Prioritization of Precursors Affecting Public Officers Performance during the Implementation of Covid-19 Working From Home Policy: Experiences from Kenya

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Abstract: The covid-19 pandemic affected the normality of everyday life in both organizations and households. Organizations particularly had to accept and adjust to a new normal where employees had to work from home albeit the absence, policy or regulatory framework on working from nor telecommunicating the Covid-19 experience, therefore, bringing in a possibility of working from home as an alternative for engaging employees in future; hence the need for organizations to understand factors that influence this inevitable method of employee engagement. The study sought to prioritize factors working from home phenomenon in the Kenyan setup. Optimizing the Principal Component Analysis factor reduction approach on a sample of 195, the study concludes that public officers' performance level during covid-19 respondents was significantly lower relative to pre-covid-19staff performance levels majorly owing to organizational policy on the access and use of organizational information, the desire of the respondent to engage in personal matters, electricity power outages, lack of appropriate desk (working furniture) at home, the need to spend time in engaging with the community; and inadequate supervision. The study recommends Ministries Counties, Government Departments and Public Agencies, to review their policy on the use and access of information to facilitate the accomplishment of tasks by employees, establish a framework that facilitates and enhances the effectiveness of employee supervision and supervision support on working from home mode and on a phased approach progressively budget acquisition of personal computers to staff whose work assignments require the use of a personal computer.
Keywords: prioritization, performance, public officers

1. Introduction

In Kenya, like many other countries, the requirement for working from home amid the Coronavirus pandemic was received with mixed reactions since it was the first time in history that most public servants were getting an opportunity to work from the comfort of their homes indefinitely except for staff offering essential services whose presence at the place of work was inevitable (ILO, 2020). Organizations that had previous experience of teleworking, as well as those that did not have, were having their employees work remotely, resulting in the situation of a large proportion of employees teleworking in history (ILO, 2020).

In line with the Kenyan presidential directive which suspended most in-person operations in government organizations in Kenya to curb the spread of Coronavirus, most public service employees were required to work from home except for staff offering essential services such as health, and security among others (GOK, 2020). Measures such as the closing of schools, limiting travel by air or road, and a set of public health policies such as washing hands or using disinfectant gel, using gloves and wearing masks were put in place. The pandemic came with inconveniences such as limited interactions as most jobs require physical interaction, consultation with colleagues, and teamwork to concretize on a given subject matter (GOK, 2020). More importantly, most works require access to information that is domiciled in offices, and their access was hampered by the pandemic. Most public servants found this work arrangement as an 'adventure' of some sort mainly because they had never had the option of flexi-hours and there was no need to wake up early as usual, etc. With the reasonable access to internet and mobile phone connectivity, the working from home arrangement was fairly possible.

The covid-19 pandemic, therefore, affected the normality of everyday life in both organizations and households. Organizations particularly had to accept and adjust to a new normal where employees had to work from home albeit the absence, policy or regulatory framework on working from nor telecommunicating the Covid19 experience, therefore, bringing in a possibility of working from home as an alternative for engaging employees in future; there is need therefore for organizations to understand factors that influence this inevitable method of employee engagement. Further, organizations will need to understand which of these factors have a greater impact on working from home or telecommunicating on employee performance. Prioritization of such factor hence become critical. This study therefore sought to prioritize factors working from home phenomenon in the Kenyan setup.

2. Literature Review

The advert of the Coronavirus pandemic has revealed that many organizations, both in the public and private sectors, were not prepared to meet the unexpected challenges associated with teleworking and service delivery. A search of the empirical literature on the factors which play a role in making working from home mode more or less productive yielded a number of studies with mixed and rather ambivalent findings.

A study in Indonesia surveyed academic staff from 15 faculties in one university with a total of 267 completed questionnaires analyzed. The study established that only an individual's digital orientation had a significant impact on their digital capability which in turn affected the individual's productivity amidst the Covid-19 pandemic (Afrianty, Artatanaya, & Burgess, 2022). The study reveals that in the wake of the pandemic employees had no other choice than to advance their digital competencies to have the capacities to continue their jobs, which were mainly done electronically, with or without prior organizational support as far as digital literacy was concerned. Staff with minimal digital know-how were under duress to master digital technologies to support their jobs and ensure employment continuity. In the study majority of respondents were 31-35 years (23.2%) which are categorized as millennials who are unique in terms of being techno-savvy since they are highly exposed to technology, and thus the respondents had no major challenges in transiting to online mode of working (Afrianty, Artatanaya, & Burgess, 2022).

