Health, Wellness & Resilience in the Kenya Wildlife Service

A baseline assessment of drug and alcohol use

APRIL-JULY 2022

KENYA
WILDLIFE
SERVICE

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1. Executive Summary

The Kenya Wildlife Service (KWS) is a state corporation that derives its mandate from the Wildlife Conservation and Management Act, 2013, with an overall mandate to protect, conserve, develop and manage wildlife and habitats in Kenya and to enforce related laws and regulations. In addition, KWS is responsible for the management and protection of critical water catchment areas as well as complementing National security. KWS manages approximately 8% of the total landmass in Kenya that consists of 23 National Parks, 31 National Reserves and 6 National Sanctuaries, 4 Marine National Parks and 6 Marine National Reserves. There are also 154 field stations and outposts for the management of wildlife outside the protected areas. In January 2022, the Service had a total workforce of approximately 4,100 persons, 79% on permanent terms and 21% on temporary appointments.

The KWS recognizes that to achieve the Strategic Objectives identified in its Annual Performance Contract and move toward the Kenya National Wildlife Strategy 2030, it must transform itself into an effective, efficient, independent and accountable Service. Further, it must reorient its working environment as well as its institutional and administrative arrangements towards a culture that is responsive, friendly, and effective both internally to its staff and externally to the public. The general health and welfare of personnel in the KWS are critical for themselves, their colleagues, and the Service. An unhealthy officer cannot serve their community effectively and can be a danger to themselves, their colleagues and the community they serve. The current study represents the first empirical examination of how the misuse of alcohol and other substances has impacted the KWS staff's fitness for duty.

The United Nations Office on Drugs and Crime (UNODC), upon request from and in collaboration with senior leadership under the guidance of the Director General of the Kenya Wildlife Service, sponsored a Technical Work Group that included a team of national researchers and an international research consultant to conduct an Assessment of Alcohol and Drug Use in the KWS. During this assignment, the researchers received extraordinary support to carry out this mixed-methods study. The team observed the desire and efforts of the Head of Administration, Human Capital Services, Wellness Office, commanding officers, junior officers, rangers, and civilian employees to build a healthy and safe workplace that encourages support, treatment and recovery of those affected.

Executive Summary continued...

The "Baseline Assessment" is shaped around a mixed-methods research design to provide robust quantitative and qualitative data. Using the qualitative methods of focus group discussions, key informant interviews, and document review, the researchers examined individual and organizational-level factors explaining individuals' alcohol and substance use and help-seeking behaviour for substance use in general.

The interviews of both Command Staff Leaders and focus group discussions with randomly selected KWS personnel revealed what is needed to replace the existing cultural and organizational arrangements – which can lead to isolation, suicide, depression, pathology, and stigma – with a culture that has the necessary processes and commitment to promoting physical, behavioural, and mental resiliency.

The quantitative analyses revealed that KWS employees are not immune from substance use disorders. The process of analyzing the quantitative data is driven by a series of scales/screenings that measure the risk of alcohol dependence, excessive alcohol consumption, and substance use consumption.

There is evidence of specific alcohol and drug use behaviours that indicate sub-groups of officers at heightened risk for developing substance use disorders. The data further revealed that organizational culture, workforce strength, organizational pressures, unsafe working environment and social availability of drugs and alcohol shaped use and maladaptive behaviours.

2. Key Findings

Organization Development

Leadership Effectiveness

Respondents acknowledge the important role of supervisory leadership towards building an organizational culture of health and wellness. Survey respondents and focus group participants reported that their supervisors lack effective problem-solving skills and social judgment skills to manage complex organizational and social problems. This can trickle down to negatively impact personnel, especially since these are captured separately in the qualitative and quantitative assessments, as these relate to fulfilling family obligations. This includes canceling leave time, staff shortages, salary caps and salary ceilings, and predatory loan practices.

Communication

There is a perceived lack of uniformity in policies, processes, and expectations around leave, promotions, and transfers according to respondents and focus group participants causing widespread distrust in KWS. The findings suggest that ambiguous, uncertain, and inconsistent communication in these areas may be a direct or indirect explanation of alcohol and/or drug use.

Key Findings continued...

Alcohol and Substance Use

Onset of alcohol consumption
The results suggest that most officers begin to consume alcohol after entering KWS.

Onset of substance use
The results suggest that officers who regularly use drugs and other substances began to consume regularly after joining the KWS.

Incidence of heavy or excessive alcohol consumption
4 out of 10 KWS personnel who acknowledged having consumed alcohol in the past year meet the World Health Organization's criteria for excessive alcohol consumption, as measured by the number of drinks per day or week and by the volume of alcohol consumed. The data showed that there is a significant relationship between age and use of alcohol for officers aged 26-35 who reported being more likely to use alcohol than those in other age groups. There is a significant relationship between education level and the use of alcohol, with data indicating that officers with a college degree were most likely to use alcohol than any other education level.

Cultural Acceptance of Khat
KWS Rangers and personnel in the field reported that khat - a stimulant drug that is controlled under the Controlled Substances Act, and illegal in most countries but is legal where its use is traditional in cultures, including Djibouti, Kenya, Uganda, Ethiopia, Somalia, Sudan and Yemen - is widely used by personnel in the field so that rangers can patrol through the night and work long shifts. There was consensus that supervisors are aware of and tolerate the use of khat to ensure workforce coverage.

Intervention
There were positive responses regarding the importance of leadership, psychological, spiritual counseling, and family systems to effectuate intervention and treatment for alcohol and other substances. Notably, there was acknowledgment that intervention and treatment change behaviour.

Key Findings continued...

Hiring, Transfer, Advancement and Promotion

The strength of the KWS workforce has not been maintained. Researchers were advised that there have been no new ranger hires since 2015. Respondents explained that this lack of strength contributes to alcohol use, drug use, and general ill health.

Furthermore, personnel perceive that promotion, advancement, and transfer do not necessarily follow the posted civil service requirements. Thus, employees' use of alcohol and drugs may be a response to the alienation and stress of the work environment. Lastly, participants stated that often personnel who use or misuse drugs and alcohol are transferred to a hardship or conflict zone as a 'corrective' measure.

Off-duty hours, Idleness, and Social Amenities

Personnel that are part of KWS sports activities stated that the activities are highly valued and contribute to a healthy physical and mental state. Yet, these opportunities are limited due to lack of resources. Participants indicated that the lack of opportunities to engage in positive social, familial, behavioural, and physical activities contribute to alcohol and substance use.

Shift Work Balance, Fear/Safety

IParticipants reported a level of concern for their personal and community safety when a co-worker is AWOL (absent without leave) or they report to work while intoxicated. Moreover, the sober ranger is often held accountable by their supervisor for the harmful behaviour of the intoxicated co-worker.

KWS Personnel Attitudes Towards Trauma

KWS personnel have a measurable exposure to trauma due to their occupation, and it falls to the organization to determine how to address individuals experiencing both stress and trauma. In focus group interviews and survey responses, participants reported using alcohol and other substances as a coping mechanism because they receive little psychological support.

Key Findings continued...

Response patterns by sex

Patterns and consequences of alcohol and substance use consumption varied by the sex of the respondent. Across all three assessment/screening measures (CAGE, AUDIT, ASSIST), males reported being at a higher risk for use disorder than females. The most common reason given by both male and female respondents is that women refrain from use or misuse because they have greater responsibilities to take care of, such as their children and their families. In the field especially, it was also noted that female personnel are placed at greater risk of harm and sexual harassment than their male counterparts due to patterns of male intoxication of alcohol and lack of effective supervisory response.

CAGE is a 4-item screening tool; a score of 2 or more is considered clinically significant for alcohol use disorder. The AUDIT is a 10-item screening tool. A score of 8 or more is considered to indicate hazardous or harmful alcohol use. The ASSIST was adapted to screen for past or present drug abuse covering tobacco, alcohol, cannabis, cocaine, amphetamine-type stimulants, inhalants, sedatives, hallucinogens, opioids, and 'other drugs.'

3. KWS Director General Foreword

It is a great honor for me to present the Baseline Assessment Report on drugs and alcohol use, 2022 for Kenya Wildlife Service (KWS), which provides the findings of prevalence of drug and substance use in the Service. The protocol of the assessment was developed with inputs from all stakeholders and requisite clearances obtained from relevant authorities. This assessment was conducted through a participatory process, ethical considerations and approvals obtained from the Ethics and Scientific Review Committee and embracing best practices with support from the United Nations Office on Drugs and Crime (UNODC), together with a dedicated team from KWS Health & Wellness Committee and the Technical Working Group who were trained with the help of UNODC consultants.

Vulnerability to drug use is a complex social phenomenon which requires concerted efforts from all stakeholders to address intrinsic challenges. As an organization, we cannot afford to turn a blind eye to substance use because invariable this has an impact on the organization's sustainable productivity and social well-being of our staff. Alcohol and drug use has a direct effect on organizational productivity as it undermines achievement of set goals through loss of skills and diversion of financial resources to procure drugs, treatment and rehabilitation. Invariably this has a negative impact on both the organization and affected staff who are likely to sink into poverty and hopelessness.

We are optimistic that this baseline assessment will assist the Service to identify the right measures to develop and implement a response to prevent drug use in the Service. Our common aim is to attain zero prevalence of drug use, thus adding to the development and wellbeing of employees, and raising awareness by educating them to make informed and responsible decisions in their own lives.

On my own behalf and that of management, I wish to thank the entire KWS Technical Working Group that undertook the survey. I also treasure the collaborative support received from UNODC for their technical support and financial assistance. We are confident that the assessment findings and recommendations will be valuable assets towards developing KWS strategy on drugs and substances use prevention which will further guide us in addressing the menace of drug use with much more scientific approach.

Dr. Erustus Kanga,
KWS Director General
22 November 2022

4. KWS Chairman Foreward

To be submitted by KWS

5. UNODC Foreword

Rangers serve as guardians for the rich biodiversity of Kenya and are the public face of the Kenya Wildlife Service. The harmful effects of substance abuse among rangers extends beyond their health and well-being as it also impacts their families and communities and undermines public trust in the KWS.

Over the last decade, Kenya's National Authority for the Campaign Against Drug Abuse (NACADA) has reported that harmful drug and alcohol use is a critical challenge facing employers, and the workplace, in Kenya. This survey, conducted by the Kenya Wildlife Service through technical and financial support from the United Nations Office on Drugs and Crime (UNODC), was undertaken to create better knowledge and understanding of the potential drivers and pathways associated with drug and alcohol misuse in the KWS. Such knowledge, based on sound and tested research methodology, serves as the basis for human and health-centred interventions within the Kenya Wildlife Service.

I am certain that the leaders, management, and staff of KWS will value the findings of this research and will identify solutions to create and maintain a conducive and healthy work environment.

UNODC congratulates KWS for their leadership and commitment to provide a better understanding of these issues and for setting an example for wildlife law enforcement agencies around the world. I would also like to thank all those who are participating in this survey and commend them for helping us to collectively understand the issues.

Thank you.

Neil J. Walsh
Regional Representative
United Nations Office on Drugs and Crime in Eastern Africa

6. Abbreviations

ADA	Alcohol and Drug Abuse
ATLAS.ti	ATLAS.ti Scientific Software
AUDIT	Alcohol Use Disorder Identification Test
CDC	Centers for Disease Control and Prevention
DAST-10	Drug Abuse Screening Test - 10
DSM-IV & DSM-V	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition and Fifth Edition
EAP	EmployeeAssistance Professional
ERC	Ethics and Research Committee
FSU	Final Sampling Frame
HIV	Human Immuno-Deficiency Virus
KWS	Kenya Wildlife Service
NACADA	National Campaign Against Alcohol and Drug Abuse
PTSD	Post Traumatic Stress Disorder
SPSS	Statistical Package for Social Sciences
TWG	Technical Working Group
UNODC	United Nations Office on Drugs and Crimes
WHO	World Health Organization

7. Literature Review

The data sources utilized for this report were carefully selected based on their relevance and accessibility. Some of these sources may appear dated; however, they have proven to be critical in setting standards or providing foundational insights. It should be noted that this study is the first of its kind conducted globally, thus, there are no comparable examples available to reference. It is important to acknowledge that while additional research in this field would be beneficial, the limited availability of studies on the subject required us to utilize the most relevant and accessible information available.

The literature reviewed in this section will focus on the various studies that have been done locally, regionally and globally on alcohol and substance use among wildlife game personnel

1.3 Contextualizing alcohol and substance use by public sector employees in Kenya

Over the last decade, the National Authority for the Campaign Against Drug Abuse (NACADA) has reported that harmful drug and alcohol use is one of the most critical challenges facing employers and the workplace in Kenya. Further, many of these challenges have broader community impacts that affect the political, economic, and social stability of a community. Key findings of the NACADA rapid assessment survey of the impact of alcohol and drug use among the public sector employees (2014) indicates that 33.3% of employees in the public sector were using alcohol, 8.5% tobacco, 3.8% Khat, 1.1% marijuana and 0.4% narcotics (heroin, cocaine). The findings also showed that current alcohol users (48.5%) had a proportionately higher likelihood of receiving a warning from the employer for an offence compared to current non-users (32.1%). A family member's alcohol or drug use may also negatively impact the workplace According to this report, 47.8% of employees indicated that a family member was abusing alcohol or drugs and that their work performance was being affected. Results also showed that 7.2% of current alcohol users drunk daily, 8.8% had failed to go to work in the last one year due to a hangover, and 9.2% took alcohol first thing in the morning to enable them to start working. Though alcohol and substance use is not specific to any one occupation, the key findings of the baseline survey highlight the importance of the following themes: availability of alcohol and other substances, alcohol policies, drug policies, workplace culture, and workplace alienation (NACADA, 2014).

The geographic scope of KWS Ranger responsibility extends throughout the country. Differences in the type and amount of alcohol and substances used by KWS Rangers and their impact may reflect the social and environmental stressors of the conservation areas, and the social and physical availability of substances in the locale. A seminal study carried out by the World Wildlife Fund (WWF), "Preliminary results of the Ranger perception survey in Kenya" reported that overall, rangers feel very positive about their work, their relations with the community and with managers, and rangers in the Southern and Coastal Conservation areas expressed the highest level of physical, cognitive, and social stressors (WWF, 2020). These are factors that have been associated with increased alcohol and substance use.

The prevalence of alcohol consumption and drug use patterns vary somewhat by region of the country. A 2016 survey carried out by NACADA on the status of alcohol and drug abuse in the coastal regions indicates a lower percentage of residents using alcohol (12.6%) compared to the national rate, but higher rate of residents using substances such as tobacco (14.7%), khat (12.0%), marijuana (4.5%), heroin (2.3%), prescription drugs/sleeping pills (1.3%), cocaine (0.9%), and hashish (0.4%) (NACADA, 2016). In addition to commercially produced alcohol, home-brewed/ traditional spirits represent a substantial proportion of the alcohol consumed in Kenya. Traditional home-brewed spirits like Chang'aa are reported to account for almost 52.8% of alcohol consumed in Murang'a County, Kenya (Gathu, Gakunju, Okwarah, & Thungu, 2013). Research has linked traditional/ home-brewed alcohol consumption with sexual risk behaviors, alcohol misuse, violence and economic stress, and HIV infection risk (Kibicho & Campbell, 2019).

1.4 Availability: Physical, Social, and Legal

The literature suggests a clear correlation between the accessibility of substances and alcohol consumption rates, as well as related problems. Studies in the field of alcohol research have found that both the physical and social availability of alcohol, as well as its legality, generally lead to higher rates of consumption and associated harm. Furthermore, natural experiments have shown that reducing the availability of alcohol results in lower levels of consumption and harm. Physical availability includes not only the ease of access to alcohol but also the barriers and costs involved in obtaining it. Social availability refers to the level of social acceptance or rejection of drinking within a person's social circle.

