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Research

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Determining compliance with the COVID-19 daily symptom monitoring tool used to identify suspected COVID-19 workers of the military health support formation employees of the South African national defence force

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Abstract

Introduction: *the COVID-19 pandemic had prompted governments in many countries to enact laws and policies to combat the spread of COVID-19 at work. The DEL required every worker to be screened when they arrived at work. Screening methods included self-reporting symptoms using a symptom monitoring tool. This study aimed to determine compliance with the symptom monitoring tool by assessing the knowledge, attitude, and practice of the MHSF employees.* ***Methods:*** *a cross-sectional questionnaire was administered to the employees. Information related to demographic, COVID-19 exposure, knowledge of COVID-19 and the symptom monitoring tool, attitude towards the symptom monitoring tool and practices towards COVID-19 and the symptom monitoring tool was collected.* ***Results:*** *a total of 90 participants participated in the study. The majority (N=45; 50%) of respondents were aged between 30 and 39 years old, with more female (N=50) than male (N=40) participants. The majority (N=51; 56.7%) only had grade 12 as the highest level of education. There were 25% (N=10) of males and 20% (N=10) of females who contracted COVID-19. The relationship between the COVID-19 positive cases and the symptom monitoring tool identifying symptoms had a strong negative correlation (-0.932). Respondent's knowledge of COVID-19 and the symptom monitoring tool was moderate (72.4%), with the attitude to the symptom monitoring tool being moderate (63.3%) as well. However, the practices of the COVID-19 guidelines and the symptom monitoring tool were good (93.3%).* ***Conclusion:*** *the employees of the MHSF complied with the completion of the daily symptom monitoring tool. There was decent knowledge of COVID-19 and the symptom monitoring tool, with a moderate attitude and good practices towards COVID-19 and completing the tool. The tool was able to identify suspected COVID-19 cases, which possibly reduced the spread of the virus in the workplace.*

Introduction

The COVID-19 pandemic had prompted governments in many countries to enact laws and policies to combat the disease's spread in the population and at work, including lockdown measures [1]. President Cyril Ramaphosa of South Africa declared a national state of disaster and imposed a nationwide lockdown, resulting in the closure of borders, non-essential shops, and industries [2]. President Cyril Ramaphosa announced on June 1, 2020, that the country would be subject to a Level 3 lockdown to allow economic activity to continue as long as health protocols were followed [3]. Section 27(2) of the Disaster Management Act outlined these health protocols, including the master plan for workplace reopening, administrative measures, health and safety measures and social distancing measures [4].

The Act requires all employers to implement symptom screening as part of the health and safety measures outlined by the Department of Employment and Labour (DEL) [4]. As a result, every worker had to be screened when they arrive at work to see if they have COVID-19 symptoms. The National Institute of Communicable Diseases (NICD) published symptom monitoring and management guidelines. Cough, sore throat, fever, dyspnoea, loss of smell or taste, body aches, red eyes, nausea, diarrhoea, vomiting, fatigue, weakness, or tiredness, were most of the symptoms. The guidelines also include a symptom monitoring sheet that can be customized for use in a workplace [5]. Some people infected with COVID-19 may be asymptomatic, and others may have minor symptoms. Misidentifying COVID-19 in healthy persons may result in unnecessary self-isolation and testing, while misidentifying a lack of infection in sick people may result in viral propagation [6]. The study, therefore, aims to determine compliance with the use of the self-assessing daily symptom monitoring tool used at the Military Health Support Formation (MHSF) by assessing the knowledge and attitude of COVID-19

and the completion of the daily symptom monitoring tool, factors associated with compliance with the completion of the daily symptom monitoring tool and determining the number of suspected COVID-19 cases identified using the daily symptom monitoring tool.

Methods

Study area and data collection: the study was conducted at the MHSF Headquarters (HQ) in Zwartkop, a Centurion suburb of Pretoria, Gauteng. 127 employees work at the HQ, with an average of 100 employees at the facility at any given time due to military obligations such as courses, military exercises, deployments, and detached duties. The MHSF provides logistical support to the South African Military Health Services (SAMHS), with top management sitting at the HQ for decision-making purposes. The study population comprised of employees who stand rollcall at the HQ and did not include members of facilities that report to the HQ after their rollcall at their facilities. The study area was chosen due to its proximity which allowed for travelling costs involved being reduced, and the study was during regular working hours. The quantitative cross-sectional study design used a Knowledge Attitude and Practices (KAP) survey approach that uses prepared questions organised into standardised questionnaires to enable access to quantitative data. Furthermore, KAP surveys uncover misconceptions or misunderstandings that may impede the activities one wishes to adopt and possible obstacles to behaviour change [7]. The study data was collected using a self-administered questionnaire. The questionnaire was only provided in English as it´s the language of communication in the South African National Defence Force (SANDF). The self-administered questionnaire was provided directly to each respondent. In addition, consent forms were distributed to respondents together with the questionnaire. Respondents had a working day to complete the questionnaire, which took less than 15 minutes of their time and was collected at the end of the working day.

