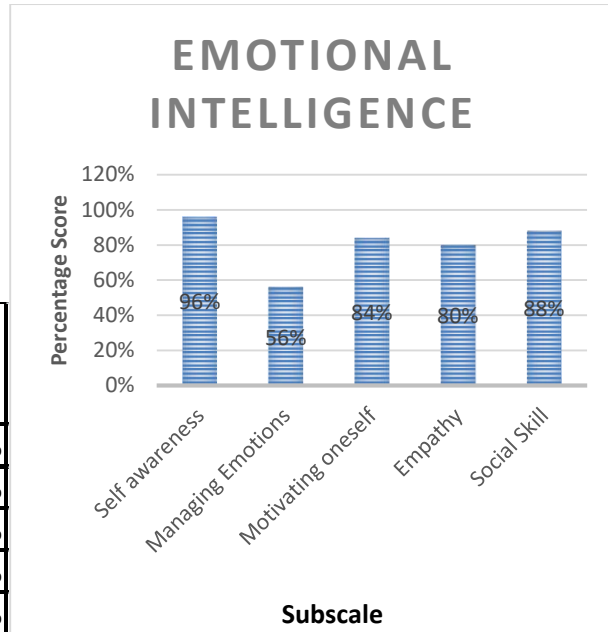
Type	Category	Needs	Method	Manager	Agreed completion date	Start date	Status
Emotional Costs	Learning and Growth	Leadership Courses	Post Graduate diploma in leadership	Josiah Tsheko Training Manager	2021/11/22	2021/01/12	

The Post Graduate diploma in leadership and coaching and mentoring from my managers will help me deal with change better and accept change, will help me to trust others with task or any work allocated to them to have trust in others, will help deal with my emotions better and be able to give positive criticism to my fellow colleagues.

Emotional intelligence self-assessment

Emotional Intelligence (EI) is the ability to manage oneself and interact with others in mature and constructive ways (Kreitner and Kinicki, 2004:175). Daniel Goleman (1995) argues that EI is a constellation of the quantities that mark a star performer at work. Goleman's belief is that emotional competencies are twice as important to people's success today as raw intelligence or technical know-how.

Emotional Intelligence Assessment	Score	Percentage
Self awareness	48	96%
Managing Emotions	28	56%
Motivating oneself	42	84%
Empathy	40	80%
Social Skill	44	88%



Managing emotions

Self-Improvement developmental plan

This plan will assist me to improve my emotional literacy and that I don't react to my emotions and or situation it will assist me to manage my emotions better and manage other persons as well. This will also assist with Emotional Mastery people who have developed emotional mastery recognize that as Epictetus said 2000 years ago, " it's not the facts and events that upset man but the view he takes on them". For those in position of formal power the most important aspect of emotional mastery may be controlling anger. Outbursts of anger have no spot in the workplace, and can quickly destroy a sense of organizational equity and partnership. A person with the core quality of emotional mastery

Area of improvement

<u>Type</u>	<u>Category</u>	<u>Needs</u>	<u>Method</u>	<u>Manager</u>	<u>Agreed completion date</u>	<u>Start date</u>	<u>Status</u>
Emotional Costs	Learning and Growth	Leadership Courses	Post Graduate diploma in leadership	Josiah Tsheko Training Manager	2021/11/22	2021/01/12	

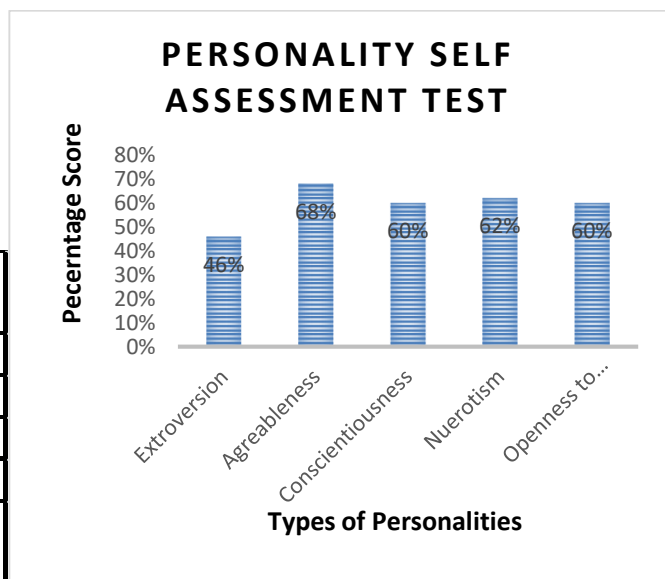
Personality self-assessment test

Personality traits

Whenever we look at individuals around us, one of the primary things that strikes us is the manner by which we are different from one another. Other persons are talkative and others not. Some are dynamic though others are habitually lazy people. Some people appear to be stressed at all times whilst others appear to be very relaxed. Each time we utilize one of these words, words like "talkative," "calm," "dynamic," or "restless," to define everyone around us, we are discussing an individual's character—the trademark ways that individuals vary from each other.

In spite of the fact that there are numerous approaches to consider the characters that individual have, Gordon Allport and other guaranteed that we can best comprehend the contrasts between people by understanding their character attributes. Character qualities ponder fundamental measurements which individuals vary (Matthews, Deary, and Whiteman, 2003). There are a predetermined number of these (measurements like Extraversion, Conscientiousness, or Agreeableness), and every individual falls some place on each measurement, implying that they could be low, medium, or high on a particular attribute.