Elsewhere in India a, study attempted to identify the challenges faced by IT employees while working from home. Chinnaiah & Chythra (2021) found that IT employees while working from home expressed the challenge in scheduling time for work and family. The study established that the employees took more time to finish the work which could be attributed to among others lack of all infrastructure at home, increased mental stress, fear of job loss, lack of supervisory support from higher authority, and lack of face to face interaction as the challenges they considered as affecting their performance while working from home.

A study done between May and July 2020 in Italy targeting participants who were working from home in Italian public and private institutions established that social isolation and family-work conflict significantly reduced work productivity and employee engagement while at the same time increasing job-related stress among the participants (Galanti, Guidetti, Mazzei, & Zappala, 2021). In the study, the researchers measured job demands related to WFH using three different scales- family-work conflict, perceived social isolation, and distracting working environment all of which captured a negative impact on individual motivation and weakened work productivity and this is in line with studies done India by Chinnaiah & Chythra (2021) targeting IT staff.

A study on the impacts of working from home during the COVID-19 pandemic on the physical and mental well-being of Office Workstation Users revealed an overall decline in the physical and mental well-being of workers during the transition to working from home arrangement. In the study, nine types of physical health issues were evaluated in the study- musculoskeletal (discomfort, injury); cardiovascular (chest pains, blood pressure, heart rate); chest/lung (shortness of breath, chest tightness/pain); digestive (appetite changes, abdominal discomfort, irregularity); and eye-related (burning, blurry and/or dry). Others were fatigue or tiredness; headaches or migraines; nose/throat-related (dry, runny, or bloody nose; hoarseness); and skin-related (chapped, itchiness, redness) (Xiao, Becerik-Gerber, Lucas, & Roll, 2021).

The respondents were also given the chance to assess eight types of mental health issues that could be effects of telecommuting such as anxiety; depression; insomnia; low motivation; mental stress; mood swings; social isolation; and trouble concentrating. The study found that 64.8% of respondents had new physical health issues while 73.6% had new mental health issues arising from working from homework arrangement. According to the findings, factors associated with the increase in numbers of new physical or mental health issues were similar and entailed employee demographics, lifestyle and home environment, presence of dependent children, and occupation environment.

And in another study examining the effects of the lockdown due to Coronavirus amongst researchers, it was found that work efficiency for slightly below a half of the researchers (47%) declined to work from home arrangement. Out of those surveyed, 23% expressed that they were more efficient during the prolonged working

from home as compared to working on-site (Aczel, Kovacs, Lippe, & Szaszi, 2021). As a short-term measure, a study done in Hong Kong recommended the introduction of formal working from the home guideline for employees and employers factoring technological infrastructure and employee skills; COVID-19 risk, different guidelines for different sectors, and incorporation of employees' expectations in the guidelines (Vyas & Butakhieo, 2020).

Previous studies have focused on the general effects of the pandemic leaving out the precursors and their prioritization of such variables a gap that this study seeks to address.

3. Material and Methods

Principal Component Analysis (PCA) procedure was used to investigate the principal factors influencing employee performance during the implementation of the working from home directive initially, the factorability of the 26 items instrument was examined. The data were screened to determine their suitability for factor analysis. Firstly, it was established that all the 26 items correlated at least .3 with at least one other item, suggesting reasonable factorability. Secondly, based on the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy for the overall data set was .829, which was above the commonly recommended value of .6 (Kaiser & Cerny, 1977).

To ensure adequate correlations between the variables for variables to be reduced to a smaller number of components, Bartlett's test of sphericity was used for detection; the test was significant ($\chi2$ (147) = 1410.9, p < .05). Further the diagonals of the anti-image correlation matrix were also all over .5. With such indicators exhibiting such characteristics, factor analysis was deemed suitable for the analysis. Table 1 shows the KMO and Barlett's Test of Sphericity used to determine the factorability of the data.

Table 1: KMO and Barlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.829
Bartlett's Test of Sphericity	Approx. Chi-Square	1410.881
	df	325
	Sig.	.000

α=0.05

4. Results and Discussion
Prioritization of Principal Factors Influencing Employee Performance during the Implementation of Working from Home Directive

The analysis of the communalities of items confirmed that each item shared some common variance. Results output in table 2 shows communalities of the items, it is observed that all items had an extraction of >.3, further confirming that each item in the measurement scale shared some common variance.