Alcohol availability has been found to be equally important in occupational settings (Ames and Grube, 1999). The physical availability of alcohol at work includes procuring alcohol in or around work sites or events, the rules or policies restricting its purchase, possession, and use, and the extent to which these rules or policies can be enforced. The social availability of alcohol at work may relate to the frequency of work-related drinking by one's friends or immediate co-workers, and the approval or disapproval by one's work friends, co-workers and supervisor. It is important to note that most of the drinking by members of the public sector in Kenya occurs off-duty (NACADA, 2014). However, the division between work and leisure for the KWS Rangers is not as clear-cut as it is for other professions. According to the "Preliminary results of the Ranger perception survey in Kenya", Rangers reported working "an average of 80-100 hours a week" (WWF, 2020). Thus, it is important to consider that all drinking for KWS Rangers, whether on or off duty is work-related due to the fact that the Ranger may be subject to be called to duty at any time.

1.5 Alcohol Use, Substance Use and the related field of public safety/law enforcement

Major General Johan Jooste (ret.) of the South African National Parks, was speaking about the "militarization of conservation" to describe the shift in rangers' role from traditional conservation to law enforcement (Tan & Mongabay, 2018). In South African parks, Jooste estimated that 90% of ranger time was dedicated to criminal law enforcement and 10% to conservation (Hubschle, A., 2017). Driven by an increase in organized crime poaching in many areas, there is a shift towards paramilitary training and combat-oriented responsibilities for the rangers.

In addition to their conservation responsibilities, KWS rangers have legal authority and responsibility as law enforcement agents. KWS rangers are at the frontline in preventing wildlife crimes like poaching. Thus for the purposes of this study, it is relevant to consider the occupational literature associated with alcohol and substance use by police. Dating back to some of the earliest research on alcohol use by police (Violanti, Marshall, & Howe, 1983), findings have remained fairly consistent that alcohol use is correlated with stress and distress related to the structural organization of policing and indirectly related to a process of depersonalization that accompanies the occupation (Chopko, Palmieri, & Adams, 2013; Davey, Obst, & Sheehan,2001; Lindsay & Shelley, 2009; Patterson, Chung, & Swan, 2014; Richmond et al., 20220; Violanti & Aron, 1994).

Depersonalization refers to the psychological distancing of trauma in stressful situations that serves to maintain the officers' sense of emotional balance. When coupled with social isolation, the status of depersonalization is a strong contributor to maladaptive behaviors.

NACADA rapid assessment survey data (2014) found that workplace alienation and isolation contribute to alcohol and drug use among public sector employees. Rangers face isolation from their family and community because of their work. Wildlife Rangers spend a significant amount of time in physically remote and socially distanced areas, which contributes to the lack of social ties (protective factors) with primary social groups such as the family. According to a WWF Report, 77% of rangers see their family less than 10 days per month, with 30% of rangers seeing their family members less than 5 days per month (WWF, 2019). Compounding the separation from close family members, wildlife rangers may not be accepted by the local community due to their anti-poaching enforcement efforts. Due to poverty and limited sources of income, many local poachers and communities start living off this illegal income which can further alienate the Ranger from social ties.

Though alcohol consumption dominates the literature, there are a few studies that give insight into enforcement officers' use and misuse of illegal drugs (Carter, 1990; Carter & Stephens, 1988; Gorta, 2008; Kraska & Kappeler,1988). Officers self-reported illicit drug use tended to be officers who are young,inexperienced, and viewed the position of police officer as a job and not a career choice (Wilson, Ashton, and Sharpe, 2001).

Stress has been cited as the impetus for using illegal drugs (Gorta, 2008; Stevens, 2005). Research indicates that marijuana is the most commonly used illegal drug among law enforcement officers with up to 30% of officers admitting to using illicit substances since becoming officers (Carter, 1990; Carter & Stephens, 1988). Officers' misuse of prescription pain medications, anti-depressants and benzodiazepines are related to the physical availability of these medications. Further, inconsistent workplace policies significantly contributed to officers' misuse of prescription medications and illegal street drugs (Griffin, 2017).

Research indicates that stress, depression, and psychological illnesses may be masked as physical pain (Fontanarosa J, Uhl S, Oyesanmi O, Schoelles KM, 2013; Rijavec, & Grubic, 2012). For example, a study carried out in India reported that the predominance of somatic symptoms over psychological symptoms, along with a lack of awareness among patients and doctors, often lead to over prescribing of unnecessary medications (Shetty, Mane, Fulmali, & Uchit, 2018). The COVID-19 pandemic created additional challenges and stressors on KWS Rangers. According to the International Fund for Animal Welfare (IFAW), all KWS rangers were called back to their duty stations for extended tours of duty, often without any personal protection equipment (PPE). The IFAW and other civil society organizations provided PPE, training, and support for the Rangers during the COVID-19 period, however resources are limited and COVID-19 resource support cannot be sustained at the current level (IFAW, 2020).

1.6 Negative Consequences of Stress

Across Africa and around the globe, organizations such as the WWF, The Thin Green Line Foundation, Ranger Training Colleges, and volunteer organizations such as Project Embrace in the Kruger National Park South Africa (SANParks) have sprung up to address the psycho-social needs of Rangers. While we cannot predict how stress will affect every Ranger, a strong evidence base has been developed regarding the negative consequences of stress and the occupation of policing. Given the increased role of KWS Rangers to engage in wildlife crime prevention and law enforcement, this is an area to be explored.

Previous studies have concluded that the law enforcement population suffers from higher than average rates of domestic problems, including violence and divorce, substance use, and suicide (Anderson, 2008; Atkinson-Tovar, 2003; Copes, 2005; Cross & Ashley, 2004; Violanti, Vena, & Marshall, 1986). In addition, a number of studies have found that police officers have high rates of post-traumatic stress disorder (Green, 2004; Kureczka, 1996; Mann & Neece, 1990; Stephens & Long, 1999). Negative consequences of police stress can be separated into three major areas: psychological and mental disorders, behavioural issues, and physical health concerns.

The WWF Rangers' perception survey highlights how relationships with coworkers, managers and the community may be a source of physical and mental stress (WWF, 2016). The link between substance use and stress has been well-documented in the field of medicine and psychology.

The relationship between police stress and substance use has also been documented. While some drinking by police officers may be part of social interactions and not generally harmful, there is extensive evidence to suggest that drinking by police officers in the U.S. is often a maladaptive coping mechanism in response to stress (Carter, 1990; Carter & Stephens, 1988; Shanahan, 1992; Violanti et al., 1999).

Cross and Ashley (2004) found that nearly one-quarter of law enforcement officers are dependent on alcohol as the result of on-the-job stress NACADA (2020) emphasizes that male-dominated occupations tend to have higher rates of heavy drinking and alcohol-related problems than other occupations. In the KWS, over 85% of the rangers are male. Even more so, the occupational subculture of law enforcement is conducive to a high level of alcohol consumption (Cross & Ashley, 2004; Kohan & O'Connor, 2002; Miller, 2005; Paton & Violanti, 1997; Paton, Violanti, & Schmuckler, 1999; Violanti et al, 1983, 1985). As Cross and Ashley explain, "the unique subculture of the law enforcement profession often makes alcohol use appear as an accepted practice to promote camaraderie and social interaction among officers" (2004).

Yet, we may not be seeing the same impact on KWS Rangers. According to those working directly with wildlife Rangers in South Africa and Kenya, the Ranger subculture in these countries do not necessarily support alcohol use (personal communication with D. McVey, 8/13/2020; J.Jooste, 8/17/2020; E. Smith, 8/21/2020). The subcultural norms associated with alcohol as a coping mechanism may be changing due to the younger generation not being familiar with the challenging terrain of a ranger with increased responsibilities of criminal law enforcement.

Poor and hazardous working conditions are an occupational hazard of being a game Ranger (WWF, 2016). The most recent report proffered by NACADA to assess the status of drug and alcohol use among employees of Kenyan Ministries, Department Agencies, and County Governments (2020) continues to direct attention to the negative impact of limited work supervision, lack of communication and poor equipment and how it increases drug and alcohol use. The literature on police stress clearly indicates that organizational stress is a major concern for officers, often eclipsing concerns about the dangers of the job. Organizational stress stems from internal issues, such as pressure from supervisors, inadequate administrative support, lack of promotional opportunities, arbitrary and inconsistent disciplinary procedures, and perceived favouritism in assignments (Beehr, Johnson, & Nievia, 1995; Copes, 2005; Liberman et al., 2002; McCarty, Zhao, & Garland, 2007; Newman & Rucker-Reed, 2004; Stinchcomb, 2004; Storch & Panzarella, 1996; Violanti & Aron, 1995a). Research has indicated that, with the exception of the duty-related death of a fellow officer, organizational stressors such as lack of consultation and input, inadequate administrative support, and lack of promotional opportunities rank most highly with police research populations (Collins & Gibbs, 2003; Laufersweiler-Dwyer & Dwyer, 2000; Stinchcomb, 2004).

Violanti and Aron (1993) found that organizational stressors affected psychological distress more than six times as much as operational police stressors (i.e., critical-incident stress). In fact, research has concluded that organizational stressors predict the risk of post-traumatic stress disorder (PTSD) more than the number or severity of traumatic events experienced (Liberman et al., 2002).

One of the most often cited psychological disorders related to police stress is PTSD. Since the acceptance of PTSD into the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) in 1980, research has concluded that this disorder affects not only veterans of war, but also those who have been exposed to other forms of trauma (Paton & Violanti, 1997). PTSD is generally defined as the development of characteristic symptoms following a psychologically traumatic event that is generally outside the range of human experience (American Psychiatric Association, 2000).

PTSD is unique in that great importance is placed on a single traumatic event in determining the origin of the disorder (Friedman, 2003) whereas KWS Rangers' stress is often cumulative in nature. Repeated exposure to trauma causes rangers to suppress their emotions, which may result in long-term emotional, psychiatric, and physical illnesses. "The pressure is relentless", said Elise Serfontein, founding director of 'Stop Rhino Poaching', "there is no respite" for the Rangers (Tan & Mongaby, 2018). While it may be expected that what we know about how the occupation of being a wildlife ranger will continue to evolve, the limited research demonstrates that not all officers experience negative physical, mental, or behavioural outcomes from their profession. Thus it is a matter of interest to identify the individual choices, social and environmental pathways, and/or interventions that serve as buffers against maladaptive behaviours.

Study Sites

A collection of the terrain of 8 conservation areas which KWS operates.This collection provides contextof the environment which KWS staff patrol within protected areas, monitor wildlife, combat wildlife crime, engage local communities in conservation, help communities resolve human-wildlife conflicts, and support tourism.

Lake Nakuru

Marsabit

Manyani

Nanyuki

Saiwa Swamp

Isiolo

Tsavo

Baringo

8. Methodology

2.1 Study Design

A cross-sectional study was conducted where both quantitative and qualitative data were collected.

2.2 Data types and sources

The quantitative data included survey responses. The qualitative data included key informant interviews, focus group discussions, and a review of organizational reports.

2.3 Sampling

The study population for the assessment included all active (permanent and temporary)staff. The total population of active KWS personnel as of January 2021 was N=4,461 (supplied by KWS, Office of Human Capital). In fulfillment of the NACADA: ADA Baseline Assessment Guidelines (2020), a sample of 30% of the total KWS active personnel were selected to participate in the baseline assessment. The final sample size was determined using a sample size calculator based upon a 95% confidence level ± 2% Margin of Error. This resulted in a final sample size of approximately 1,400 individuals. While there were several options for allocating the total sample, a probability-based stratified sampling methodology was determined to be the most empirically efficient and valid for a study of this nature to reflect the gender composition of the KWS. Consequently, for this assessment, a stratified random sample of approximately N= 1400 individuals (Females n = 282; Males n =1116) was randomly selected to participate in the assessment.[1]Table 1 lists the study areas covered in this assessment.

[1]Due to the small proportion of females across the KWS overall and in specific duty stations and sampling sites, the analysis and findings do not report by specific Conservation areas, parks, or Duty stations.

9. Problem Statement

KWS personnel fulfil multiple roles, including administration, wildlife conservation, law enforcement and national security. Harmful alcohol and substance use has a negative impact on worker productivity, whether the use occurs on the job or off. Substance use related problems are not characteristic of any social segment, industry, or occupation. The current assessment aims to understand potential drivers, pathways, and protective factors associated with drug and alcohol use in the KWS. Importantly, these discussions will be situated in the social and cultural context of drug and alcohol use in Kenya.

10. Study Sites

KWS Headquarters (n=173)	Corporate Headquarters Airwing Central Workshop
Central Rift (n= 146)	Iten/Rimoi Station Kericho Station Lake Nakuru N. Park Nakuru Station Nandi/Bonjoge Station Narok Station Transmara Station
KWSTI (n= 28)	Naivasha Station Hells Gate
Coast (n= 137)	Arabuko Sokoke Coast Reg. HQs Hola Station Kisite Marine N. Park Kiunga Marine N. Park Lamu Station Malindi Marine Mombasa Marine Shimba Hills N. Park Tana Delta Tana Primate N. Reserve Watamu Marine

Eastern (n= 149)	Garissa Station
	Isiolo Station
	Isiolo/Samburu Complex
	Kora/Mwingi
	Meru N. Park
	Meru Station
	RRU − Isiolo
Mountain(n= 219)	Aberdare N. Park
	Embu Station
	Laikipia Station
	Mt. Kenya N.Park
	Mwea N. Reserve
	Nyahururu Station
	Rumuruti Station
	Samburu/MaralalStation
Northern(n=51)	Malka Mari N. Park
	Mandera Station
	Marsabit N. Reserve
	Moyale Station
	Sibiloi N. Park
	Wajir Station
Southern(n=146)	Amboseli N. Park
	Kajiado Station
	Machakos Station
	Makueni Station
	Nairobi Safari Walk
	Ngong Station
	Nguruman Station
	Ol Donyo Sabuk
	PAMU Unit − Kiboko

Tsavo (n=213)	Chyulu Hills N. Park
	South Kitui N. Reserve
	Tsavo East N. Park
	Tsavo West N. Park

| KWS LEA – Manyani (n=25) | KWS LEA – Manyani |

Western (n = 113)	Homa Bay Station
	Kakamega F. N. Reserve
	Kapenguria Station
	Kisumu Impala Sanctuary
	Kisumu Station
	Kitale Station
	Lodwar Station
	Mt. Elgon N. Park
	Ruma N. Park
	Saiwa Swamp N. Park

11. Survey instruments

Following the NACADA Baseline Guidelines (2020), a structured questionnaire was created using Kobo Toolbox software to generate the quantitative data. Kobo Toolbox was developed as a joint initiative between United Nations Office for the Coordination of Humanitarian Affairs (OCHA), Harvard Humanitarian Initiative, and the International Rescue Committee for humanitarian work. It is a widely used and validated method for data collection in the field . Due[2] to the COVID-19 pandemic, to reduce cross-contamination from contact with surfaces including pens, papers, envelopes and all other requirements on paper, digital tablets with the Kobo Toolbox software was adopted for its paperless approach.

Once the survey questionnaire was developed with KWS, the questionnaire was created in Kobo Toolbox, and each tablet was pre-logged in by one of the co-investigators to allow the questionnaire to be accessed in the field. The survey and focus group discussions were conducted in a designated private space away from other participants and staff, and in line with the recommended social distancing requirements as per national guidelines. No personal identifiable information was required of the participants to access or complete the survey. The survey took approximately 30 minutes to complete.

Responses from participants in the field were automatically transmitted to the principal investigator when the tablet was connected to the Internet. [3] The focus group discussions serve to complement to the survey questionnaire. Focus groups are a strong data collection method that aims to draw from personal experiences, perceptions, and attitudes of participants to provide in-depth information about the issues of alcohol and substance use.