Personality Test	score	percentage score
Extroversion	23	46%
Agreeableness	34	68%
Conscientiousness	30	60%
Nuerotism	32	62%
Openness to Experience	30	60%



Area for improvement

Extroversion

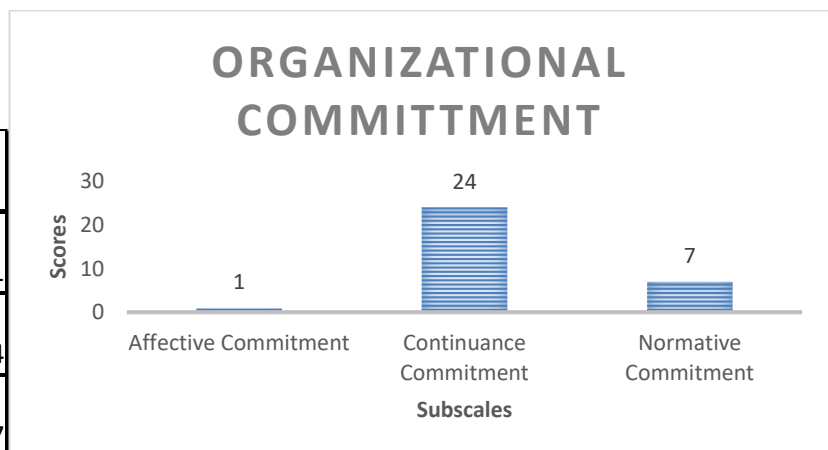
<u>Type</u>	<u>Category</u>	<u>Needs</u>	<u>Method</u>	<u>Manager</u>	<u>Agreed completion date</u>	<u>Start date</u>	<u>Status</u>
Extroversion	Learning and Growth	Working with teams and becoming a team player	Coaching and mentoring	Philemon Jwili	2021/01/29	2021/01/30	

The improvement is aimed at improving the employee's ability to work with teams. An employee will be given more group project to improve his ability to work with people.

ORGANISATIONAL COMMITMENT SELF-ASSESSMENT

This type of commitment occurs when the employees' vision and mission is aligned to that of the organization, this type of commitment enhance employees' performance and the employees become attached to the originations goals.

Organisational Commitment	Scores
Affective Commitment	1
Continuance Commitment	24
Normative Commitment	7



Area for Improvement

Affective commitment

This developmental plan will help employees align his personal developmental plan to that of the organization; it will be supported by the line manager. If employee needs a supported by the organization he will feel a sense of belonging and well give his best to the organization

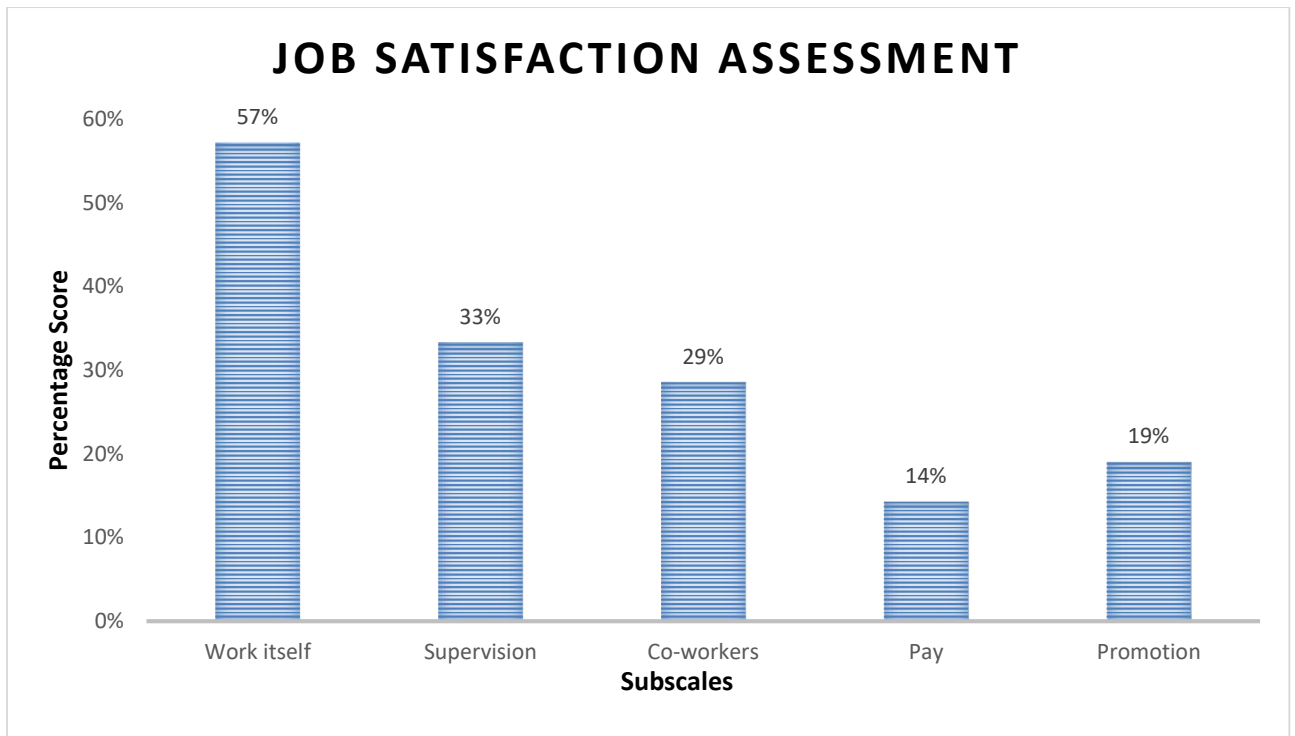
<u>Type</u>	<u>Category</u>	<u>Needs</u>	<u>Method</u>	<u>Manager</u>	<u>Agreed completion date</u>	<u>Start date</u>	<u>Status</u>
Affective Commitment	Coaching and mentoring	Aligning of employees developmental plan to the organizations vision mission and goals	On the Job coaching and mentoring	Philemon Jwili line manager	2021/05/20	2021/07/07	

Job satisfaction self-assessment

Job satisfaction is the emotional and mental state of employees' happiness towards their working environment. Job satisfaction is a specialist's pride and success at work. It is commonly seen to be legitimately connected to productivity just as to individual prosperity.