Table 2: Communalities Extracted Using Principal Component Analysis

	Initial	Extraction
Presence of children Dependent on the respondent	1.000	.758
Anxiety of the respondent due to Coronavirus	1.000	.563
Desire of the respondent to follow pandemic updates on the media	1.000	.643
Pressure to beat the curfew	1.000	.626
Engagement with children	1.000	.638
Helping spouse with domestic chores	1.000	.644
Desire to undertake domestic chores	1.000	.716
Engagement of the respondent with the community during the pandemic	1.000	.558
Desire of the respondent to engage in personal matters	1.000	.554
Internet reliability	1.000	.708
Internet Affordability	1.000	.536
Computer availability	1.000	.624
Basic Computer Skills	1.000	.369
Electricity availability	1.000	.728
Power outages	1.000	.733
Lack of appropriate desk at home	1.000	.528
Organization policy on information	1.000	.546

Lack of access to critical files domiciled in the office	1.000	.593
Lack of printing services	1.000	.604
Supervisor support	1.000	.614
Lack of supervision	1.000	.577
Lack of communication from supervisor	1.000	.669
Interruption from visitors	1.000	.709
Noise in the neighbourhood	1.000	.615
Colleague support	1.000	.583
Number of hours worked from home per day	1.000	.551

Extraction Method: Principal Component Analysis.

To determine the number of components to retain, the Kaiser Eigenvalue 1 criterion was used. (Kaiser, 1974). Going by this criteria five principal components with Eigenvalues greater than 1 were extracted. The result in Table 3shows the percentage of variance accounted for by each of the 26 variables; suggesting the 26 variables were the key components measured in the eight (8) latent factors that accounted for 61.487% of the total variance observed from the factors influencing employee performance during the implementation of working from home directive.

Table 3: Total Variance Explained by factors influencing employee performance during the implementation of working from home directive

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.307	24.257	24.257	6.307	24.257	24.257
2	2.140	8.229	32.486	2.140	8.229	32.486
3	1.853	7.128	39.615	1.853	7.128	39.615
4	1.335	5.135	44.750	1.335	5.135	44.750
5	1.195	4.595	49.345	1.195	4.595	49.345
6	1.081	4.159	53.504	1.081	4.159	53.504
7	1.056	4.063	57.567	1.056	4.063	57.567
8	1.019	3.920	61.487	1.019	3.920	61.487
9	.928	3.570	65.058			
10	.886	3.408	68.466			
11	.832	3.201	71.666			
12	.783	3.012	74.678			
13	.739	2.843	77.521			
14	.689	2.651	80.172			
15	.611	2.350	82.521			
16	.591	2.275	84.796			
17	.558	2.146	86.942			
18	.531	2.042	88.985			
19	.475	1.828	90.812			
20	.434	1.669	92.481			
21	.418	1.608	94.089			
22	.365	1.404	95.492			
23	.355	1.364	96.856			
24	.314	1.207	98.063			
25	.291	1.119	99.182			
26	.213	.818	100.000			

Extraction Method: Principal Component Analysis.

Results in Table 3 indicate eight (8) latent component factors influencing employee performance during the implementation of the working from home directive. The eight components retained for meeting the Kaiser criteria of having the greatest Eigen values greater than 1 account for 61.487% of the total variance observed (Kaiser, 1974).

To determine how many factors to retain, the resultant Cattell scree plot was examined, variables that loaded before the curve starts to flatten and with Eigen values above one were retained. Figure 1 shows the

resultant loading of Variables on the components displaying plotting Eigen value (y-axis) against each component (x-axis).
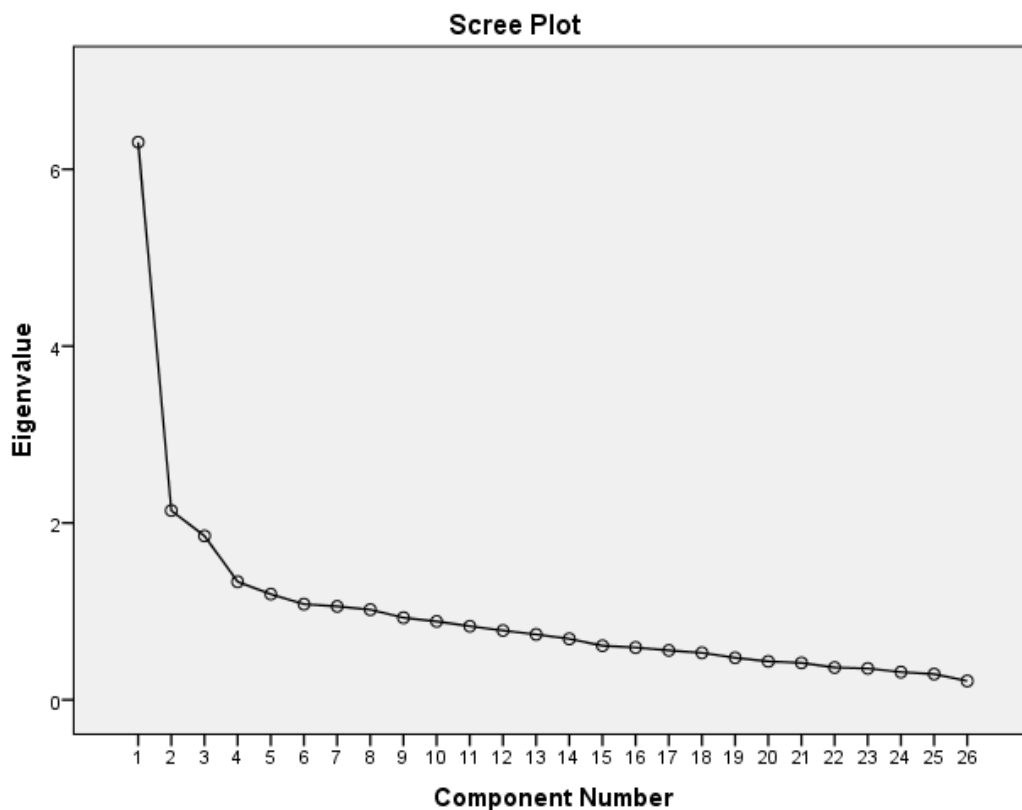