For this focus groups, a random selection of eight persons was selected from those who participated in the survey. For sites with fewer than eight respondents overall, all respondents were invited to participate in the focus group discussions. The focus group notes were transmitted to the primary investigator for analysis.

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https://www.humanitarianresponse.info/en/applications/kobotoolbox

[2] The researchers will follow the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) guidelines for the disinfection of mobile computers and tablets. Each tablet will be disinfected at the beginning of the research study. Survey participants [3] will be asked to disinfect their hands prior to touching the tablet and upon completion of the survey. The field research team will subsequently disinfect each tablet as an additional measure.

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12. Data Collection

Figure 1: Survey Administration Flow Chart
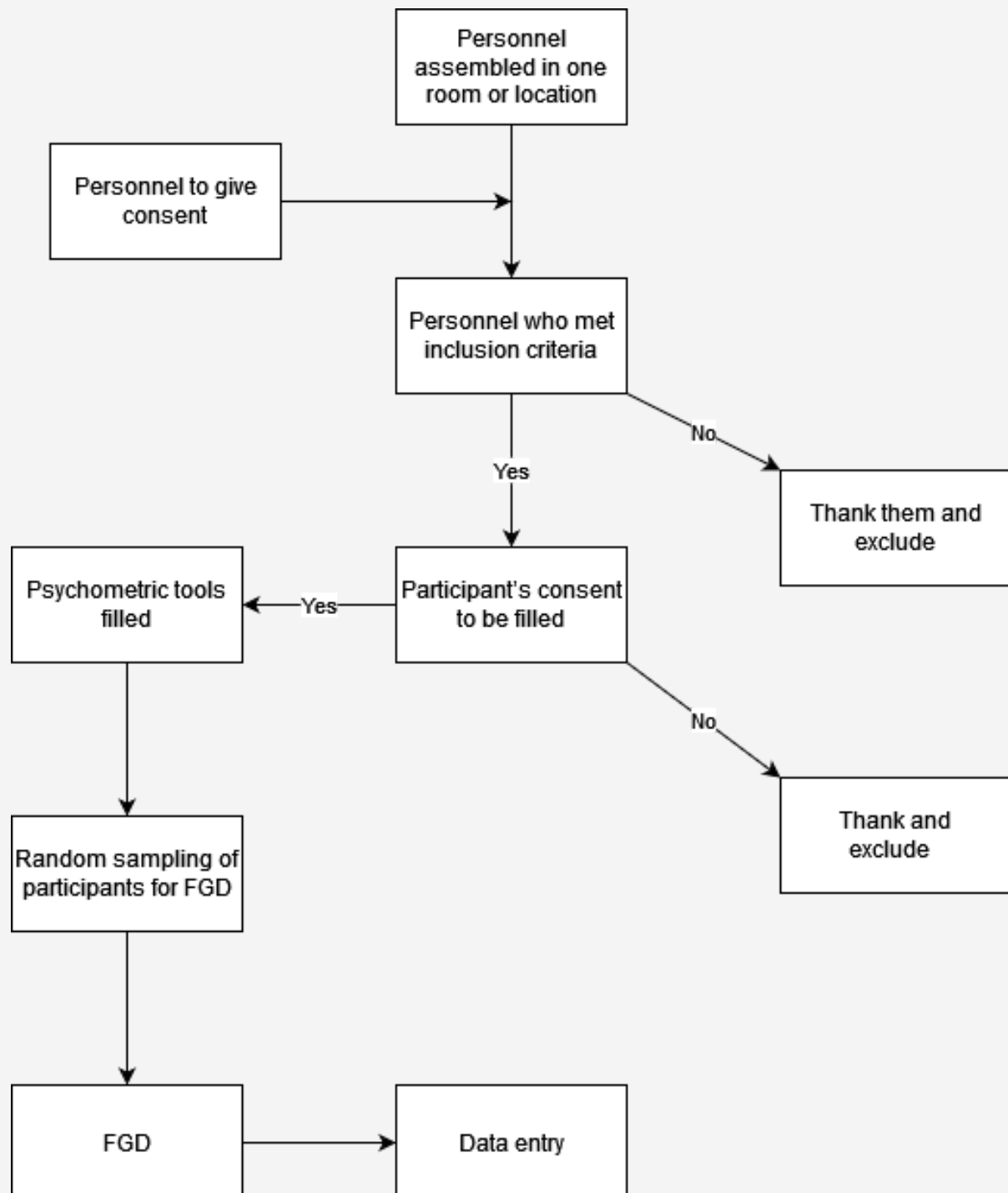
Study Sites

A collection of spaces where quantitative data collected using the digital tablet and focus group discussions were conducted

13. Ethics

A cross-sectional study was conducted where both quantitative and qualitative data was collected with ethical approval obtained from the Ethics and Scientific Review Committee (ESRC). The primary investigator and co-investigators undertook an online course on protection of humans in research. Considering that the surveys were conducted on a tablet, the consent was explained on the first page of the questionnaire of the survey. Sanitizers were used to disinfect tablet surfaces and other stationaries used during the survey.

The primary investigator and co-investigators were responsible for carrying out the field research. Informed consent was sought from all those who are randomly selected to participate in the study on the day of the study. Welcome remarks included a reading of informed consent to all participants by members of the research team. Participants were informed that their participation is voluntary and that they may stop their participation at any time. Prior to commencement of the assessment, the investigator explained the risks and benefits of the study. Acknowledgement of informed consent to participate was obtained through a check box on the tablet which was mandatory before proceeding with the assessment. Participants were informed that they were able to withdraw their consent to complete the survey at any time and advised that their data will be deleted . Consent and their choice to volunteer to participate was further explained and obtained for all those who were randomly selected to participate in the focus groups.

Once the survey was underway, no participant withdrew [4] their consent to participate in the assessment.

14. Data entry, cleaning, and analysis

To maximize research insight, quantitative and qualitative data was collected and analyzed, and an online survey was used to gather quantitative data. No personal identifying information was sought on the survey, and all questionnaire responses were anonymous. Data reported was aggregated to prevent the possible identification of individual participants.

Upon receiving completed survey responses, data was immediately transmitted electronically to Microsoft OneDrive cloud storage to the principal investigator's account, this included consent forms and scanned handwritten focus group interview notes. Once the survey data was transferred electronically from the tablet to OneDrive, the data was deleted from the tablet.

The principal investigator was responsible for data management and data security. Quantitative data was coded, sorted, and analyzed using SPSS software. Descriptive statistics, namely frequencies, pie charts, bar graphs and percentages were used to describe, organize and summarize collected data. Cross tabulations, chi-square statistics, and regression analysis can also be calculated to assess data relationships.

Responses from focus group open-ended questions have been analyzed qualitatively using Atlas.ti software and summarized according to emerging themes. The qualitative findings complement the quantitative results by providing deeper insights and experiences.

All data collected has been stored and will be retained for a minimum of five years after the completion of the research assessment. At that time, the data will be deleted from OneDrive, along with manual deletion from the principal investigators' laptop that may have been used to perform data analysis and report writing
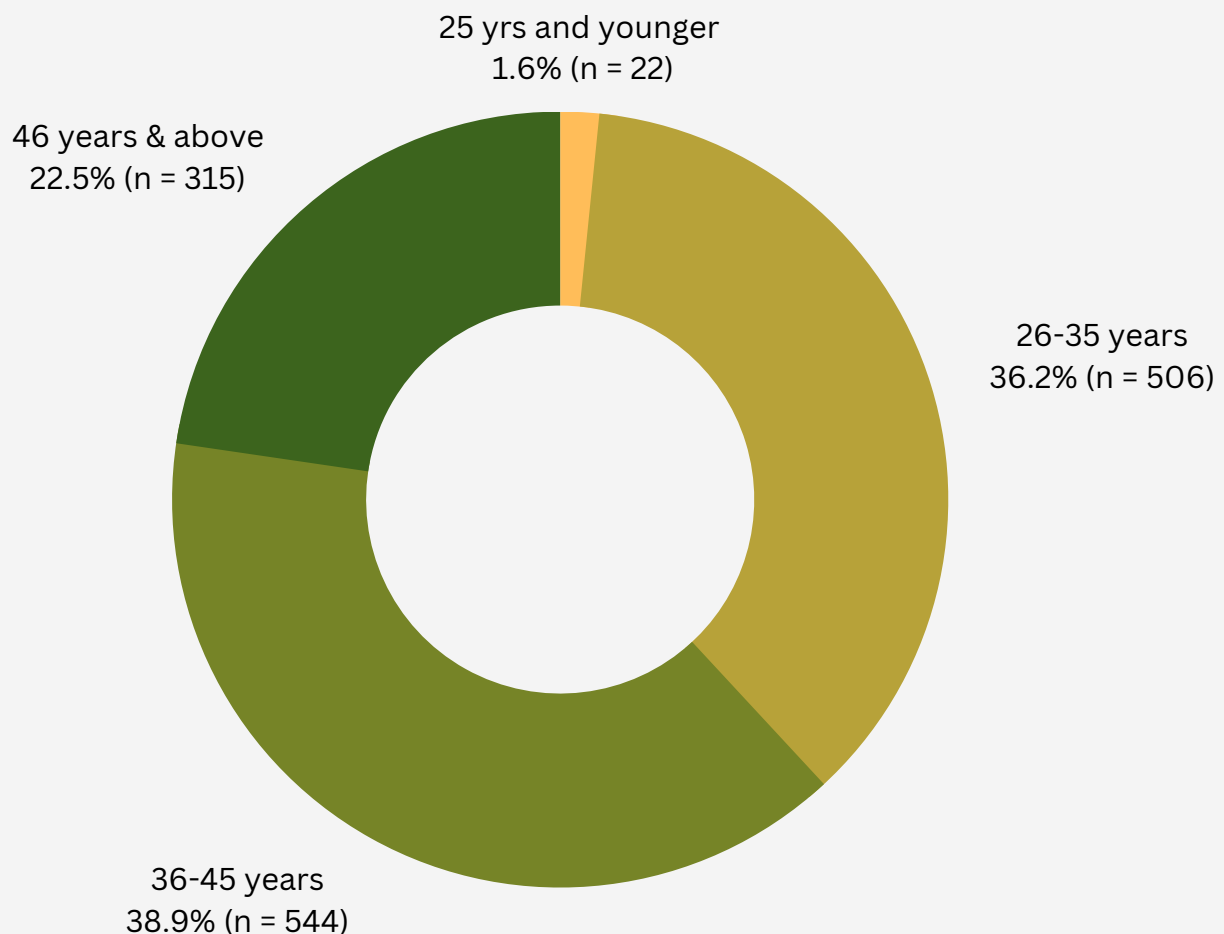
15. Results

15.1 Introduction

This chapter presents key findings of the baseline survey on the status of Drug and Alcohol Use among Kenya Wildlife Service (KWS) personnel.
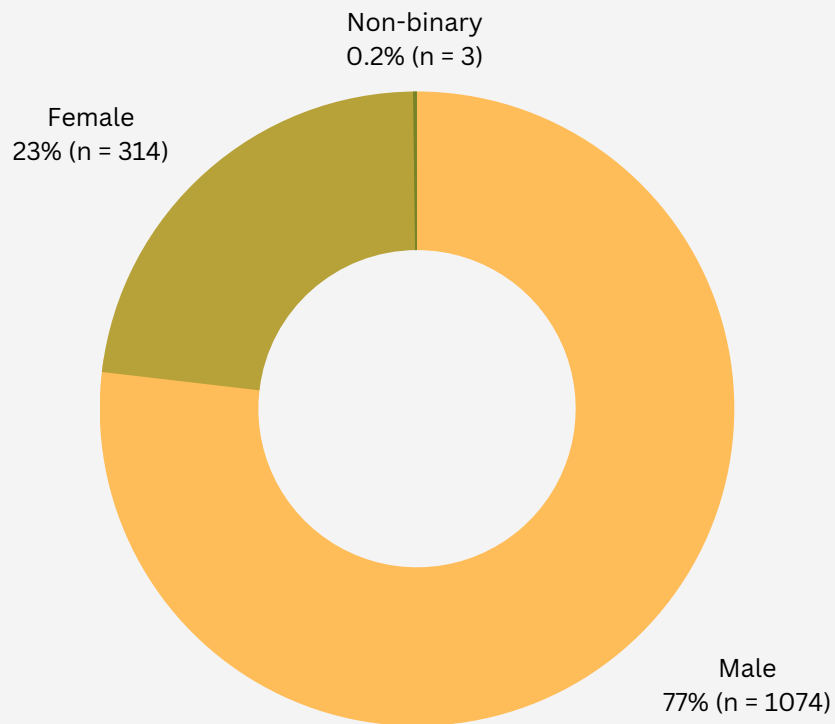
15.2 Employee background characteristics

The final sample consisted of 1,395 permanent and temporary employees. The following charts demonstrate the key demographic and background characteristics such as age, marital status and educational level, along with distribution by job cadre and length of service.