Appreciates doing it well and being remunerated for such performance, further infers energy and bliss with one's work, is the key ingredient that prompts acknowledgment, pay, advancement, also, the achievement of different objectives that lead to a sentiment of fulfilment (Kaliski,2007)

Job Satisfaction Assessment	Score	Percentage Score
Work itself	12	57%
Supervision	7	33%
Co-workers	6	29%
Pay	3	14%
Promotion	4	19%



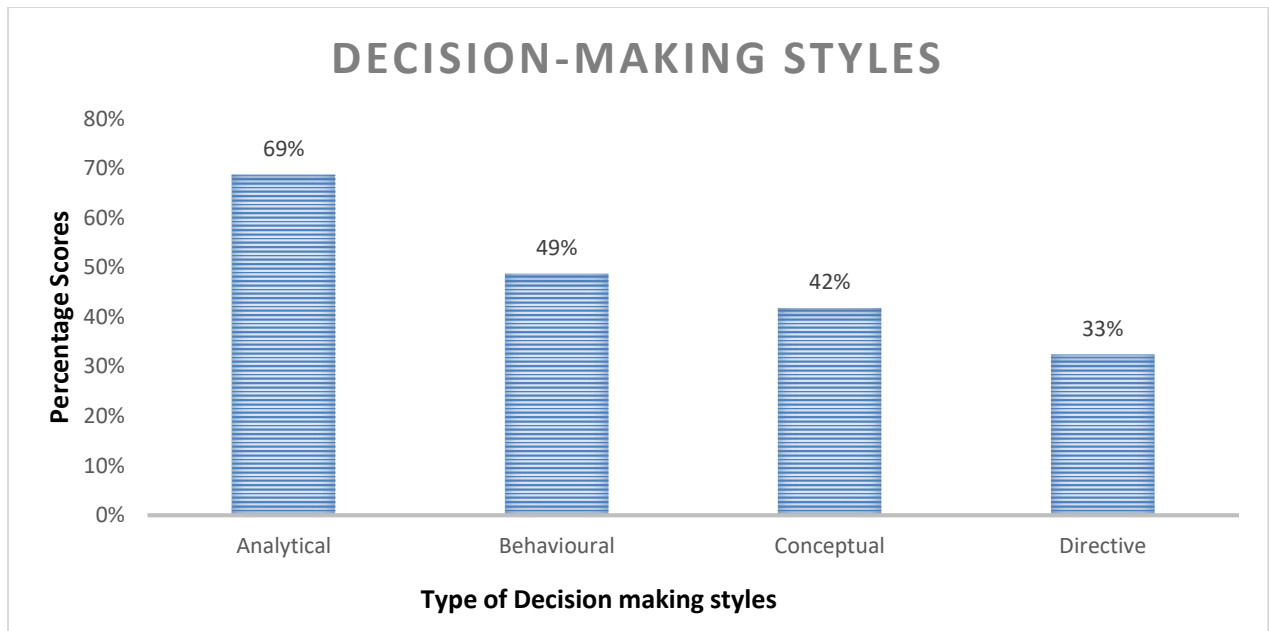
Area of Improvement

I scored low on pay and promotion

This item can be closed off by a meeting with a line manager and HR to discuss the future plans of an employee and align them with that of the organization (personal developmental plan), discuss the pay and check if it aligns with the industry and according to the remuneration procedure of the organization.

Decision-making style self-assessment

Decision Styles	Scores	Percentage Scores
Analytical	110	69%
Behavioural	78	49%
Conceptual	67	42%
Directive	52	33%

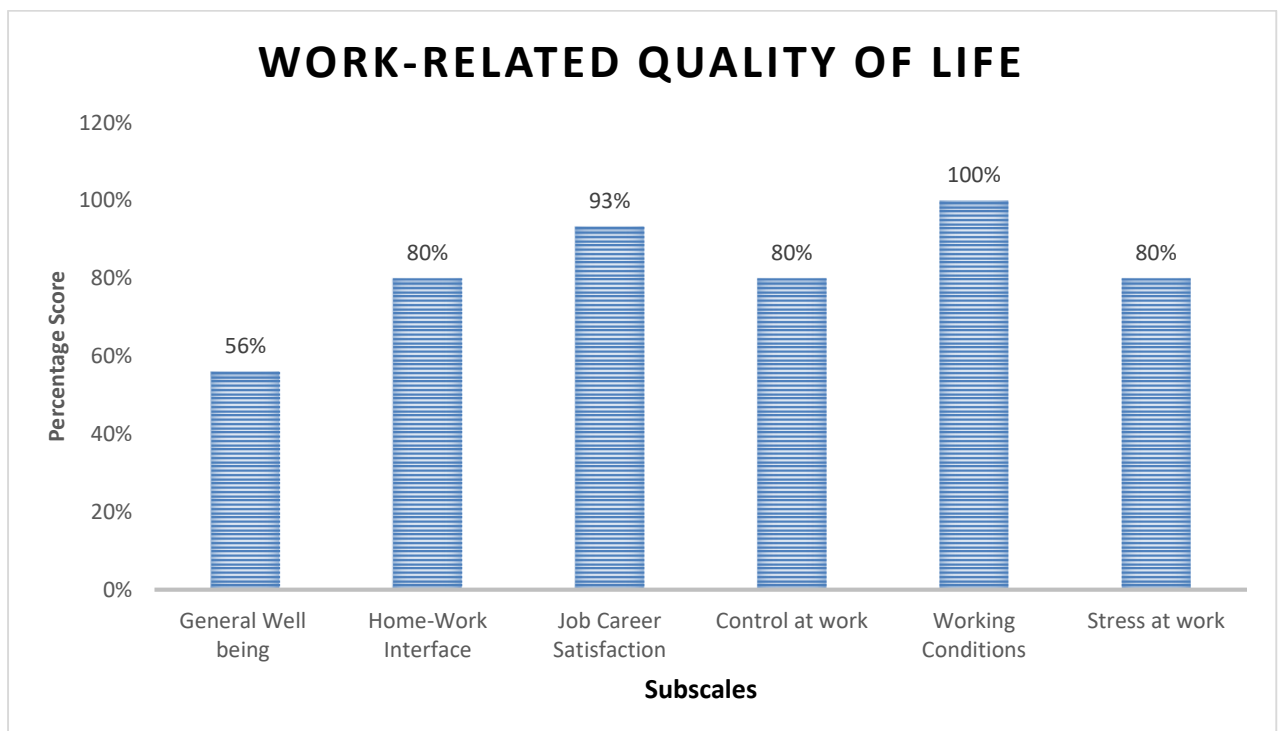


Area of Improvement

Type	Category	Needs	Method	Manager	Agreed completion date	Start date	Status
Directive	Learning and Growth	Human Resource Management Skills	Human Resource Management Courses	Minah Motuku Human Resource Manager	2021/11/22	2021/01/12	

Work-related quality of life self-assessment

Work Related Quality of Life	Score	Percentage Score
General Well being	14	56%
Home-Work Interface	12	80%
Job Career Satisfaction	28	93%
Control at work	12	80%
Working Conditions	15	100%
Stress at work	4	80%