Study population and eligibility criteria: military officers, non-commissioned officers, and Public Servant Act Personnel (PSAP) who worked at the MHSF were eligible to participate in the study. Members detached to work at the MHSF, civilian contractors and cleaners were excluded from the study and did not form part of the research population. There was a total of 435 employees within the MHSF, which comprises the source population, with 127 employees within the MHSF HQ, which constituted the target population for the study.

Sample size determination: the sample size for the cross-sectional study employed a population research technique that was estimated using the Centers for Disease Control and Prevention's (CDC) Epi Info tool. The study population consisted of 127 MHSF HQ workers. The sample size was calculated using a 97% confidence interval and a 5% margin of error. As a result, using Epi Info version 7.2, the largest feasible sample size was estimated to be 100 individuals.

Data collection tools and measurements: the study data was collected using a self-administered questionnaire with closed questions. The questionnaire consisted of 38 standardised, pre-set questions and pre-coded responses meant to collect information to address the study goals. The variables discovered throughout the research were utilised to create the measuring instrument. The questionnaire comprised of five sections: demographic information, COVID-19 exposure, knowledge of COVID-19 and the symptom monitoring tool, attitude towards the symptom monitoring tool and the practices toward COVID-19 and the symptom monitoring tool. The original Bloom´s cut-off points, 80.0-100.0%, 60.0-79.0%, and ≤59.0%, were adapted and modified for the KAP study conducted. For the knowledge section, each correct response was assigned a score of 1, and incorrect was assigned a score of 0. Respondents´ overall knowledge score was

categorised as good for a score between 80.0-100.0%, moderate for a score between 60.0-79.0%, and poor for a score of less than ≤59.0%. For the attitude section, yes was assigned a score of 1, and no was given a score of 0. The total attitude score was as positive for a between 80.0-100.0%, moderate for a score between 60.0-79.0%, and negative for a score of ≤59.0%. For the practice measures section, yes was assigned a score of 1 and no a score of 0. The total score was categorised using the same Bloom´s cut-off point: good for a score between 80.0-100.0%, moderate for a score between 60.0-79.0%, and poor for a score of ≤59.0%.

Data quality control, processing and analysis: validity was crucial since it determined what survey questions were used and ensured researchers used questions that measured the study questions. The degree to which a questionnaire assesses what it promises to measure is referred to as its validity. To determine validity, Content Validity was employed. This is a non-statistical kind of validity in which the questionnaire content was methodically examined to see whether it covers a representative sample of the behaviour domain to be evaluated [8]. A pilot study was conducted, and efforts were made to ensure that the sample drawn for the pilot study represented the population of interest. This was 10% of the sample population size. Data collected from respondents were compared with the actual research data to determine if the same responses were obtained for the same sections. Content Validity ensured the content of the questionnaires content covers all the research questions and objectives. Accurate computations and data compilation boosted dependability. The dependability of the information being analysed was determined using confidence intervals. All completed questionnaires were verified for accuracy, completeness, and correctness. Data encryption was used to categorise the data and make data entry into the statistics programme easier. The Statistical Package for the Social Science Software Version (SPSS) 26 was used to enter the data, which was then cleaned before being analysed. Checking for out-of-the-ordinary values of each variable was part of the data cleansing process. The data was then analysed with the SPSS programme. The analysis included frequency, summary statistics, and measurements of central tendencies. Frequencies were calculated for all categorical variables, and summary statistics were calculated for continuous variables. A linear regression analysis was undertaken to see if age, gender, race, and level of education influence knowledge, attitudes, and practices of the daily symptom monitoring tool.