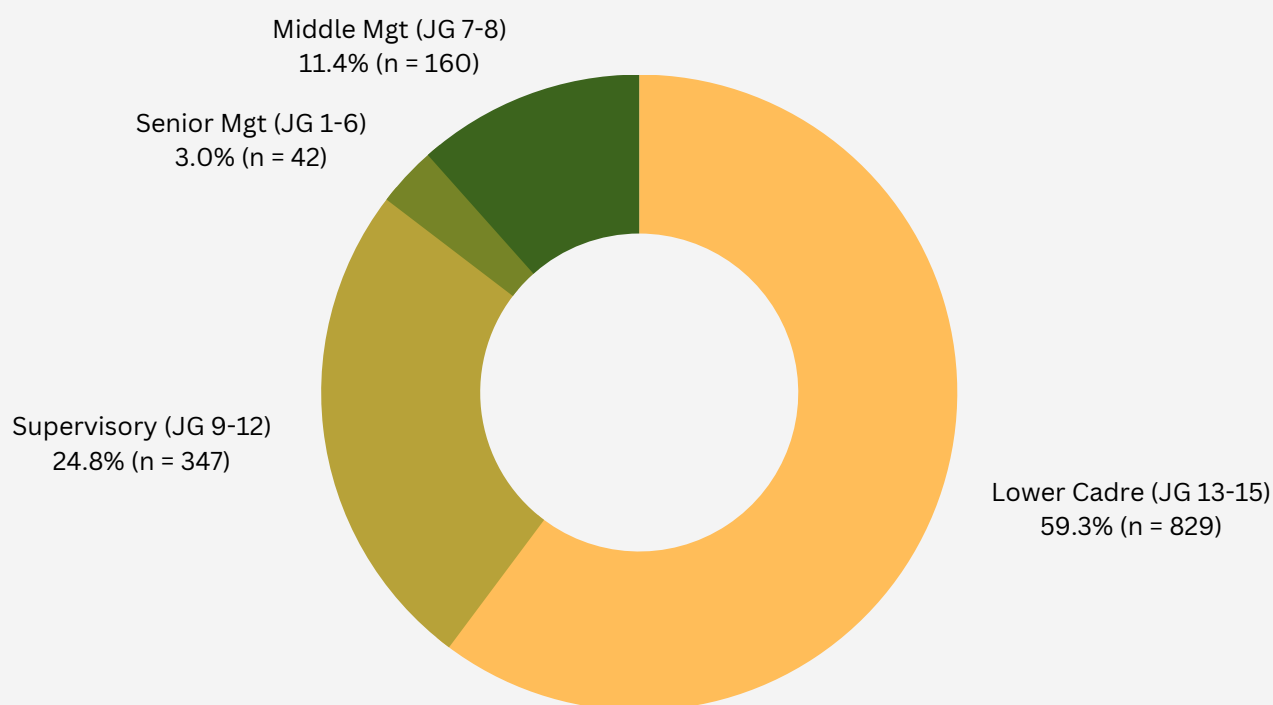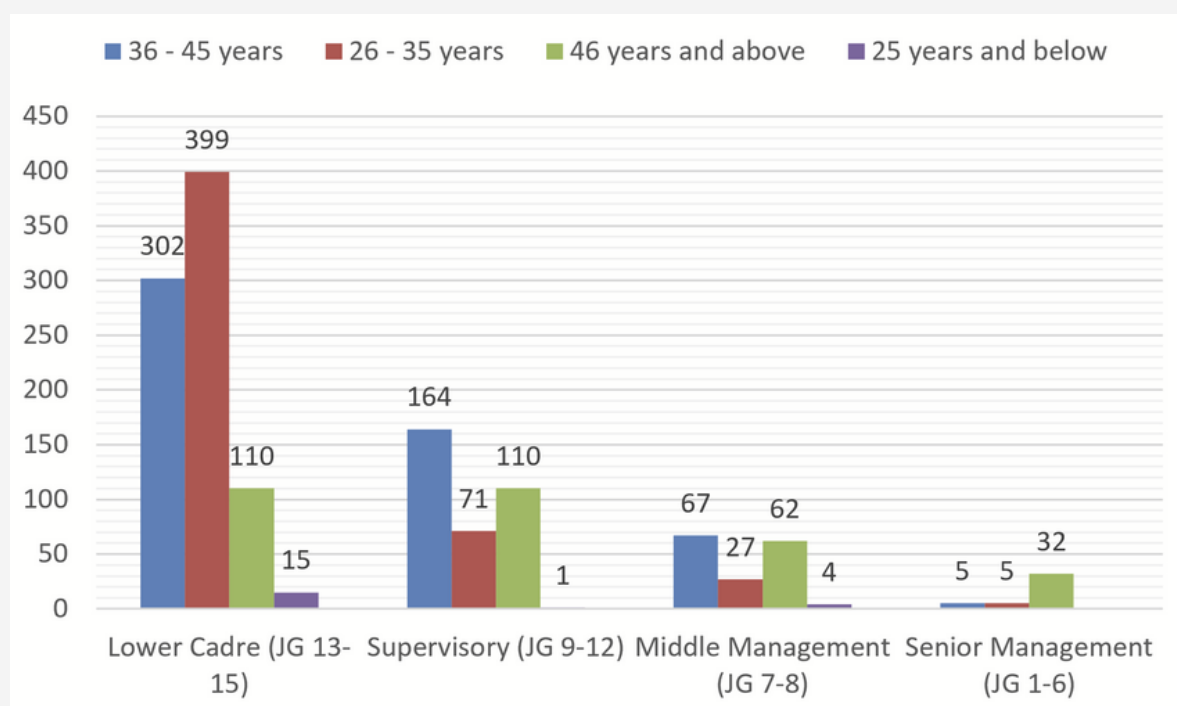### 15.2.1 Age (n = 1387)   n = number of individuals that responded to this question.

25 yrs and younger
1.6% (n = 22)

46 years & above
22.5% (n = 315)

26-35 years
36.2% (n = 506)

36-45 years
38.9% (n = 544)

15.2.2 Sex (n = 1391)

Non-binary
0.2% (n = 3)

Female
23% (n = 314)

Male
77% (n = 1074)

15.2.3 Marital Status (n = 1395)

Single, never married
8.4% (n = 118)

Divorced/Separated/Widowed
6.4% (n = 89)

Married
84.6 % (n = 1183)

15.2.4 Cadre (n = 1378)

Middle Mgt (JG 7-8)
11.4% (n = 160)

Senior Mgt (JG 1-6)
3.0% (n = 42)
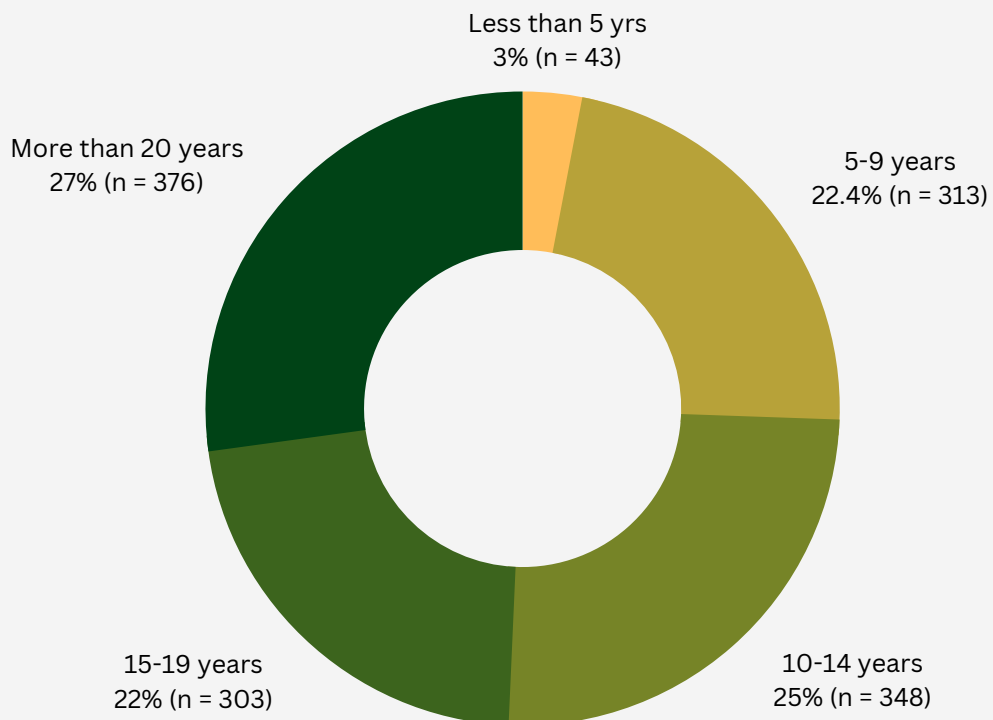
Supervisory (JG 9-12)
24.8% (n = 347)

Lower Cadre (JG 13-15)
59.3% (n = 829)
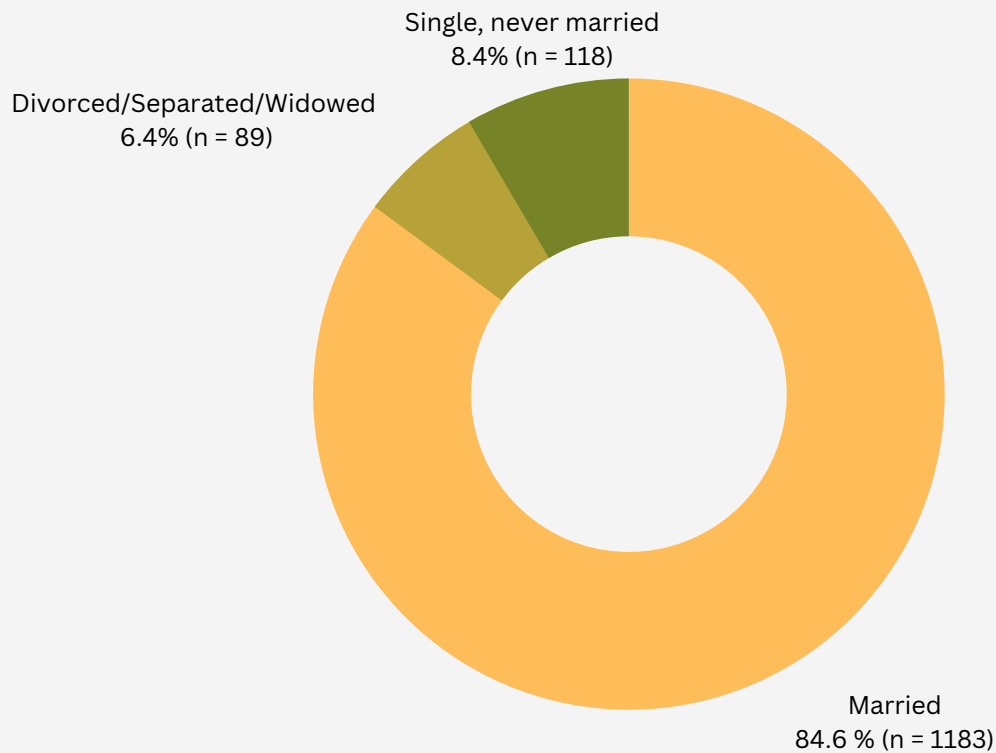
15.2.5 Age of participants and their level of Cadre (n = 1387)

15.2.6 Highest Educational Level Achieved (n= 1389)

Post graduate level
1.8% (n = 25)

College
42.5% (n = 591)

Secondary
37.5% (n = 521)

Bachelor's
8.2% (n = 114)

Primary
10% (n = 138)
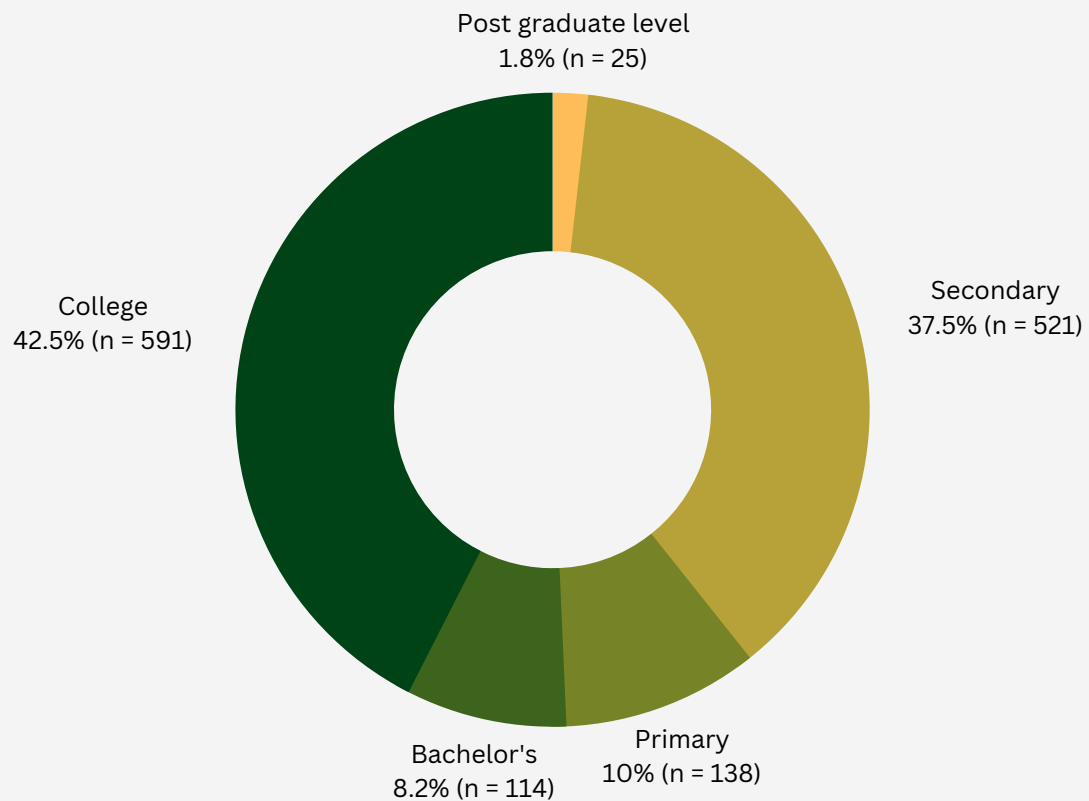
15.2.7 Length of Employment in KWS (n= 1388)

Less than 5 yrs
3% (n = 43)

More than 20 years
27% (n = 376)

5-9 years
22.4% (n = 313)

15-19 years
22% (n = 303)

10-14 years
25% (n = 348)

15.3 Level of drug and alcohol use among employees

This section explores the trends of drug and alcohol use among employees. Past and current usage of alcohol, tobacco, miraa and other drugs (bhang, cocaine, heroin, and prescription medications) are documented in this section.

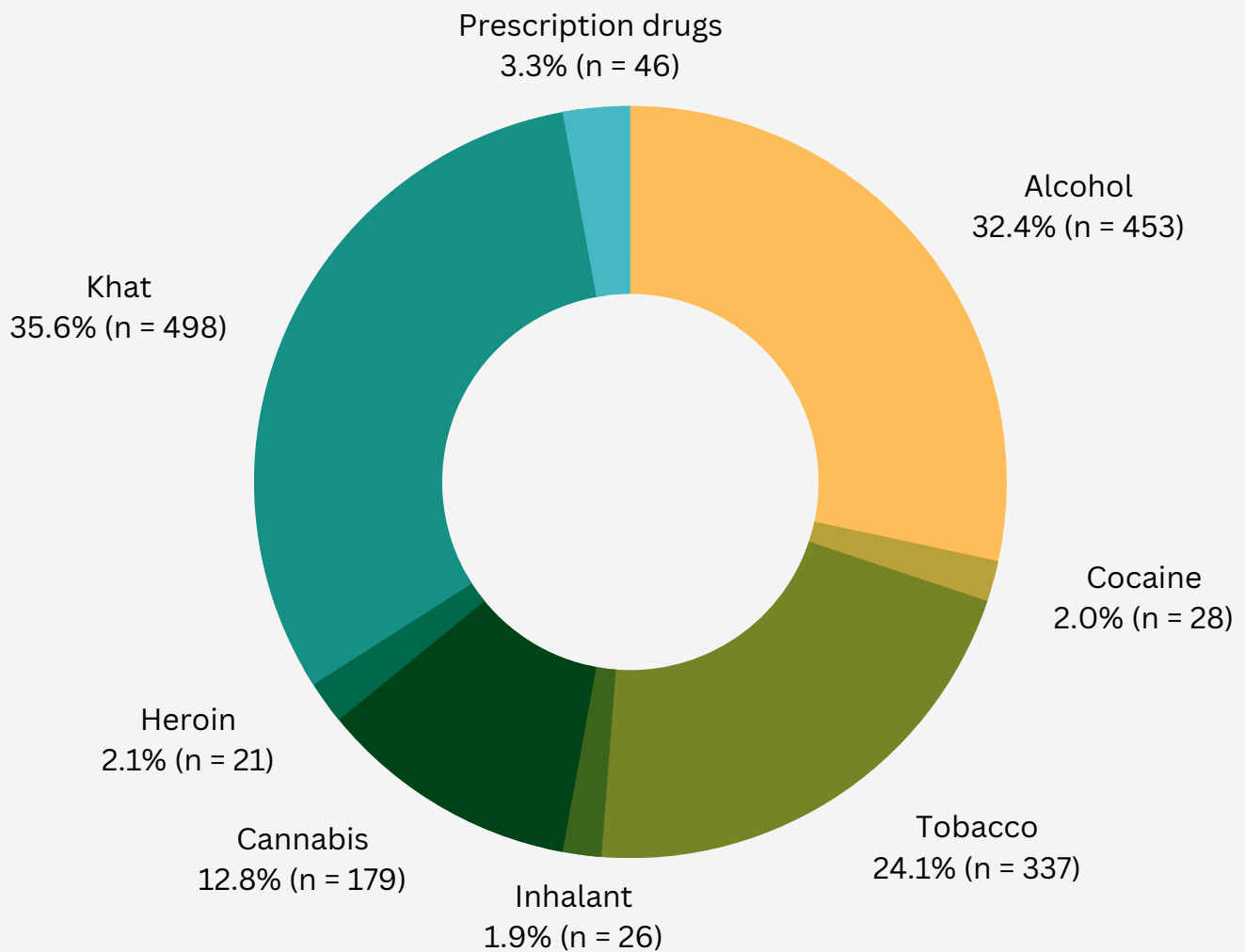### 15.3.1 Perception of Drug and Alcohol levels (n=1357)