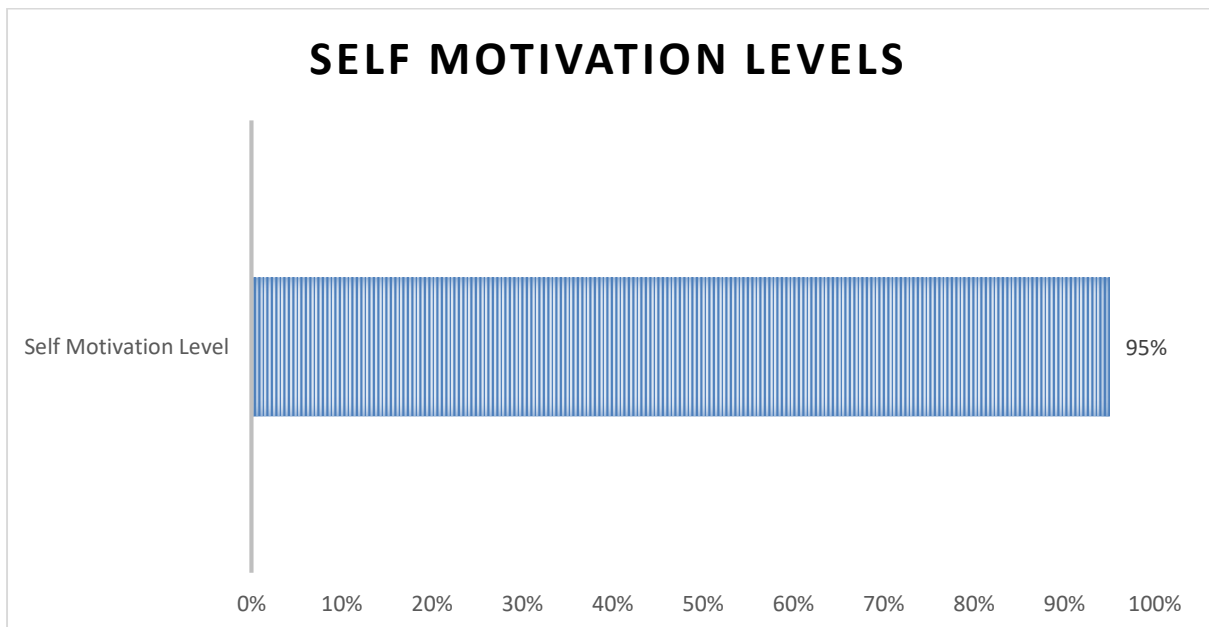
Area of Improvement

<u>Type</u>	<u>Category</u>	<u>Needs</u>	<u>Method</u>	<u>Manager</u>	<u>Agreed completion date</u>	<u>Start date</u>	<u>Status</u>
Work-related Quality of life	General Wellbeing	Compile a list of goals and improvement areas that	Set goals and work towards achieving them	Philemon Jwili line manager	2021/05/20	2021/07/07	

Self-motivation assessment

Self-motivation is the drive that come from within ones' self to achieve goals and perform well. People who are self-motivated continuously improve themselves, they take initiative to complete tasks with no need for supervision and are optimistic. This is an important skill to have in an organization as it proven to have an increased productivity and employee engagement.

	Score	Self Motivation Level
Self Motivation Levels	57	95%



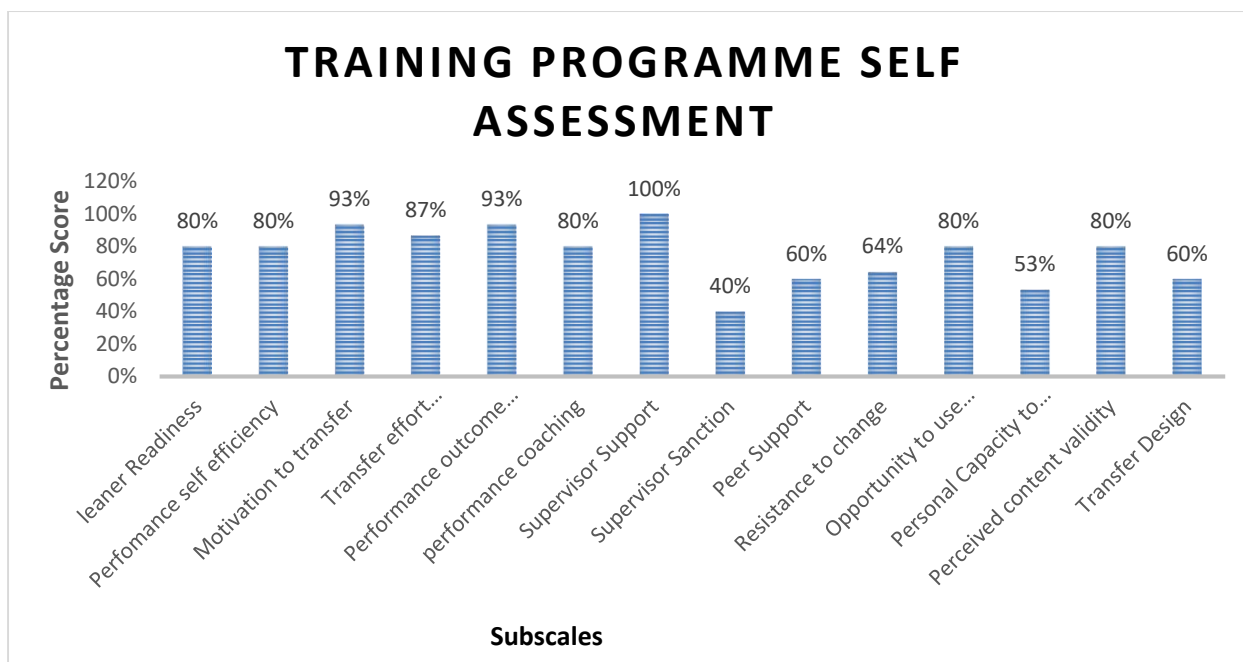
Areas of Improvement

As the graph depicts, I have high levels of self-motivation which allows me achieve the goals I set out for myself. I have achieved this level by being self-aware, developing myself by continuing with studies, setting goals and planning my work.

Training programme self-assessment

Training programmes in organizations have been implemented to reach a gap between employee experience and employee's education. This is important to an organization to have competent employees as that will reduce costs in waste and time.