Ethics approval and consent to participate: research ethics clearance was granted by the University of Johannesburg Research Ethics Committee with the reference number REC-1540-2022 prior to the study being conducted. Permissions from the General Officer Commanding of the MHSF was obtained to conduct the study in the study area. Written consent was obtained from each of the research participants. Those not willing to participate were given the right to do so. The questionnaire was completed anonymously, allowing participants to express themselves freely, to prevent biased answering, and the responses were not disclosed to other participants. Confidentiality of responses was also ensured throughout the research process.

Results

Fifty percent of respondents were between 30 and 39, with only 1.1% over 60 years of age. There were 55.5% female participants, with no (zero) participants identifying as non-discriminatory gender. Eight seven percent (87.8%) of the respondents identified as black, followed by white (5.6%), coloured (4.4%) and lastly, Indian (2.2%). The majority (51.1%) of the participants were single, followed by married participants at 37.8%. The highest education level of 56.7% of the participants was grade 12 (matric), with zero participants having a Masters or PhD degrees. The rank groupings indicate that most participants

were Junior NCOs at 58.9%, while the PSAPs were the minority at 8.9%. Fifty-nine (65.6%) participants had their own accommodation. Most participants (27.8%) lived with four or more family/dependents, while 25.6% lived independently. Participants who used their own vehicles to get to work made up 38.9% of the participants, while 33.3% used military duty buses, 16.7% used public transport, and 11.1% used a lift club (Table 1).

COVID-19 exposure data: there were 33.3% of 40 - 49-year-olds who contracted COVID-19, followed by 49 - 50-year-olds (23.5%), 30 - 39-year-olds (20.5%) and lastly, 18 - 29-year-olds with the least COVID-19 cases at 16.7%. When looking at the total amount of respondents, more males had COVID-19 (25%) compared to females (20%). Participants with only matric (grade 12) had 25.5% of participants who contracted COVID-19, 20.0% of members with a degree/BTech, and 17.2% of participants with a diploma/higher certificate contracted COVID-19 (Table 2). The relationship between the COVID-19 positive cases and the symptom monitoring tool identifying symptoms had a strong negative correlation (- 0.932) since the value is close to - 1 (Table 3).

Knowledge data of the research participants: there were six questions asked to determine the knowledge of the basic COVID-19 preventative measures and five questions on the knowledge of the symptom monitoring tool. There were 91.1% of respondents who knew that COVID-19 is spread via respiratory droplets, 94.4% of respondents knew the quarantine period was for 7 days, 96.5% knew that wearing surgical marks can prevent COVID-19 infection, with only 66.6% knowing that social distance was 1.5 meters, 37.8% knew that they need to wash their hands for at least 20 seconds and only 63.3% knowing that sanitisers should comprise of at least 70% of alcohol. When it comes to the knowledge of the symptom monitoring tool, 84.4% knew completing the tool was compulsory, 24.4% of respondents knew that they must complete the tool themselves, 85.6% knew it must be completed when they arrive at work, with 94.4% knowing it must be completed daily, and 60% knowing the purpose of the monitoring tool. Respondent's knowledge of COVID-19 and the symptom monitoring tool was assessed using the 11 questions and the percentage of the correct answers was 72.4% (717/990*100). Therefore, the knowledge of COVID-19 and the symptom monitoring tool is moderate (60.0-79.0%) (Table 4).

Attitude data of the research participants: this section comprises four questions. There were 90% of the respondents who thought the monitoring tool was needed in the workplace, with 74.4% thinking it is effective in identifying COVID-19 suspected workers. When asked if they believe an alternative method should be used, 74.4% thought that an alternative should be used. Of the options asked, 48.9% preferred a screener to screen for symptoms, 23.3% preferred a mobile app, and 3.3% didn´t want any screening to take place. Respondents attitude to the symptom monitoring tool was assessed using three questions. The percentage of favourable answers was 63.3% (171/270*100). Therefore, the attitude of the symptom monitoring tool is moderate (60.0-79.0%) (Table 5).

Practices data of the research participants: this section contained seven questions. There were 98.9% of respondents who sanitised their hands daily, 96.6% of respondents who had their own offices and those who shared wore their masks when colleagues or visitors entered the office space, 90% practiced social distancing at work, with 95.6% answering the screeners at other military units truthfully. When asked if they complete the symptom monitoring tool as instructed, 97.8% stated they comply. The percentage of compliant answers was 96.3% (524/544*100). Therefore, the practice of COVID-19 guidelines and the symptom monitoring tool is good (80.0-100.0%) (Table 6).