When asked, "how would you describe the level of harmful alcohol and drug use in the organization," 77.4% of respondents reported moderate (35.7%) to high (24.5%) to very high (17.2%).
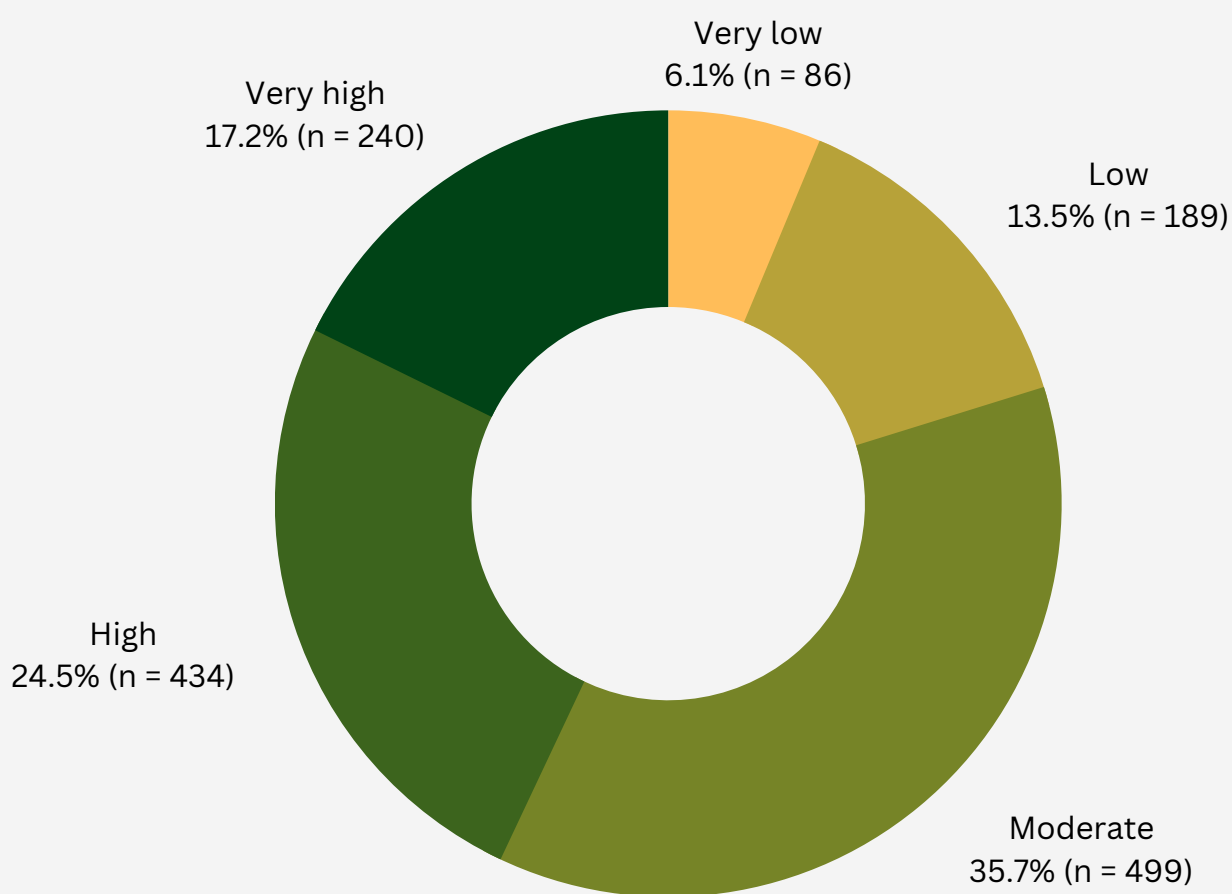
Open-ended responses included in the survey indicated that KWS personnel perceive the use of alcohol and substance use to be serious for the organization and individuals. As stated by a senior officer, "this assessment is necessary for management. There is a new generation where the use of drugs is a fashion trend. If we do not address the issue early, we have a lot more problems".

15.3.2 Lifetime usage of alcohol and (n = 1588)

Of those who responded to the survey question the following substances were used at least once in their lifetime

Prescription drugs
3.3% (n = 46)

Alcohol
32.4% (n = 453)

Khat
35.6% (n = 498)

Cocaine
2.0% (n = 28)

Heroin
2.1% (n = 21)

Tobacco
24.1% (n = 337)

Cannabis
12.8% (n = 179)

Inhalant
1.9% (n = 26)

15.3.3 Current usage of alcohol and drugs (n = 1298 - 1314)

Not everyone who engages in using alcohol or drugs is currently a user. The survey assessments sought to understand current usage, defined by "consumption in the last 30 days prior to the survey". Of those who responded to the survey question, the following had reported that they used the indicated substance in the 30 days prior to the survey assessment.
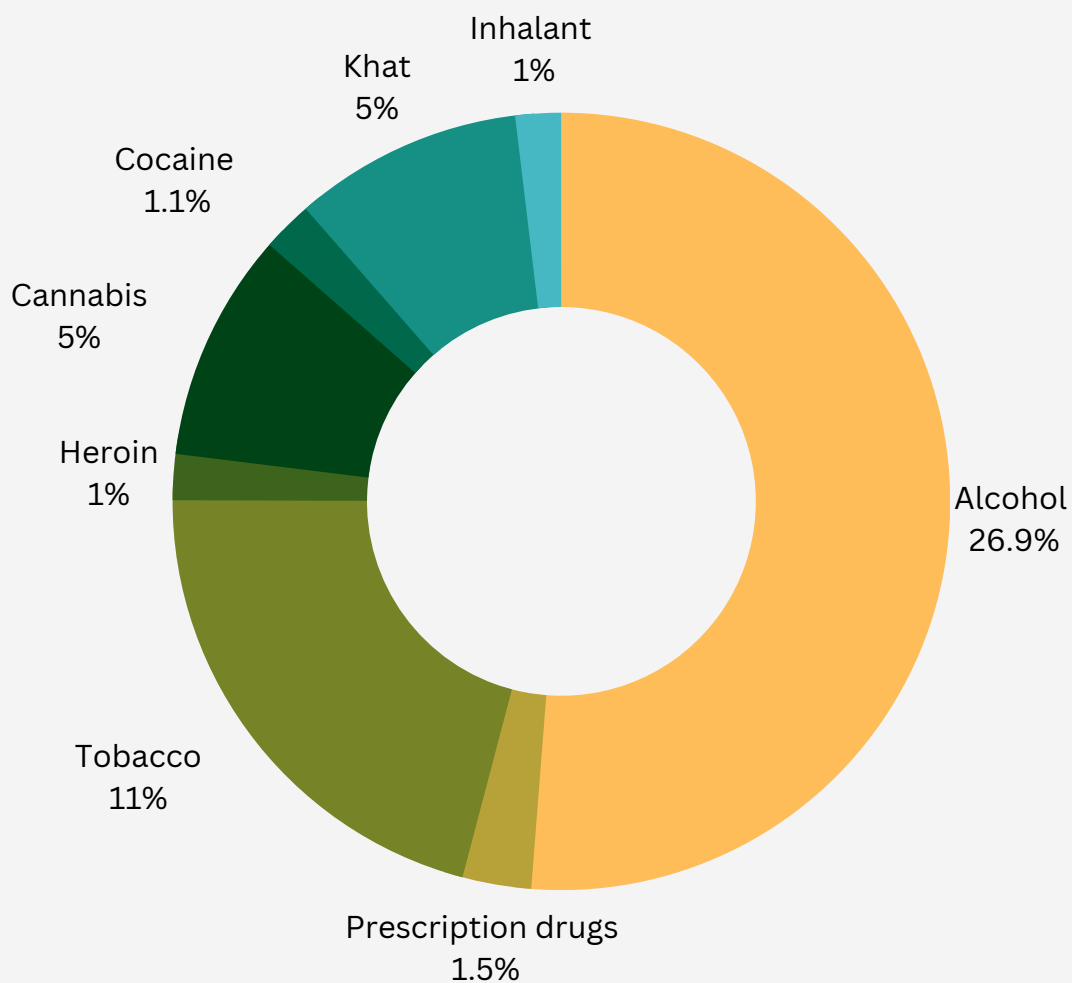
15.4 Relationship between current usage of alcohol and background characteristics

The research examined the relationship between current usage of alcohol and background characteristics, including age, sex, marital status, education, job cadre, and years of employment. A chi-square test of independence was performed to examine the relationship between alcohol use and each background characteristic. Analysis indicates that there is a significant relationship between each of these background characteristics and alcohol use.

The findings are as follows:

There is a significant relationship between sex and the use of alcohol.
Men are more likely than women to consume alcohol.
$X^2 (40, N= 1399) = 4284.168, p = .000$

There is a significant relationship between age and the use of alcohol.
Those aged 26-35 reported being more likely to use alcohol than those in other age groups. $X^2 (35, N= 1399) = 4213.059, p = .001$

There is a significant relationship between education level and the use of alcohol. Those with a college degree were more likely to use alcohol than other education levels. $X^2 (40, N= 1399) = 4214.479, p = .000$

There is a significant relationship between marital status and use of alcohol. Those who are married are more likely to use alcohol than those who are not married.
$X^2 (30, N= 1399) = 72.349, p = .001$

Further Analysis is conducted to indicate that there is a significant relationship between alcohol and each of these specific behaviours:

15.5 Effects of alcohol and drug use among employees

There is evidence that alcohol consumption may be associated with several medical, social, and economic problems. It has also been associated with other effects in the workplace, including job absenteeism, accidents, low job satisfaction, and decreased productivity in the workplace.

15.5.1 Relationship between absenteeism and current alcohol use

There is a significant relationship between absenteeism and current alcohol use. Those who consumed alcohol are more likely to be absent than those who did not identify as having consumed alcohol in the past year.
$X^2 (25, N= 1383) = 4205.610, p = .000$

15.5.2 Relationship between visiting a health facility because of an illness and current alcohol use

There is a significant relationship between visiting (check up/ being admitted) a health facility because of an illness and current alcohol use. Those who consumed alcohol are more likely to visit a health facility than those who did not identify as having consumed alcohol in the past year. X^2 (25, N= 1381) = 4205.417, $p = .000$

15.5.3 Relationship between receiving a warning from a supervisor and current alcohol use

There is a significant relationship between receiving a warning from a supervisor and current alcohol use. Those who consumed alcohol are more likely to receive a warning from a supervisor than those who did not identify as having consumed alcohol in the past year. $X^2 (25, N= 1383) = 4231.839, p = .001$

15.5.4 Relationship between reporting to work late and current alcohol use

There is a significant relationship between reporting to work late and current alcohol use. Those who consumed alcohol are more likely to report to work late than those who did not identify as having consumed alcohol in the past year.
$X^2 (25, N= 1382) = 4205.238, p = .000$

15.6 Family member's alcohol usage and workplace performance

This section explores the extent of alcohol, drugs, and substance use in families and how they may impact employee performance. According to the NACADA Baseline Assessment Guidelines (2020), past studies have shown that employees with family members who use substances are less productive in the workplace.

15.6.1 Effects of a substance abusing family member on work performance

Of those who completed the survey assessment, 41% of the respondents reported that a family member is using drugs and/or alcohol. Within this group, 27.7% (n=388) indicated that drug or alcohol use affects their work performance, 41.7%(n=583) indicated that it does not affect their work performance, and 4.8% (n=67) reported that they are not sure whether the family member's drug or alcohol use affects their work performance.

15.8 Psychometric Tools

Included in the survey assessment are three screening scales: the CAGE scale for alcohol (Ewing, 1984), the Alcohol Use Disorders Identification Test (AUDIT) (WHO, 2001; Winstock & Reed, 2012) and the Alcohol, Smoking and Substance Involvement Screening (ASSIST) (WHO, 2010) to assess alcohol consumption, drinking behaviours, alcohol-related problems, and hazardous and harmful substance use. CAGE is a 4- item screening tool; a score of 2 or more is considered clinically significant for alcohol use disorder. AUDIT is a 10-item screening tool; a score of 8 or more is considered to indicate hazardous or harmful alcohol use. The ASSIST, developed by the World Health Organization (WHO), was adapted to screen for past or present drug use covering tobacco, alcohol, cannabis, cocaine, amphetamine-type stimulants, inhalants, sedatives, hallucinogens, opioids, and 'other drugs.' A risk score is provided, and scores are grouped into 'low risk,' 'moderate risk,' or 'high risk.' The risk score determines the level of intervention recommended. These instruments have been validated across genders in a wide range of racial and ethnic groups (Roffman & Stern, 2010).
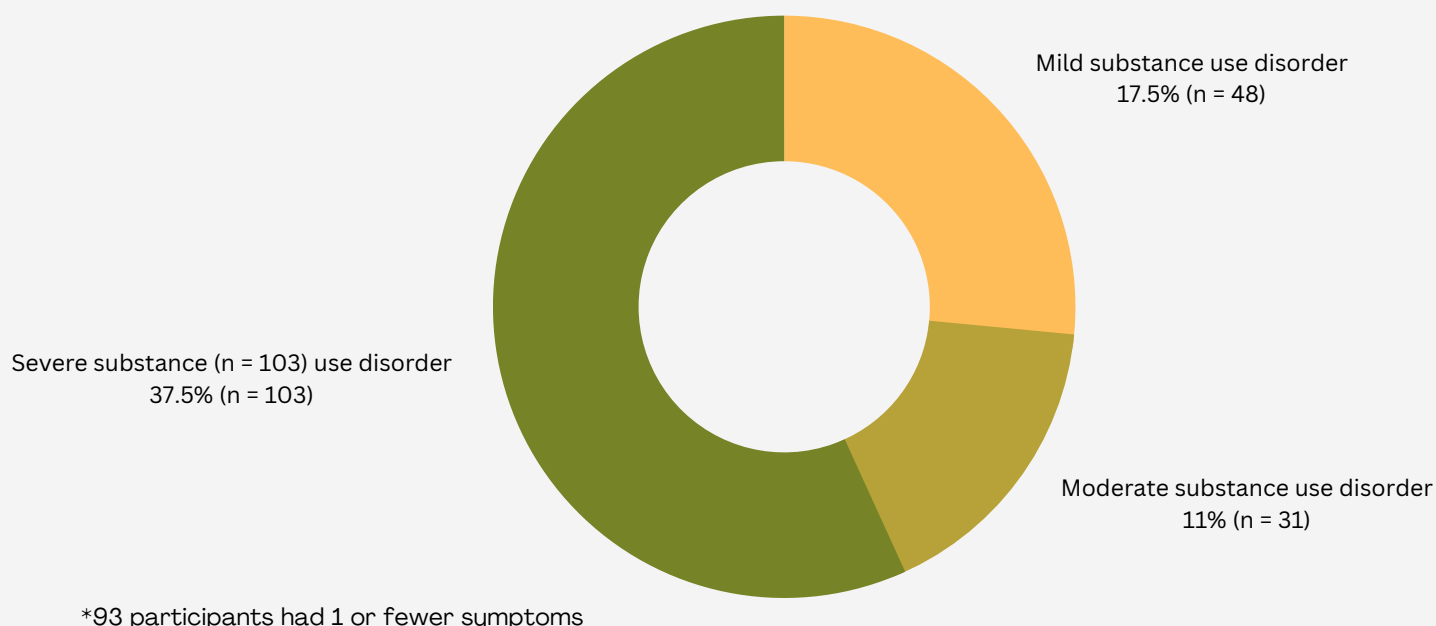
15.7 Substance use disorders

It is known that not everyone who is using alcohol develops an alcohol use disorder (AUD). However, a certain proportion of users will develop a problematic use of alcohol. The NACADA Baseline Assessment Guidelines (2020) include questions based on the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V), used as a screening tool to identify employees with alcohol use disorders. Accordingly, the DSM-V recognizes substance related disorders resulting from using ten separate classes of drugs: alcohol, caffeine, cannabis, hallucinogens, stimulants, tobacco, and other substances.