Training Programme Self Assessment	Score	Percentage Score
leaner Readiness	12	80%
Perfomance self efficiency	12	80%
Motivation to transfer	14	93%
Transfer effort performance expectation	13	87%
Performance outcome expectation	14	93%
performance coaching	12	80%
Supervisor Support	15	100%
Supervisor Sanction	6	40%
Peer Support	9	60%
Resistance to change	29	64%
Opportunity to use learning	12	80%
Personal Capacity to transfer	8	53%
Perceived content validity	12	80%
Transfer Design	9	60%



Areas of Improvement

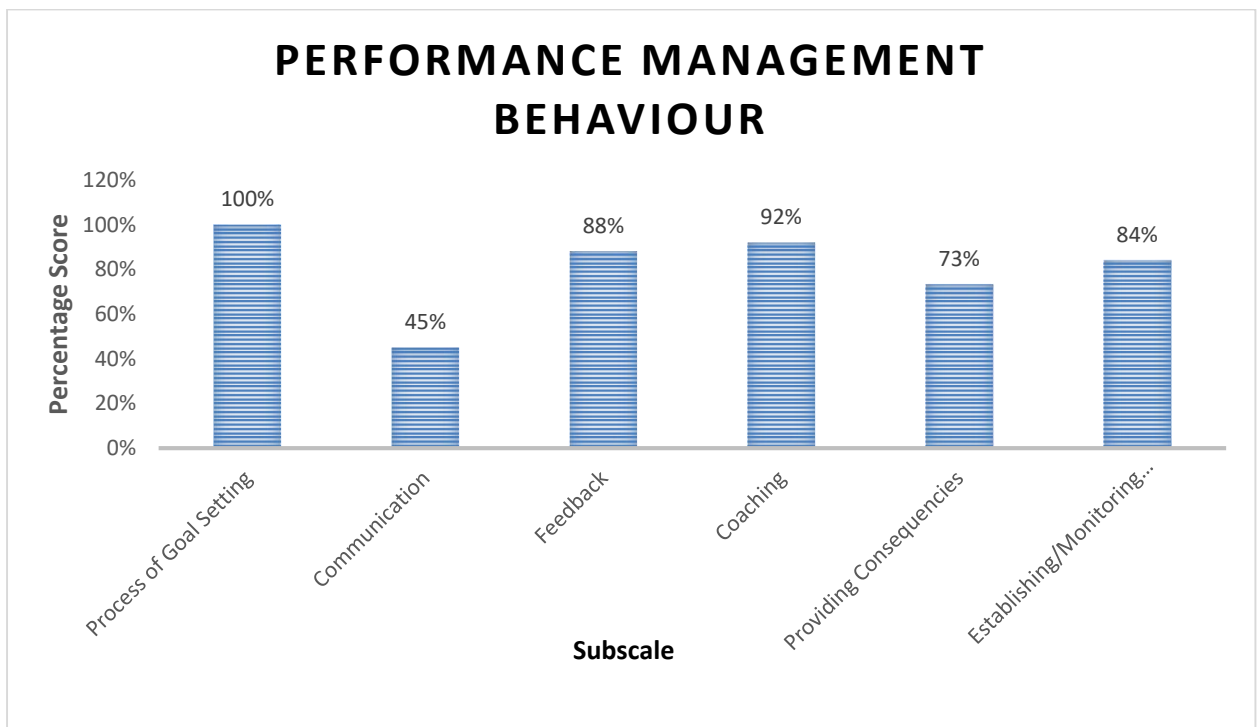
<u>Type</u>	<u>Category</u>	<u>Needs</u>	<u>Method</u>	<u>Manager</u>	<u>Agreed completion date</u>	<u>Start date</u>	<u>Status</u>
Training Programme	Personal capacity to transfer	Use the training for my job	Develop a learning transfer plan.	Philemon Jwili	2021/01/29	2021/01/30	

I have scored low on the category of personal capacity transfer. This means that I do not apply what I have acquired on the training programmes. I have realized that it takes quite a lot of time and energy away from work. So the plan is to focus on prioritizing the training learnings by setting out a few hours during my day to apply what I have learned on the programme.

Performance management behaviour self-assessment

This are the visions and goals that were set out in order to improve performance. A plan and daily tasks are developed which is communicated to employees, then act/achieve those goals that way it is easier to track the performance of the employees. This system is crucial as it will be easy to identify people's strengths and abilities as well as their weaknesses.

Items	Score	Percentage Score
Process of Goal Setting	25	100%
Communication	9	45%
Feedback	22	88%
Coaching	23	92%
Providing Consequences	11	73%
Establishing/Monitoring Performance expectations	21	84%