Discussion

The demographic data indicated that there were more female (55.6%) respondents than males (44.4%). According to the Minister of Defence, Thandi Modise, the overall number of uniformed women in the SANDF stands at 28%, compared to 72% for men, with the civilian component comprising of 55% women compared to 45% men [9]. Therefore, the study's ratio of uniformed women to men doesn´t represent the actual ratio of the organisation. Of the half (50%) of the respondents were aged between 30 - 39, which is in line with the average age of a soldier in the SANDF [10]. When looking at the rank groupings, 58.9% of the respondents were junior NCOs. According to Democratic Alliance (DA) party shadow defence and military veterans minister Kobus Marais, this rank group is seen as the backbone of any military force [11]. Therefore, there are more NCOs than other ranks. More than half (56.7%) of the respondents had matric as the highest level of education. The education level is on par with statistics of the education of South Africans, with 59% attaining matric as their highest level of education [12]. Most respondents identify as black (87.8%). The racial demographics align with the South African population [13]. Over half (51.1%) of the participants were single, followed by married participants at 37.8%. According to Le Menestrel and Kizer [14], about 50% of American military personnel are married, whereas Keeling, Wessely and Fear [15] found that 59.4% of United Kingdom soldiers are married compared to the general population. When compared to the marriage statistics of South Africa, there had been a steady decline in marriage over recent years, where marriages fell by 22,5% between 2011 and 2019 and declined by a further 31,1% in 2020 [16].

COVID-19 exposure data: of the sample population, 22.2% contracted COVID-19 between March 2021 and January 2022. Based on the study's total sample, more men contracted COVID-19 than women, but when only analysing the COVID-19 positive cases, the positivity rate was 50% for men and women. Regarding age groups with the highest infection rate, 40-49-year-olds had the highest rate of infection per population (33.3%). Of the COVID-19 positive cases, the data showed that 30 - 39-year-olds had the highest positivity rate (45%). Sobotka *et al*. [17] discovered a consistent trend across countries and age groups. Men are more likely than women to die from COVID-19 infection. This gender-balanced fatality, which is similar to gender inequalities in mortality documented for other infectious diseases [18], contrasts with an apparent gender-neutral distribution of confirmed COVID-19 cases. Men accounted for 49.5% of cases in 40 countries having complete data on sex-specific illnesses and fatalities. In addition, the initial reports of COVID-19 between males and females estimated that 60% of COVID-19 patients were male based on a study examining 799 patients by Kopel *et al*. [19]. The results of the COVID-19 positivity rate among men and women in the study align with the results of other studies looking at COVID-19 cases and sex. Ruffini, Sojourner and Wozniak [20] found that the value of daily symptom screening in the workplace for identifying persons with active COVID-19 is low, especially when there are asymptomatic cases. Positive screening rates were considerably higher than actual infection rates, and local case rates were not predictive of positive screens. Therefore, the positive cases identified with the symptom monitoring tool could not be a true reflection of the actual cases of COVID-19, especially when considering the number of participants who encountered positive cases or those who were exposed to other people outside of their work environment and family circle.

When looking at the level of education of the COVID-19-positive cases, the study found that 65% of the respondents only had matric (grade 12). A study by Hawkins, Charles and Mehaffey [21] found that lower education levels are strongly associated with higher rates of COVID-19. Of the 20 positive cases, 11 (55%) respondents agreed that the symptom monitoring tool helped them identify their COVID-19 symptoms. A study by

Gostic *et al*. [22] on the effectiveness of symptom and risk screening concluded that screening would detect no more than half of infected travellers, which was consistent with studies conducted by Niehus *et al*. [23] and Bhatia *et al*. [24].

Knowledge data: the study revealed that the respondents had moderate knowledge (72.4%) of COVID-19 and the symptom monitoring tool. When only looking at the knowledge of COVID-19, the participants had a good knowledge of COVID-19, only doing poorly with one question. When looking at the respondents' knowledge, it was not too dissimilar to the study by Adesegun *et al*. [25]. Their study was a cross-sectional survey of the general population of educated Nigerians to assess their knowledge, attitudes, and practices relating to COVID-19. They found that their knowledge of COVID-19 was good, with a mean knowledge of 78%. Knowledge of COVID-19 in a cross-sectional study in Malaysia found that 80.5% of respondents had good knowledge of COVID-19 [26]. In the scoping review of studies in Nigeria, Ethiopia, Sudan, Cameroon, Ghana, Uganda, Sierra Leone, Rwanda, and the Democratic Republic of Congo, Nwagbara *et al*. [27] found that most of the participants had adequate knowledge related to COVID-19. The knowledge of COVID-19 of the participants of this study was on par with studies done to determine the knowledge of COVID-19. Such knowledge of a novel disease affirms the role of public health and health education campaigns in collaboration with news media in explaining the basics of COVID-19.