The following eleven standard criteria are typically used to identify substance use disorders:

1. Taking the substance in larger amounts or for longer than the individual meant to.
2. Wanting to cut down or stop using the substance but not managing to.
3. Spending a lot of time getting, using, or recovering from use of the substance.
4. Cravings and urges to use the substance.
5. Not managing to do what the individual should at work, home, or school, because of substance use.
6. Continuing to use, even when it causes problems in relationships.
7. Giving up important social, occupational, or recreational activities because of substance use.
8. Using substances again and again, even when it puts the individual in danger.
9. Continuing to use, even when the individual knows he or she has a physical or psychological problem that could have been caused or made worse by the substance.
10. Needing more of the substance to get the effect that he or she wants (tolerance).
11. .Development of withdrawal symptoms, which can be relieved by taking more of the substance.

ASSIST: Severity of Substance use disorder (n = 275)

Mild substance use disorder
17.5% (n = 48)

Severe substance (n = 103) use disorder
37.5% (n = 103)

Moderate substance use disorder
11% (n = 31)

*93 participants had 1 or fewer symptoms

The DSM-V screening tool was used to ere scored using the following criteria:
- 2-3 symptoms indicate a mild substance use disorder
- 4-5 symptoms indicate a moderate substance use disorder, and
- 6 or more symptoms indicate a severe substance use disorder.

More than one-third of all KWS respondents to this set of questions indicated symptoms of a severe substance use disorder that could benefit from inpatient treatment, counseling with a substance use counselor interventions, approximately half of the indicated mild substance use disorder that could benefit from educational workshop interventions, and 11% indicated symptoms of moderate substance use disorder that could benefit from interventions of engaging with a substance use professional or social worker.

15.8.1 CAGE

The following questions were asked while conducting the CAGE screening tool to assess alcohol use disorder:

- Have you ever felt you needed to **C**ut down on your drinking?
- Have people **A**nnoyed you by criticizing your drinking?
- Have you ever felt **G**uilty about drinking?
- Have you ever felt you needed a drink first thing in the morning (**E**ye-opener) to steady your nerves or to get rid of a hangover?
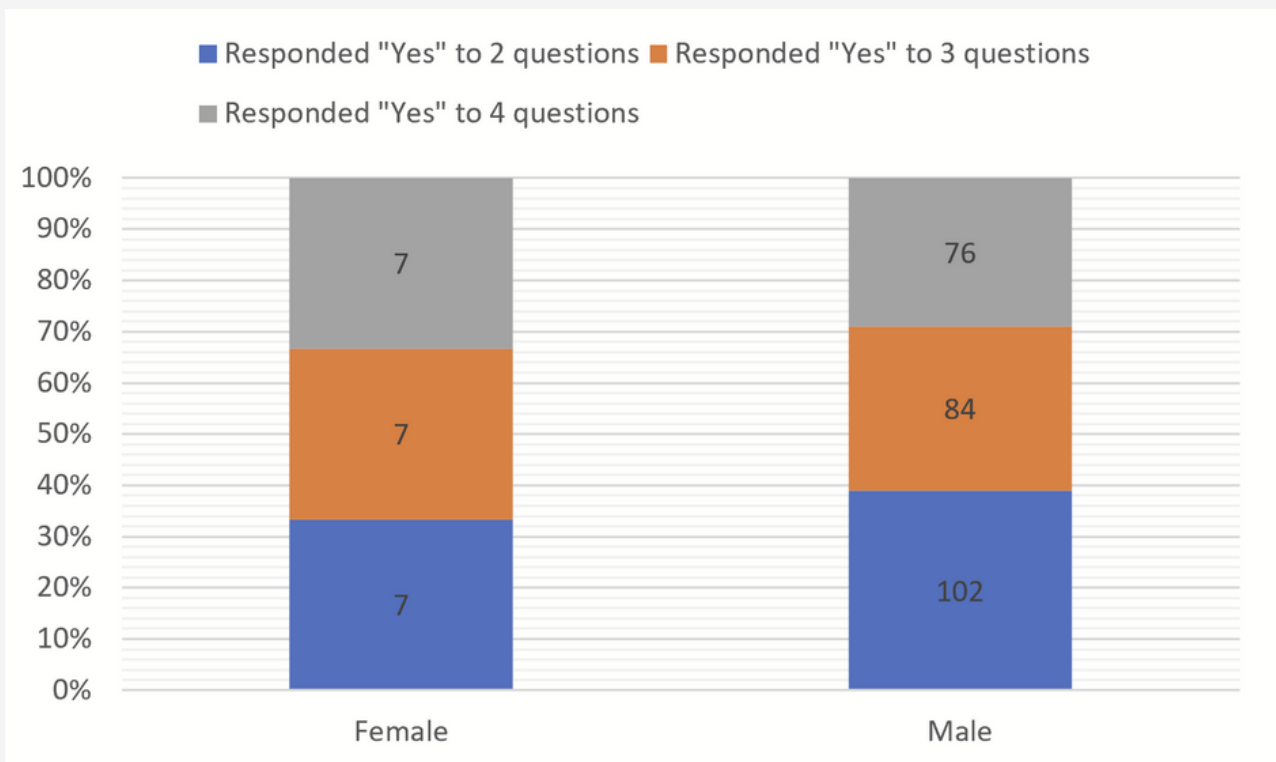
Of the 1,223 respondents to the CAGE questions, 290 individuals (24%) scored at risk for alcohol use disorder. Of this group, 40% (n=116) responded 'yes' to at least two items on CAGE, 31% of the respondents (n=91) responded 'yes' to at least three items on CAGE, and 27% of the respondents (n=83) responded 'yes' to all four of the items on CAGE.
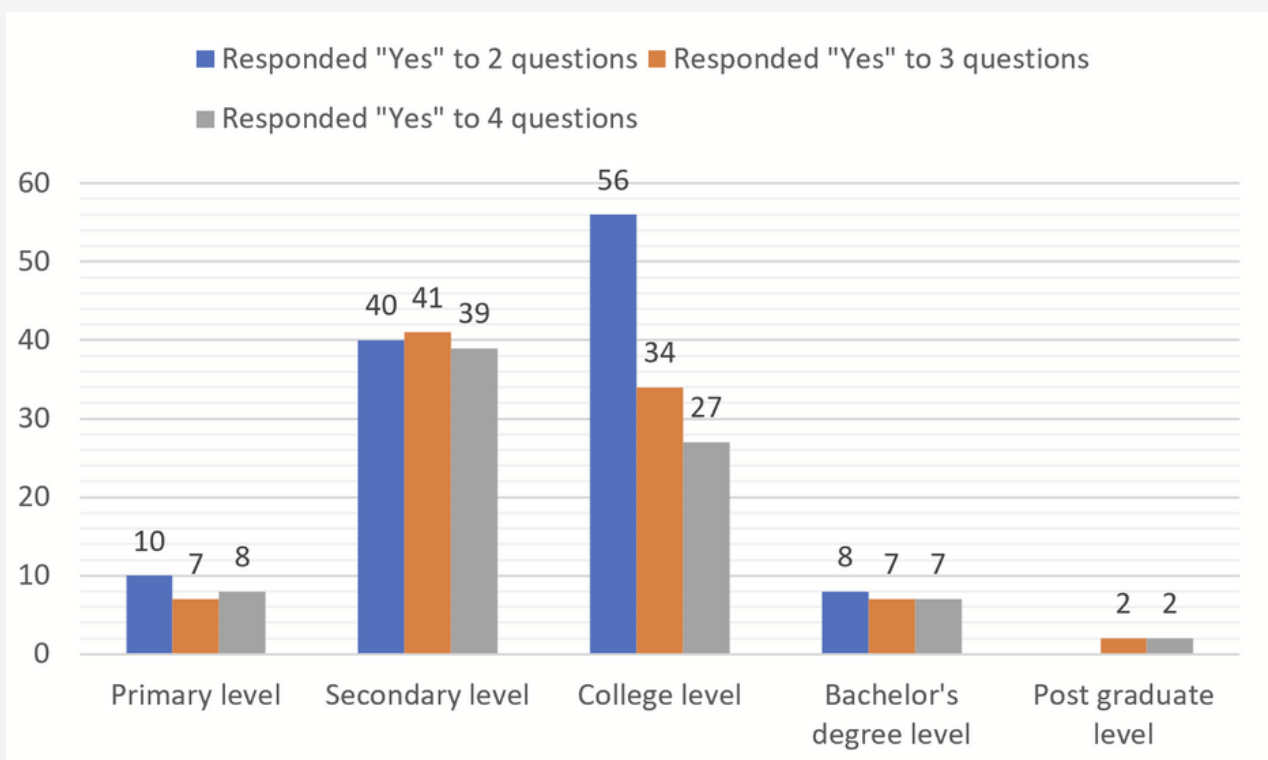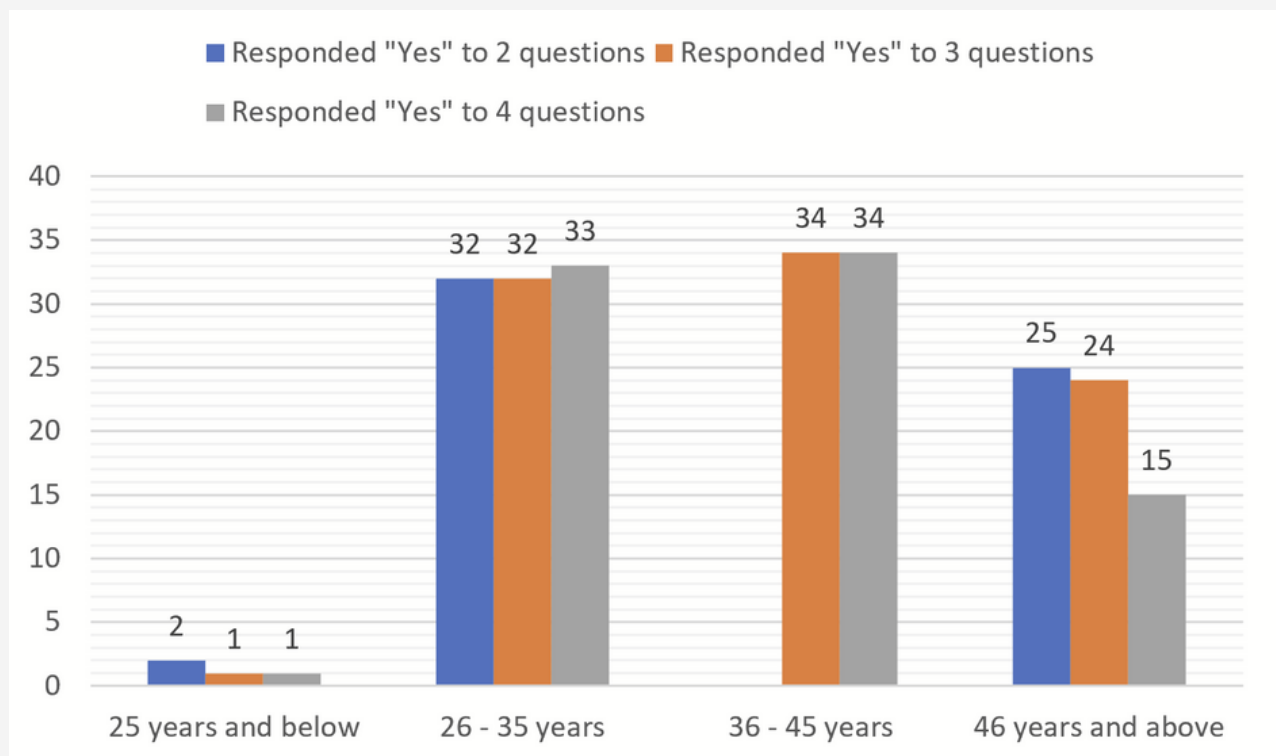
Level of Education and responses to CAGE

CAGE is a 4-item screening tool, a score of 2 or more is considered clinically significant for alcohol use disorder.
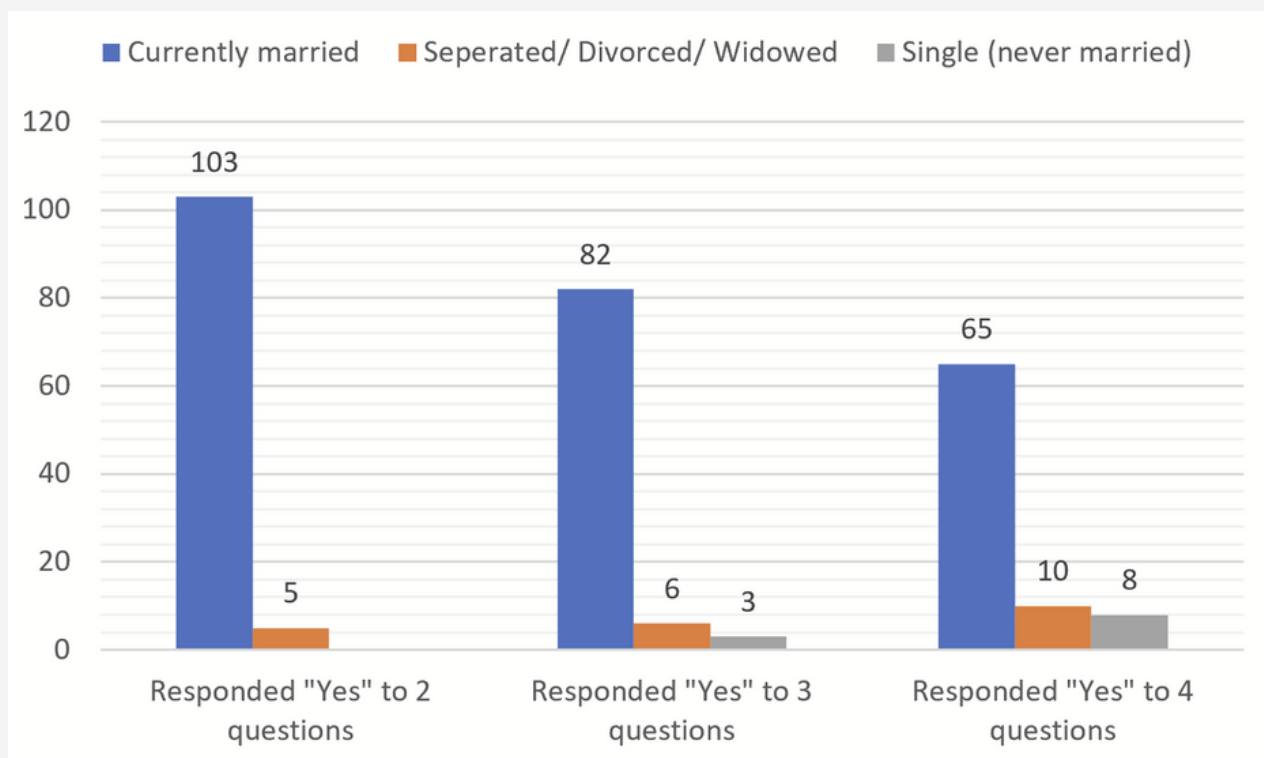
Sex and responses to CAGE

Legend:
- Responded "Yes" to 2 questions (blue)
- Responded "Yes" to 3 questions (orange)
- Responded "Yes" to 4 questions (grey)

Female: 7 (grey), 7 (orange), 7 (blue)
Male: 76 (grey), 84 (orange), 102 (blue)

Age and responses to CAGE

Legend:
- Responded "Yes" to 2 questions (blue)
- Responded "Yes" to 3 questions (orange)
- Responded "Yes" to 4 questions (grey)