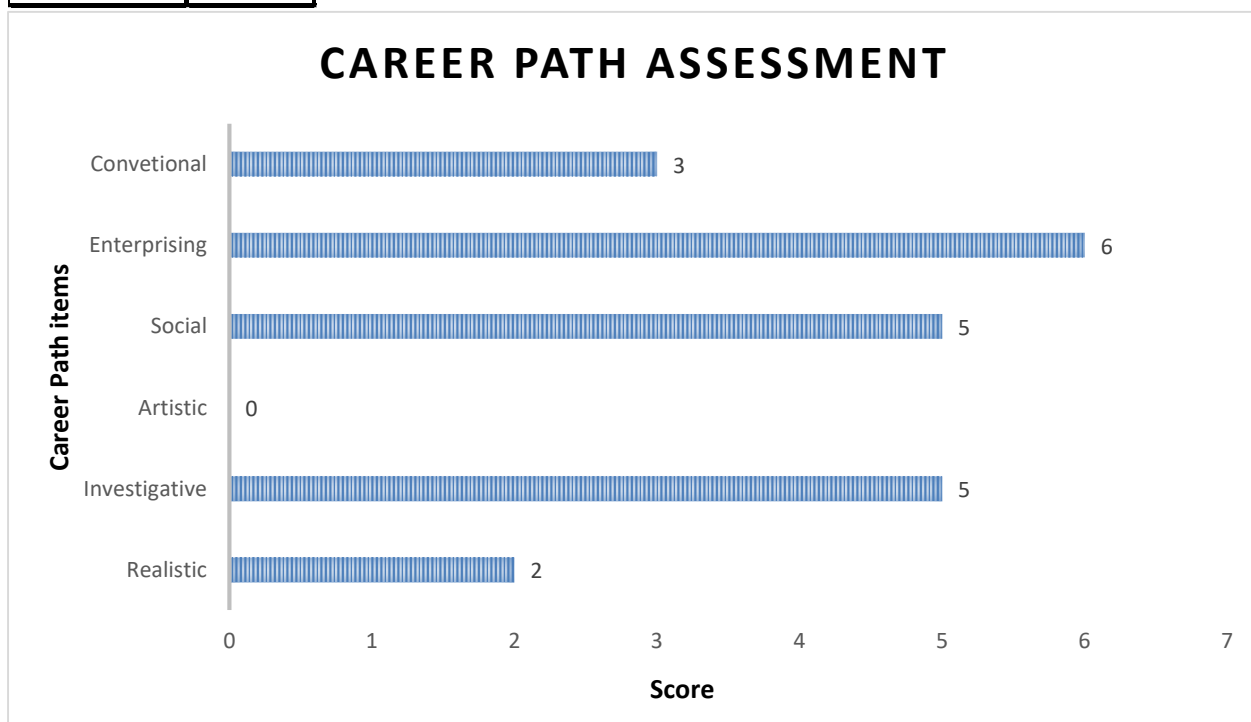
Areas of Improvement

The performance management system must be improve as I have scored low on the communication and providing consequences category. As a manager, we are too quick to reprimand and charge unsatisfactory performance and tend to forget to give recognition and reward exceptional work. A performance system should be set up in order to track and review employees' performance. That way we will organize award ceremonies whereby we acknowledge and honour the best performance achievers.

<u>Type</u>	<u>Category</u>	<u>Needs</u>	<u>Method</u>	<u>Manager</u>	<u>Agreed completion date</u>	<u>Start date</u>	<u>Status</u>
Performance management behavior	communication	Improve communication between management and workers	Implement performance management system.	Philemon Jwili	2021/01/29	2021/01/30	
	Provide consequences	Reward good behavior	Plan events to celebrate good performance	Philemon Jwili			

Career path self-assessment

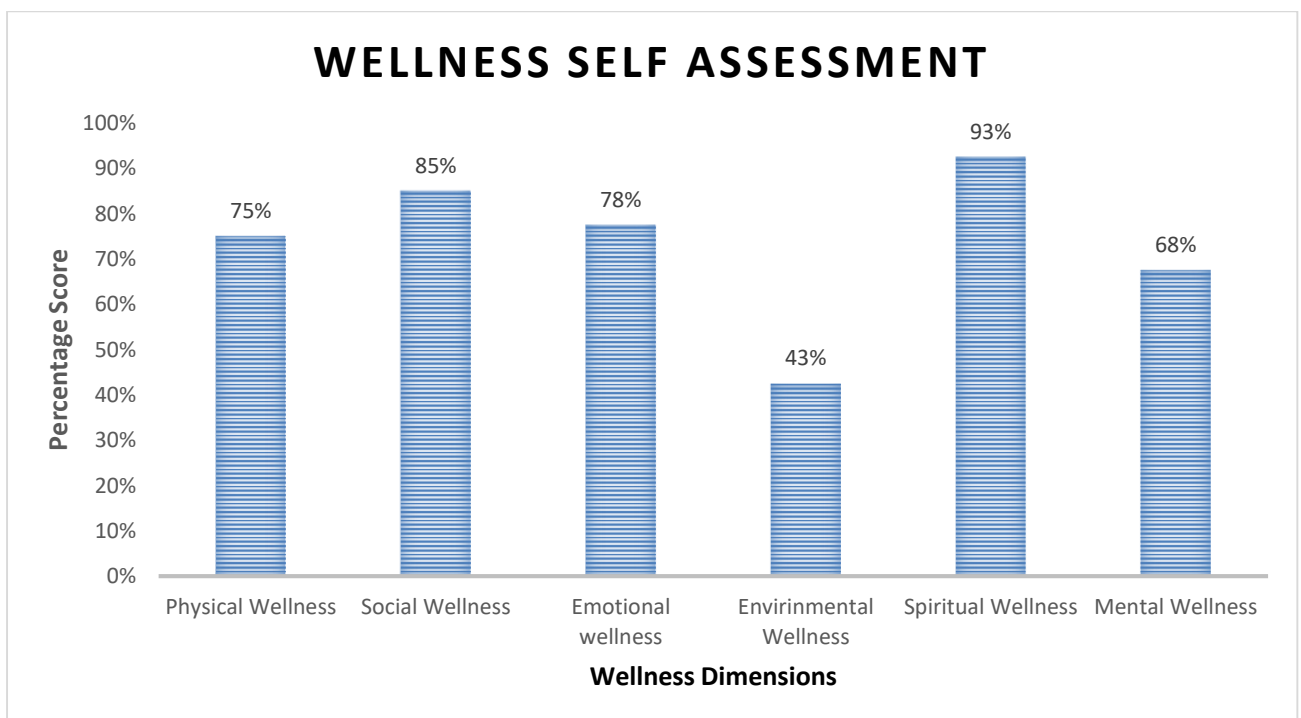
Career Path	Score
Realistic	2
Investigative	5
Artistic	0
Social	5
Enterprising	6
Conventional	3



Wellness self-assessment

Wellness can be described as the practice of daily activities in order to maintain physical, mental and spiritual wellness. We need to understand that when employees are in good health, they perform better and are happier in general.

Wellness Dimensions	Score	Percentage Score
Physical Wellness	30	75%
Social Wellness	34	85%
Emotional wellness	31	78%
Environmental Wellness	17	43%
Spiritual Wellness	37	93%
Mental Wellness	27	68%



Area of improvement

<u>Type</u>	<u>Category</u>	<u>Needs</u>	<u>Method</u>	<u>Manager</u>	<u>Agreed completion date</u>	<u>Start date</u>
Wellness	Environmental wellness	Raise awareness on the environmental wellness	Environmental campaigns which involve the community	Philemon Jwili	2021/01/29	2021/01/30