The study found that respondents aged 50 - 59 had the lowest score for the Knowledge section. Abdelhafiz *et al*. [28] found this to be true for the cross-sectional survey conducted in Egypt among 559 adults. The knowledge of COVID-19 was significantly lower among older aged persons. This was also found in the study among patients at Addis Zemen Hospital in Ethiopia, by Akalu, Ayelign and Molla [29], with an increase in age resulting in the association with poor knowledge. This is also supported by other studies [30,31] which reported that older respondents showed poor knowledge of COVID-19. Abdelhafiz *et al*. [28] found in the study that those less educated had lower knowledge of COVID-19. That is not the case with the results of this study, as respondents with a degree/BTech and those with only matric (grade 12) scored the lowest. Men had more knowledge than women, contrasting with Qutob & Awartani´s [32] and Alsan *et al*. [33] studies, which showed that women demonstrated more COVID-19 knowledge than men. However, the study by Alahdal, Basingab & Alotaibi [34] corroborates the finding of this study.

Attitude data: the study found the attitude toward the symptom monitoring tool was moderate (63.3%). Regarding the attitude toward the symptom monitoring tool, the results were positive, with 90% of the respondents believing the symptom monitoring tool was needed in the workplace and that the tool could identify COVID-19 symptoms effectively (74.4%). However, 74.4% also thought an alternative to the screening tool should be used. The majority (48.9%) of those respondents favoured a screener to screen them for COVID-19. This system was used at most facilities in the SANDF and could be seen as an easier and quicker way to be screened as opposed to the self-screening the symptom monitoring tool requires. A positive association was seen between knowledge level and attitude levels. This was also observed in a study by Abdelhafiz *et al*. [28], where it was found that the high knowledge scores on the self-assessment question tended to have a positive attitude towards the score. Correlation between knowledge and attitude was also found to have a positive association between participant´s knowledge and attitude in the study by Desalegn *et al*. [35] aimed at assessing the public KAP towards the pandemic in Addis Ababa, Ethiopia.

Practices data: regarding the COVID-19 guidelines practiced in the workplace, 98.9% of respondents sanitised their hands daily, with 96.6% and 95.6% putting on their masks when someone entered their office, even when sharing an office. When asked if they completed the symptom monitoring

tool as instructed, 97.8% stated they complied with the self-screening. A positive association was seen between knowledge and practices as well as between attitude and practices. Reuben *et al*. [36] also found a positive association between knowledge and practices in their study when looking at the compliance to COVID-19 guidelines of infection prevention and control outlined by their government. Desalegn *et al*. [35] found a positive association between attitude and practices when assessing the participants' attitudes toward practicing COVID-19 preventive measures. Similarly, Al-Hanawi *et al*. [37] found that their study's mean score for attitude and the mean score for practices were high, indicating a favourable relationship between attitude and practices.

Limitations: the study has several limitations. First, knowledge and behaviours associated with COVID-19 had changing rapidly over the two years, and lockdown and restrictions had ended in most countries, including South Africa. Therefore, these findings may be less applicable over time. Second, the survey was only conducted at the MHSF HQ, which covers a fraction of the SANDF population. Third, more participants were willing to partake in the study but did not, as they did not want to complete the study consent forms, which would contain their details, in fear of victimisation. Fourth, more Officers were unwilling to participate without any specific reasoning.

Conclusion

For this study, it can be concluded that the employees of the MHSF complied with the completion of the daily symptom monitoring tool. There was decent knowledge of COVID-19 and the symptom monitoring tool, with a moderate attitude and good practices towards COVID-19 and completing the tool. The tool was able to identify suspected COVID-19 cases, which possibly reduced the spread of the virus in the workplace. These findings are useful for public health policy development, disease prevention and health education. Understanding the KAP and behaviours of people facing pandemics is vital for guiding strategic policies in the future.