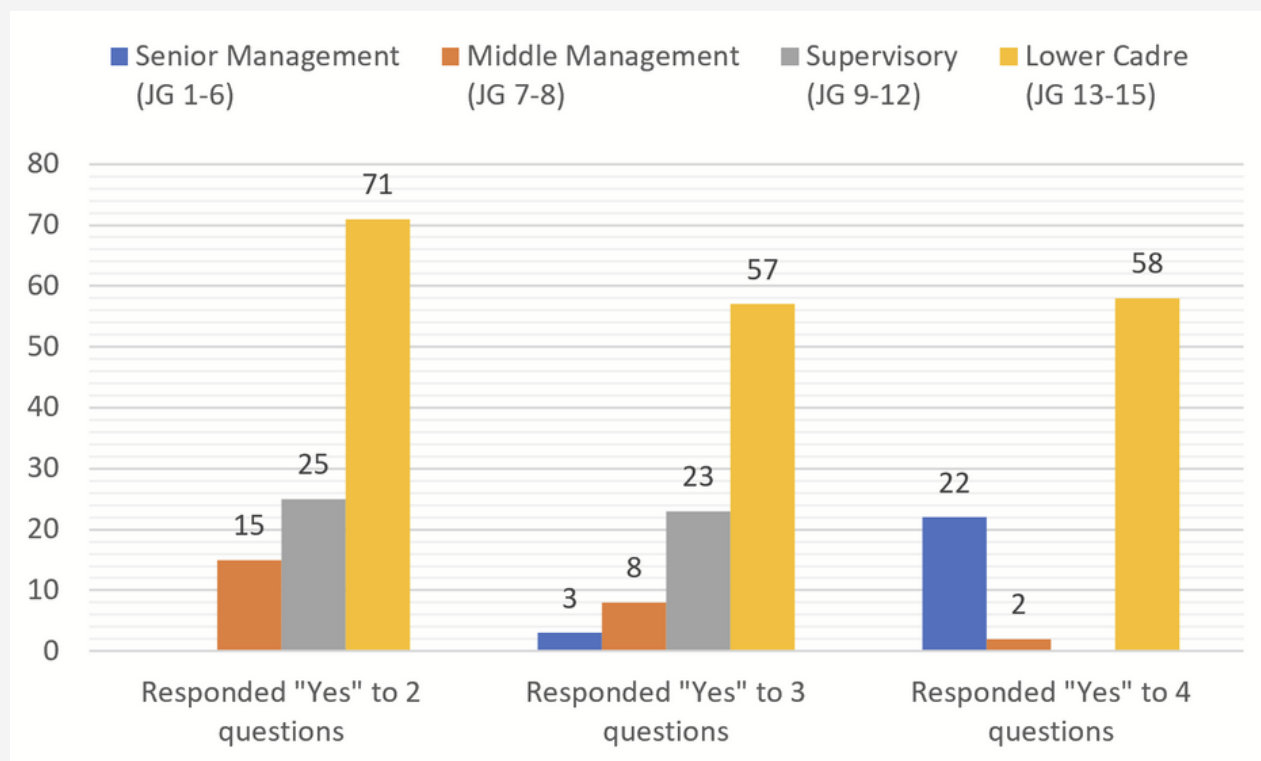| Age group	2 questions	3 questions	4 questions
25 years and below	2	1	1
26 - 35 years	32	32	33
36 - 45 years		34	34
46 years and above	25	24	15

CAGE is a 4-item screening tool, a score of 2 or more is considered clinically significant for alcohol use disorder.

Marital Status and responses to CAGE

Legend: Currently married (blue), Seperated/ Divorced/ Widowed (orange), Single (never married) (grey)

	Responded "Yes" to 2 questions	Responded "Yes" to 3 questions	Responded "Yes" to 4 questions
Currently married	103	82	65
Seperated/ Divorced/ Widowed	5	6	10
Single (never married)		3	8

Cadre and responses to CAGE

Legend: Senior Management (JG 1-6) (blue), Middle Management (JG 7-8) (orange), Supervisory (JG 9-12) (grey), Lower Cadre (JG 13-15) (yellow)

	Responded "Yes" to 2 questions	Responded "Yes" to 3 questions	Responded "Yes" to 4 questions
Senior Management (JG 1-6)		3	22
Middle Management (JG 7-8)	15	8	2
Supervisory (JG 9-12)	25	23	
Lower Cadre (JG 13-15)	71	57	58

CAGE is a 4-item screening tool, a score of 2 or more is considered clinically significant for alcohol use disorder.

Job Satisfaction and responses to CAGE
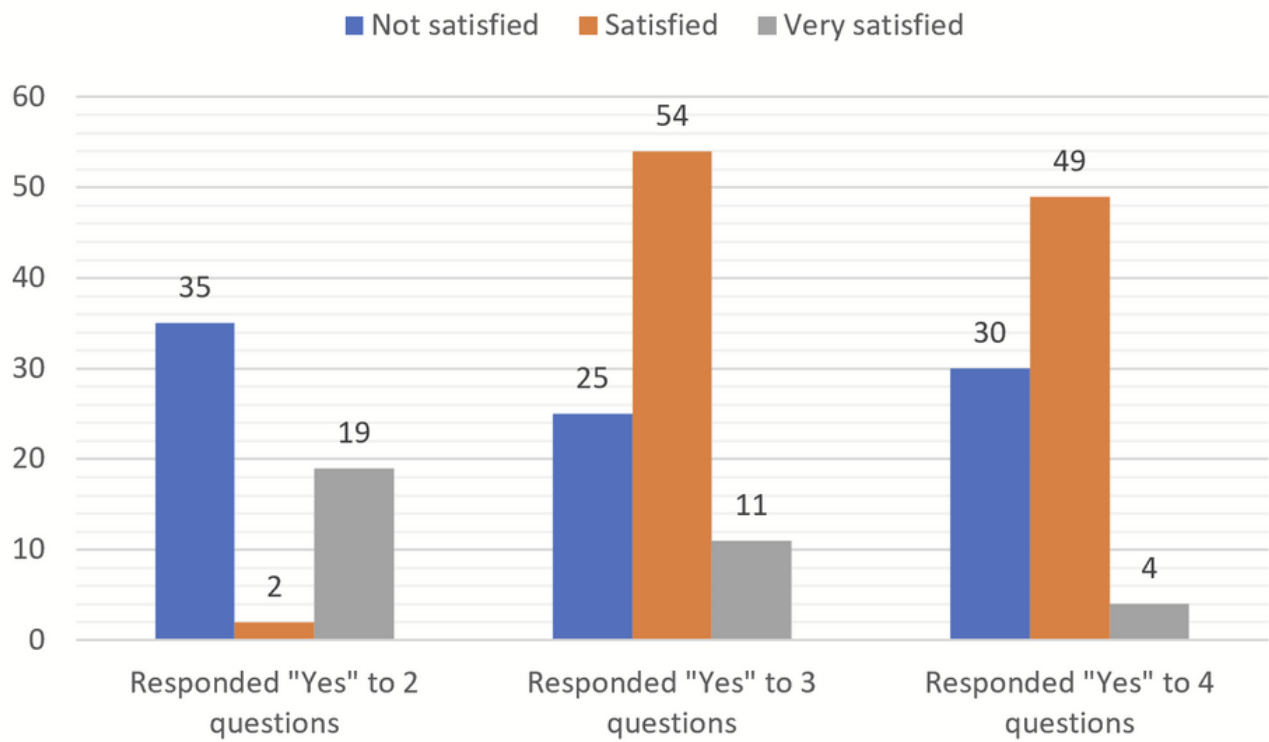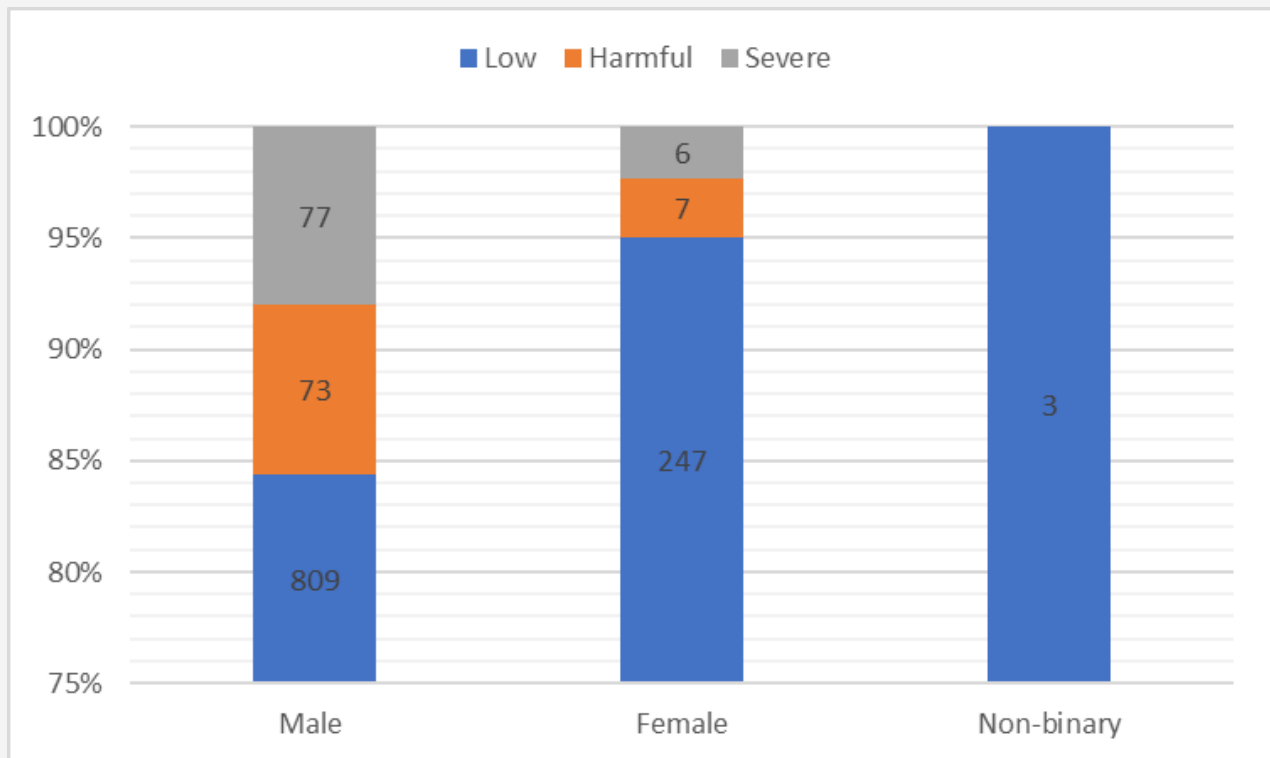

Years in Service and responses to CAGE
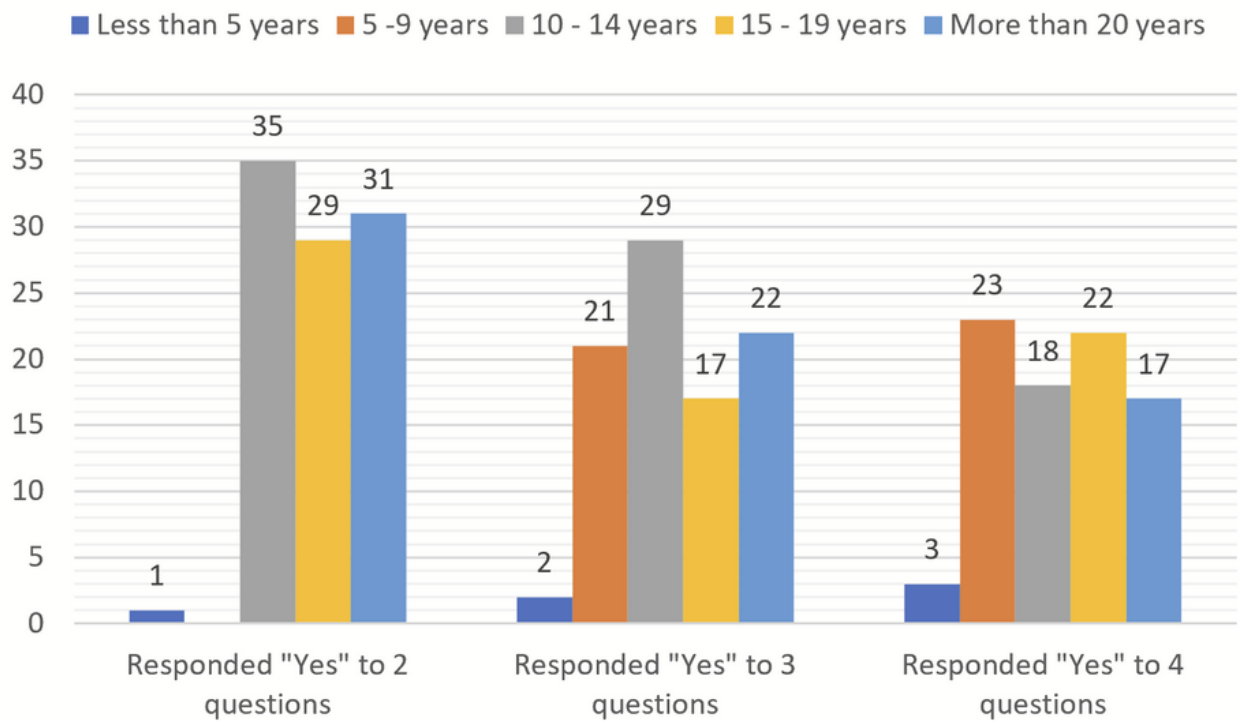
Please note: Researchers were advised that there have been no new ranger hires since 2015.