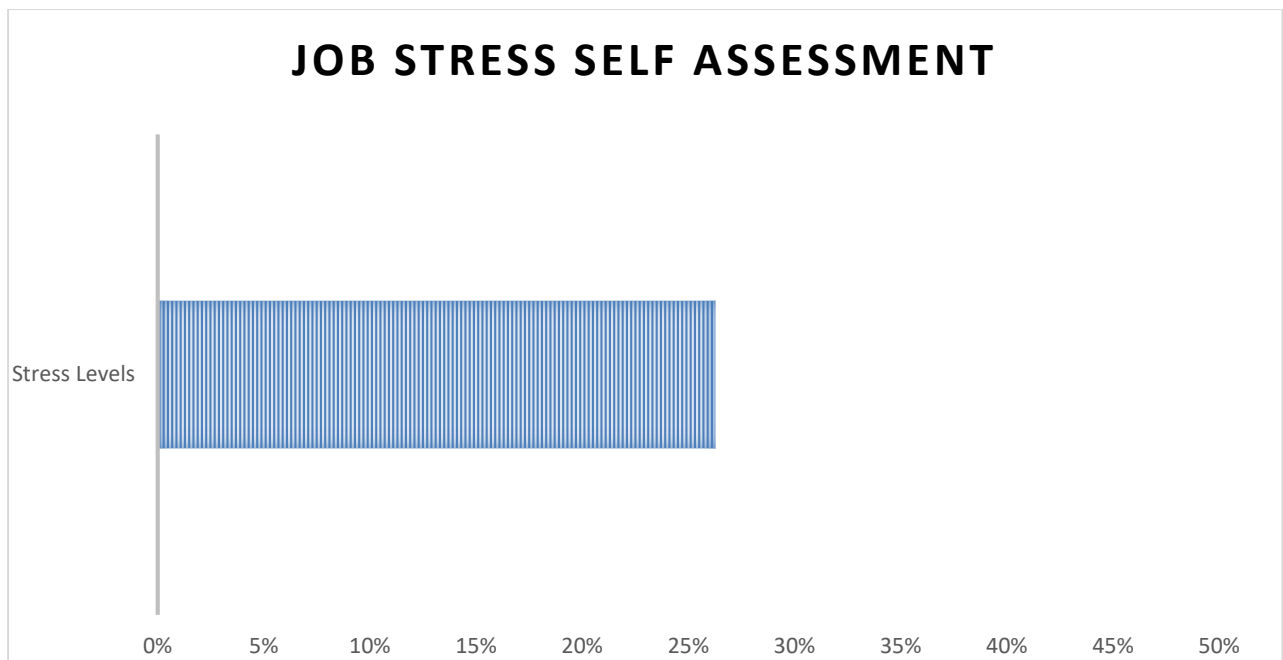
According to the graph above, it indicates that the area I need to improve on is the environmental wellbeing. I need to be more concerned about the environment. Change some daily habits like reusing plastic bags for shopping, never leaving the tap running, plant more flowers and encourage others to do the same.

Job stress self-assessment

Job stress is the type of stress that is caused by the conditions at work that impacts a worker in a negative way, this may destroy their mental and physical wellbeing. This can be caused by a lot of factors which may include job insecurity caused by companies downsizing or retrenching. Fatigue during work, employees being overworked and underpaid. The evolution of technology (4IR) has threaten the livelihood of most employees.

Job stress can be identified in so many ways, for example, you can spot by the following behavioral changes such as: increased tardiness, depression, a decline in productivity, sudden rise in absenteeism and poor workplace relations.

Stress Levels	21	26%
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Area of improvement

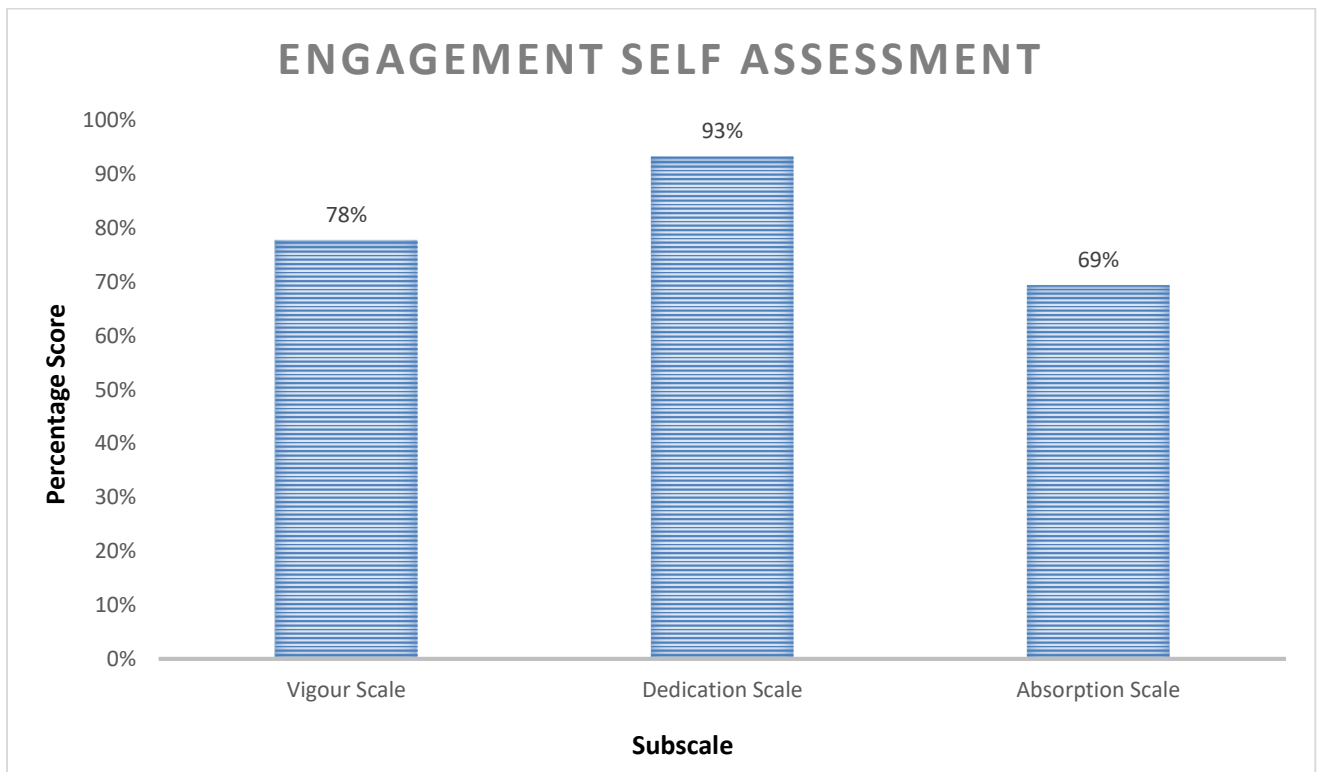
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Job Stress assessment		Reduce Stress		Philemon Jwili	2021/01/29	2021/01/30	

On the job stress self-assessment, I have scored 26%. This is an acceptable level of stress, but I still have to improve in some areas. The best way to approach job stress is by having some sort of outlet to release all of the negative emotions. Exercising is a great way to reduce stress. By the use of my organizational and planning skills, I can help stay on track and be as efficient as possible.