What is known about this topic

- *The Coronavirus was a global threat and an international public health emergency changing the landscape of the workplace;*
- *Knowledge and attitude of COVID-19 preventative measures influences the practices of preventative measures;*
- *Age has an influence of on knowledge of COVID-19.*

What this study adds

- *Self-assessing symptom monitoring tools can identify COVID-19 suspected cases;*
- *A greater knowledge of COVID-19 resulted in the adherence to the symptom monitoring tool.*

Competing interests

The authors declare no competing interests.

Authors' contributions

This study was conceived by Stellan John and formed part of the work for his Masters degree. Stellan John: Carried out the fieldwork, collated the data, entered the data, conducted data analysis and interpretation. Shalin Bidassey-Manilal and Leana Esterhuizen supervised Stellan John. Stellan John wrote the first draft of the manuscript and all co-authors assisted with its preparation before its finalisation. All authors have rad and approved the final version for publication.

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Tables and figure

Table 1: frequency of demographic information

Table 2: COVID-19 contact per characteristics

Table 3: correlation between COVID-19 positive cases and the symptom monitoring tool

Table 4: knowledge of COVID-19 per characteristic

Table 5: attitude data

Table 6: practices data

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Table 1: frequency of demographic information							
	Total		**Skewness**		**Kurtosis**		**Std deviation**
Characteristics	**n**	**%**	**Stat**	**Std error**	**Stat**	**Std error**	
Total	90	100					
Age							
18 – 29	12	13.3	0.520	0.254	-0.573	0.503	0.984
30 – 39	45	50.0					
40 – 49	15	16.7					
50 – 59	17	18.9					
60+	1	1.1					
Sex							
Male	40	44.4	-0.227	0.254	-1.993	0.503	0.500
Female	50	55.6					
Race							
Black	79	87.8	3.17	0.254	9.654	0.503	0.627
White	5	5.6					
Coloured	4	4.4					
Indian/Asian	2	2.2					
Marital status							
Married	34	37.8	1.545	0.254	2.671	0.503	0.923
Single	46	51.1					
Widowed	2	2.2					
Divorced	6	6.7					
Domestic partnership	2	2.2					
Education							
Matric (grade 12)	51	56.7	0.888	0.254	-0.413	0.503	0.690
Diploma/higher certificate	29	32.2					
Degree/BTech	10	11.1					
Rank grouping							
Junior NCO	53	58.9	1.350	0.254	0.517	0.503	1.319
Senior NCO	16	17.8					
Junior officer	7	7.8					
Senior officer	6	6.7					
PSAP	8	8.9					
Living conditions							
Military accommodation	31	34.4	-0.666	0.254	-1.593	0.503	1.568
Own accommodation	59	65.6					
Number of family members or dependents							
None	23	25.6	0.92	0.254	-1.519	0.503	1.568
1 Member/dependent	17	18.9					
2 Members/dependents	15	16.7					
3 Members/dependents	10	11.1					
4 + Members/dependents	25	27.8					
Mode of transport							
Military duty bus	30	33.3	0.013	0.254	-1.346	0.503	1.050
Public transport	15	16.7					
Own vehicle	35	38.9					
Lift club	10	11.1					
NCO; non commissioner officer, PSAP; public servant act personnel							

Table 2: COVID-19 contact per characteristics								
	Total		**COVID-19 +**		**COVID-19 –**		**Total + cases**	
Characteristics	**N**	**%**	**n**	**%**	**n**	**%**	**N**	**%**
Total	90	100					20	100
Age								
18 – 29	12	13.3	2	16.7	10	83.3	2	10
30 – 39	45	50.0	9	20.0	36	80.0	9	45
40 – 49	15	16.7	5	33.3	10	66.7	5	25
50 – 59	17	18.9	4	23.5	13	76.5	4	20
60+	1	1.1	0	0	1	100	0	0
Sex								
Male	40	44.4	10	25.0	30	75.0	10	50
Female	50	55.6	10	20.0	40	80.0	10	50
Education								
Matric (grade 12)	51	56.7	13	25.5	38	74.5	13	65
Diploma/higher certificate	29	32.2	5	17.2	24	82.8	5	25
Degree/BTech	10	11.1	2	20.0	8	80.0	2	10
Rank grouping								
Junior NCO	53	58.9	9	17.0	44	83.0	9	45
Senior NCO	16	17.8	6	37.5	10	62.5	6	30
Junior officer	7	7.8	1	14.3	6	85.7	1	5
Senior officer	6	6.7	1	16.7	5	83.3	1	5
PSAP	8	8.9	3	37.5	5	62.5	3	15
NCO; non commissioner officer, PSAP; public servant act personnel								