Figure 1: Loading of Variables on the Components

It is observed that the scree plot curve begins to flatten between factors 7 and 8. It is also apparent from the curve that components from factor 8 forward have Eigen values of less than 1, going by this criterion eight components (1, 2, 3,4,5,6,7, and 8) were retained.

This result implies that the eight main components have the greatest contribution to factors influencing employee performance during the implementation of working from home directive. To identify the variables with high loadings on each of the components, rotated component matrix was examined. Table 4 shows the Loadings of attributes on principal components.

Table 4: Loadings of Attributes on Principal Components

Component Matrix

	Component							
	1	2	3	4	5	6	7	8
Presence of children Dependent on the respondent	-.026	.351	-.162	-.478	.268	.522	.074	-.173
Anxiety due to Coronavirus	.422	-.093	-.183	.032	-.471	-.056	-.320	.123
Desire to follow pandemic updates on the media	.380	-.148	-.429	.228	-.350	.150	-.066	.303
Pressure to beat the curfew	.403	.306	-.253	-.360	-.315	.141	.227	.077
Engagement with children	.564	-.079	-.448	-.081	.313	-.052	.006	-.075
Helping spouse with domestic chores	.573	.019	-.453	-.010	.319	.056	.070	.022
Desire to undertake domestic chores	.587	-.013	-.402	.064	.179	-.278	-.081	-.300
Engagement with the community during the pandemic	.623	.155	-.280	.074	.113	-.110	.176	.081
Desire of the respondent to engage in personal matters	.670	-.169	-.189	-.024	-.056	-.138	.071	-.116
Internet reliability	.519	-.183	.127	.098	-.213	-.341	.362	-.293

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Internet Affordability	.340	-.334	.383	.044	-.112	.139	.241	-.264
Computer availability	.494	-.255	.465	-.012	.171	.210	.065	-.144
Basic Computer Skills	.354	-.284	.123	-.061	-.027	-.001	.378	-.026
Electricity availability	.652	-.417	.132	.004	.046	.237	.058	.224
Power outages	.654	-.375	.214	.024	.110	.218	-.099	.222
Lack of appropriate desk	.652	-.123	.038	-.129	.121	.062	-.214	.075
Organization policy on information	.674	-.011	.079	-.152	-.208	.042	-.012	.132
Lack of access to critical files domiciled in the office	.285	.048	.153	-.394	.212	-.461	.041	.267
Lack of printing services	.439	-.087	.314	-.284	.086	-.129	-.445	.048
Supervisor support	.508	.493	.153	.100	-.123	.049	.145	.200
Lack of supervision	.424	.511	.238	.265	.033	-.020	.081	.034
Lack of communication from supervisor	.090	.356	.161	.425	.319	-.020	.241	.410
Interruption from visitors	.538	.375	.244	.213	.066	-.139	-.302	-.243
Noise in the neighbourhood	.559	.404	.224	.083	-.006	.116	-.232	-.120
Colleague support	.414	.480	.030	-.107	-.295	.135	.043	-.249
Number of hours worked from home per day	.120	-.194	-.244	.539	.102	.277	-.134	-.208

Extraction Method: Principal Component Analysis.
a. 8 components extracted.