Engagement self-assessment

Engagement of employees simply refers to the participation of employees at work and to how enthusiastic they are about their work. Workers who are engaged tend to be more productive, committed, consistent, usually invest in their work and do more than what is expected of them.

Engagement Scale	Score	Percentage scores
Vigour Scale	28	78%
Dedication Scale	28	93%
Absorption Scale	25	69%
Total Engagement Scale	81	



Area of improvement

<u>Type</u>	<u>Category</u>	<u>Needs</u>	<u>Method</u>	<u>Manager</u>	<u>Agreed completion date</u>	<u>Start date</u>	<u>Status</u>
Engagement	Absorption	Concentrate on engagement management.	Make a model of my values and put emphasis on the	Philemon Jwili	2021/01/29	2021/01/30	

			mission				
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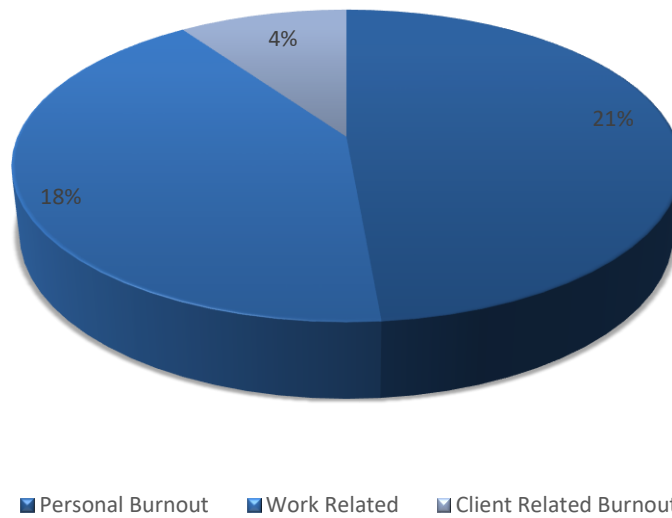
Burnout self-assessment.

This is more than just fatigue, it is the state of mind where the employee has lost all interest, enthusiasm or motivation in their work. There are a number of contributing factors that partake in the burnout of an employee. Such as lack of recognition, being underpaid, poor leadership and lack of personal control.

Burnout Self Assessment	Score	Percentage Score
Personal Burnout	125	21%
Work Related	125	18%
Client Related Burnout	25	4%

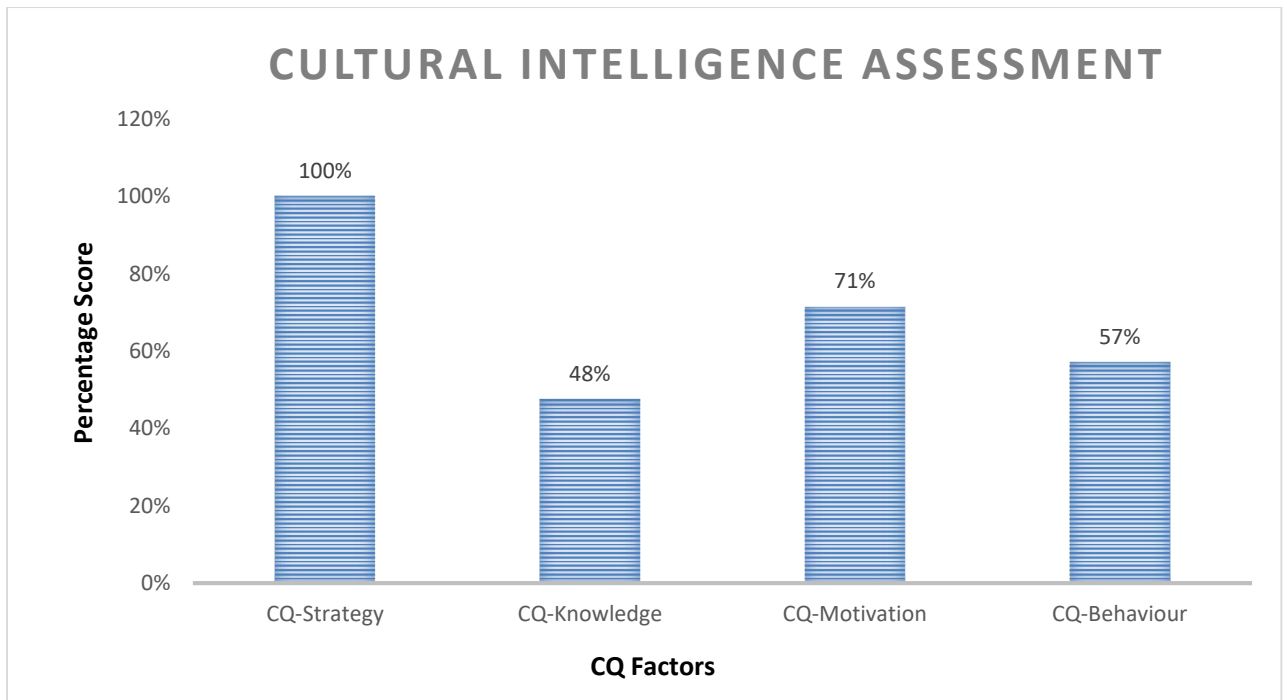
<u>Type</u>	<u>Category</u>	<u>Needs</u>	<u>Method</u>	<u>Manager</u>	<u>Agreed completion date</u>	<u>Start date</u>	<u>Status</u>
Burnout self assessment	Personal burnout	Self care	Allow yourself to rewind.	Philemon Jwili	2021/01/29	2021/01/30	

BURNOUT SELF ASSESSMENT



Cultural intelligence self-assessment

Cultural Intelligence	Score	Percentage Score
CQ-Strategy	28	100%
CQ-Knowledge	20	48%
CQ-Motivation	25	71%
CQ-Behaviour	20	57%



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