Table 3: correlation between COVID-19 positive cases and the symptom monitoring tool				
Characteristics	**r**	**p**	**95% confidence intervals**	
			Lower	Upper
Have you contracted COVID-19 between March 2021 and January 2022? Did the symptom monitoring tool help you identify your symptoms?	– 0.932	<0.001	– 0.955	– 0.898

Table 4: knowledge of COVID-19 per characteristic												
Characteristics	**Q1 correct**		**Q2 correct**		**Q3 correct**		**Q4 correct**		**Q5 correct**		**Q6 correct**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Age												
18 – 29	11	91.7	12	100	12	100	8	66.7	6	50.0	10	83.3
30 – 39	40	88.9	41	91.1	41	91.1	34	75.6	19	42.2	31	68.9
40 – 49	14	93.3	14	93.3	15	100	11	73.3	4	26.7	7	46.7
50 – 59	16	94.1	14	100	17	100	7	41.2	4	23.5	9	52.9
60+	1	100	1	100	1	100	0	0.0	1	100	0	0.0
p-value	0.956		0.600		0.381		0.016		0.002*		0.145	
Sex												
Male	36	90.0	39	97.5	38	95.0	29	72.5	16	40.0	29	72.5
Female	46	92.0	46	92.0	48	96.0	31	62.0	18	36.0	28	49.1
p-value	0.740		0.258		0.819		0.470		0.188		0.272	
Education												
Matric (grade 12)	48	94.1	48	94.1	50	98.0	35	68.6	17	33.3	30	58.8
Diploma/higher certificate	26	89.7	27	93.1	26	89.7	20	69.0	14	48.3	20	69.0
Degree /BTech	8	80.0	10	100	10	100	5	50.0	3	30.0	7	70.0
p-value	0.338		0.705		0.167		0.090		0.618		0.712	
Rank grouping												
Junior NCO	49	92.5	52	98.1	51	96.2	42	79.2	19	35.8	34	64.2
Senior NCO	14	87.5	14	87.5	15	93.8	11	68.8	7	43.8	10	62.5
Junior officer	6	85.7	6	85.7	6	85.7	3	42.9	3	42.9	5	71.4
Senior officer	6	100	6	100	6	100	3	50.0	2	33.3	6	100
PSAP	7	87.5	7	87.5	8	100	1	12.5	3	37.5	2	25.0
p-value	0.854		0.294		0.658		0.003*		0.562		0.004*	

*p is significant at <0.05 Q1 – Questionnaire question 17; Q2 – Questionnaire question 18; Q3 – Questionnaire question 19; Q4 – Questionnaire question 20; Q5 – Questionnaire question 21; Q6 – Questionnaire question 22, NCO; non commissioner officer, PSAP; public servant act personnel

Table 5: attitude data			
Characteristics		**Total**	
		n	**%**
Do you think the symptom monitoring tool is needed at the workplace?	Yes	81	90.0
	No	9	10.0
Do you think the symptom monitoring tool is effective in identifying suspected COVID-19 worker?			
	Yes	67	74.4
	No	23	25.6
Do you think an alternative method of symptom monitoring should be used?			
	Yes	67	74.4
	No	23	25.6
If you answered “Yes” to question 30, what would you prefer?			
	A screener to screen for symptom	44	48.9
	A mobile app for screening	21	23.3
	No screening	3	3.3

Table 6: practices data			
Characteristics		**Total**	
		n	%
Do you sanitise your hands regularly at work?	Yes	89	98.9
	No	1	1.1
Only answer if you have your own office: do you put on your mask when colleagues or visitors enter your office?			
	Yes	60	96.8
	No	2	3.2
Only answer if you are sharing an office: do you wear your mask at all times when working with your colleague/s in the office?			
	Yes	31	96.8
	No	1	3.2
Do you practice social distancing at work?		81	90.0
	Yes	9	10.0
	No		
When being screened by a screener at entrances of other military units, or facilities, do you answer truthfully when asked if you have any COVID-19 symptoms.		86	95.6
	Yes	4	4.4
	No		
Do you answer truthfully when completing the symptom monitoring tool?			
	Yes	89	98.9
	No	1	1.1
Do you complete the symptom monitoring tool as instructed?			
	Yes	88	97.8
	No	2	2.2