From the result in Table 4, the first latent principal component concentrated on five factors. The variables loading on this component in priority order are *"organization policy on information, the desire of the respondent to engage in personal matters, electricity power outages, lack of appropriate desk (working furniture) at home and the need to engage with the community"* and accounts for 24.257% of the variance (Eigen value = 6.307). The variables loading most on the second latent principal component in priority order are *"In priority order was first, Lack of supervision, lack of Supervisor support, support from colleagues and noise in the neighborhood."* and accounts for 8.229% of the variance (Eigen value = 2.140).

The variables loading most on the third latent principal component in priority order are *"Engagement with children, availability of Computer, Helping spouse with domestic chores, Engagement with children and Desire to undertake domestic chores"* and accounts for 7.128% of the variance (Eigen value = 1.853).

The variables loading most on the fourth latent principal component in priority order are *"Number of hours worked from home per day, Presence of children Dependent to the respondent, Lack of communication from supervisor and Lack of access to critical files domiciled in the office"* and accounts for 5.135% of the variance (Eigen value = 1.335). The variables loading most on the fifth to the eight latent principal components were *"Anxiety, internet reliability, Basic Computer Skills and Lack of printing services"*

Employee Performance Level Before and Neo-Covid-19 Season
A paired sample t-test was undertaken to determine if the employees' normal performance levels before covid-19 and average performance levels neo-covid were different. The result is indicated in Table 5.

Table 5: Paired Sample t – test on staff performance pre and neo-covid

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Respondent Performance level during Covid-19 Respondents Normal performance Level	-1.18974	.90810	.06503	-1.31800	-1.06149	-18.295	194	.000

The resultant value is less than 0.05, indicating the two datasets are statistically different. A test of variance indicates there was a large variance during the covid time (σ^2.591) unlike in normal financial years (σ^2.412).

Relationship between Respondents' Gender and Principal Components

A correlation statistical analysis was performed to determine that explains whether there was a relationship or association between respondents' gender and 5 principal components that accounted for most of the factors affecting employees' performance during the implementation of the work from home directive.

The components include *"organization policy on information, desire of the respondent to engage in personal matters, electricity power outages, lack of appropriate desk (working furniture) at home and the need to engage with the community"* the result is summarized in table 6.

Table 6: Gender and performance during Covid-19 pandemic

		Organization policy on information	Desire of the respondent to engage in personal matters	Power outages	Lack of appropriate desk at home	Engagement of the respondent with the community during the pandemic
Respondent Performance rate During Covid-19 work from home directive	Pearson Correlation	.026	.163[*]	-.062	-.089	.113
	N	195	194	194	195	195
Gender of Respondent	Pearson Correlation	-.054	-.048	-.001	-.073	-.010
	N	195	194	194	195	195

It was noted that the respondents' performance rate during the Covid-19 work from home directive had a positive correlation with organization policy on information, the Desire of the respondent to engage in personal matters, and engagement of the respondent with the community during the pandemic and negative correlation with Power outages and Lack of appropriate desk at home. However, the result on gender indicates a negative correlation inferring that the two variables in each case move in the opposite direction from each other; as one goes up, the other goes down. This indicates variation in whether the staff member was either male or female. Descriptive statistics indicated that employees who worked from home, both male and female, with dependent children (below 2 years and between 2- 5 years) had a greater decline in productivity than those without. More than half of the respondents (76.9 percent) agreed that they face a lot of distractions from their children as they work.

5. Conclusion

Based on the findings, the study concludes that public officers' performance levels during covid-19 respondents were significantly lower relative to pre-covid performance levels. It is further concluded the factors that contributed most to lowering performance in priority were: organization policy on information, desire of the respondent to engage in personal matters, electricity power outages, lack of appropriate desk (working furniture) at home the need to engage with the community; lack of supervision, lack of supervisor support, support from colleagues and noise in the neighborhood; engagement with children, availability of a computer, helping spouse with domestic chores, engagement with children and desire to undertake domestic chores. The number of hours worked from home per day, presence of children dependent on the respondent and inadequate communication from the supervisor, and challenges accessing critical files domiciled in the office.

6. Recommendations

It is recommended that Ministries Counties, Government Departments and Public Agencies, (MCDAs) review their policy on the use and access of information to facilitate the accomplishment of tasks by employees.

There is a need for an establishment of a framework that facilitates and enhances the effectiveness of employee supervision and supervision support in working from home mode.

Since the working from home model for many jobs entails the use of computers and software, it is recommended that MCDAs progressively budget for the phased acquisition of personal computers for staff whose work assignments require the use of a personal computer.

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