CAGE is a 4-item screening tool, a score of 2 or more is considered clinically significant for alcohol use disorder.
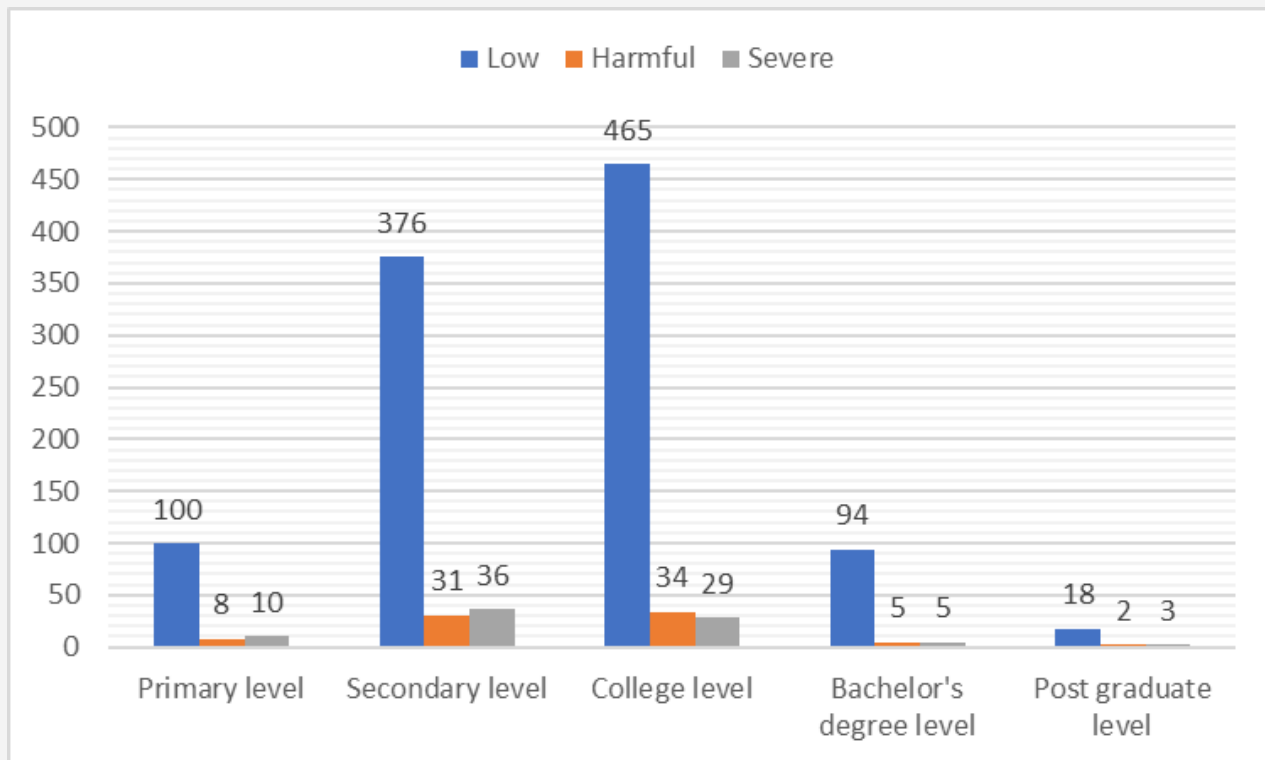
15.8.2 AUDIT

Of the 1,222 respondents to the 10-item AUDIT screening, 87% of this group (n=1059) scored low risk of alcohol dependence, 7% (n = 80) scored hazardous or harmful consequences of alcohol use, and 7% (n = 83) scored moderate-severe likelihood of alcohol dependence or alcohol use disorder.
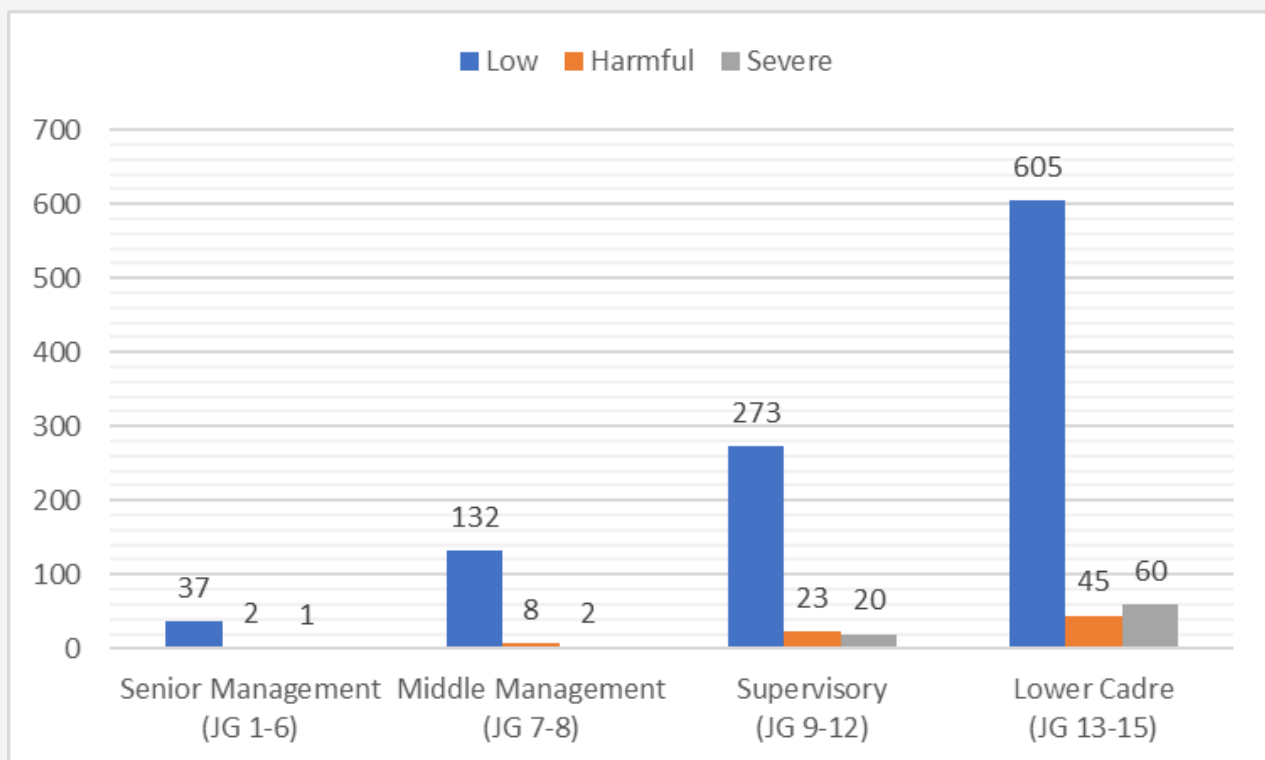
Sex and responses to AUDIT

AUDIT is a 10-item screening tool.
A score of 8 or more is considered to indicate hazardous or harmful alcohol use.

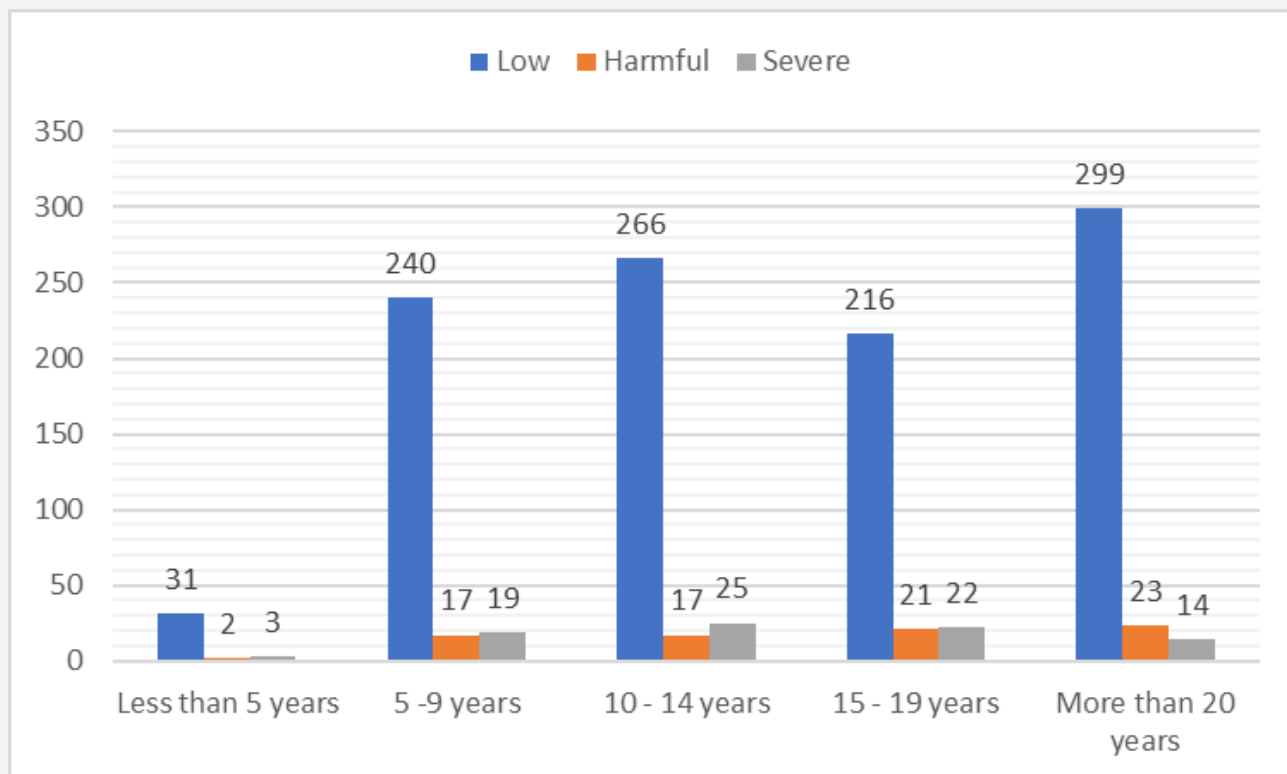# Level of Education and responses to AUDIT

Legend: Low (blue), Harmful (orange), Severe (gray)

Level	Low	Harmful	Severe
Primary level	100	8	10
Secondary level	376	31	36
College level	465	34	29
Bachelor's degree level	94	5	5
Post graduate level	18	2	3

Job Category and responses to AUDIT

Legend: Low (blue), Harmful (orange), Severe (gray)

Job Category	Low	Harmful	Severe
Senior Management (JG 1-6)	37	2	1
Middle Management (JG 7-8)	132	8	2
Supervisory (JG 9-12)	273	23	20
Lower Cadre (JG 13-15)	605	45	60

AUDIT is a 10-item screening tool.
A score of 8 or more is considered to indicate hazardous or harmful alcohol use.

Years in Services and responses to AUDIT

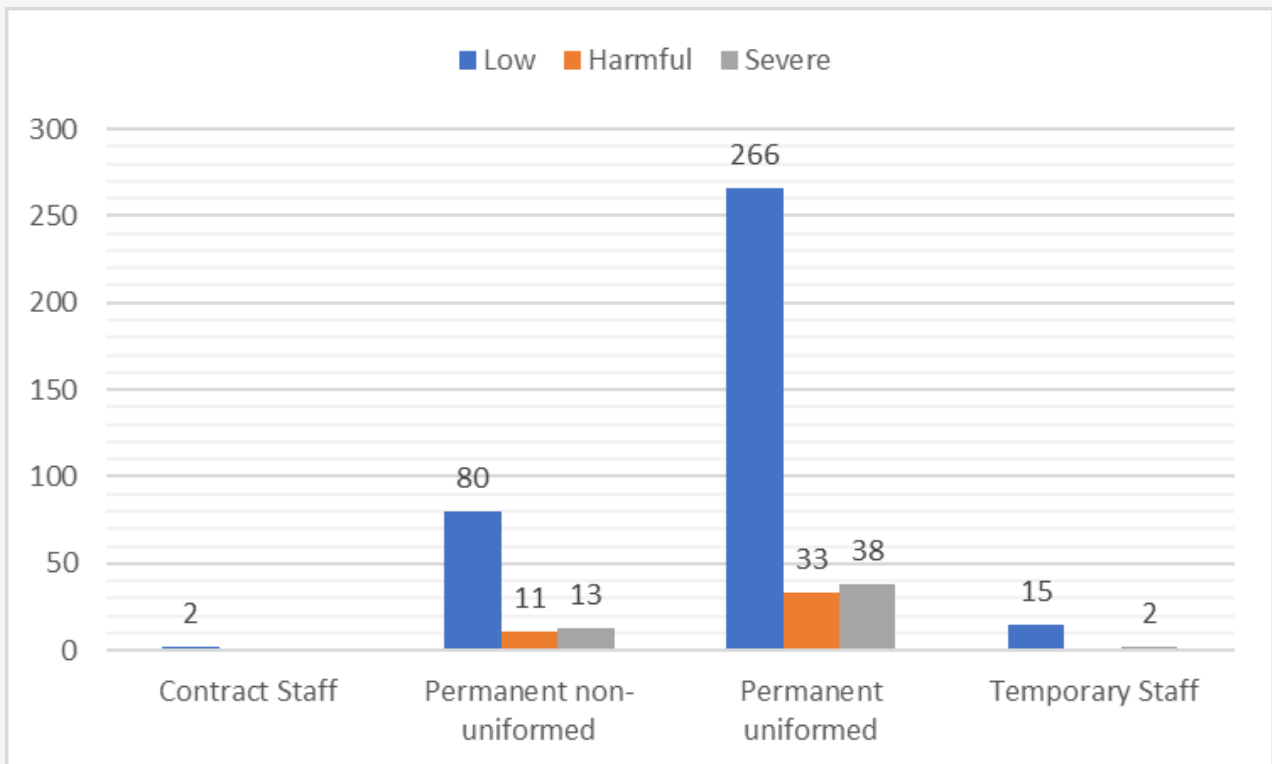# Job Satisfaction and responses to AUDIT
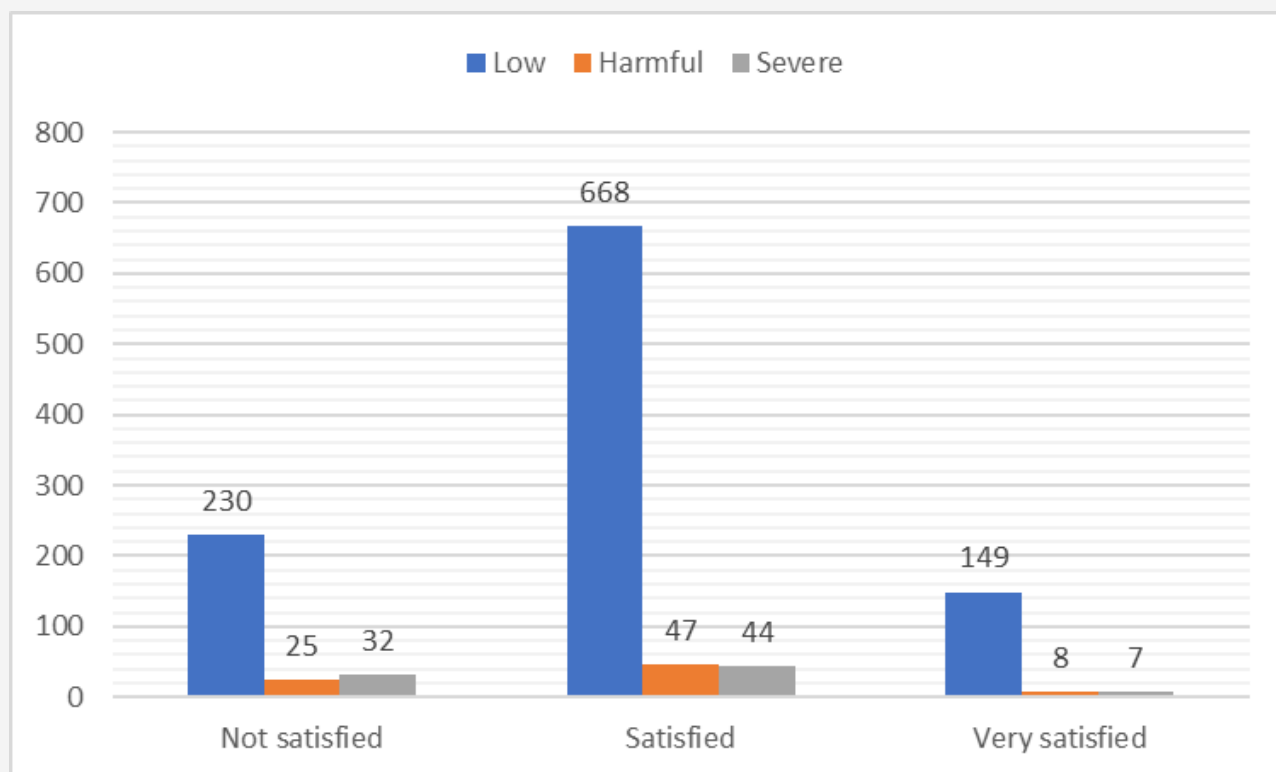
AUDIT is a 10-item screening tool.
A score of 8 or more is considered to indicate hazardous or harmful alcohol use.
Please note: Researchers were advised that there have been no new ranger hires since 2015.

Employment type and responses to AUDIT

AUDIT is a 10-item screening tool.
A score of 8 or more is considered to indicate hazardous or harmful alcohol use.

15.8.3 ASSIST

Of the 1,222 respondents to the ASSIST screening, 70% (n = 857) scored 'low risk' recommending brief education, 29% (n=351) scored 'moderate risk' recommending brief intervention, including patient-centered discussion, and 1% (n = 14) 'high risk' recommending brief intervention plus referral to specialized treatment.
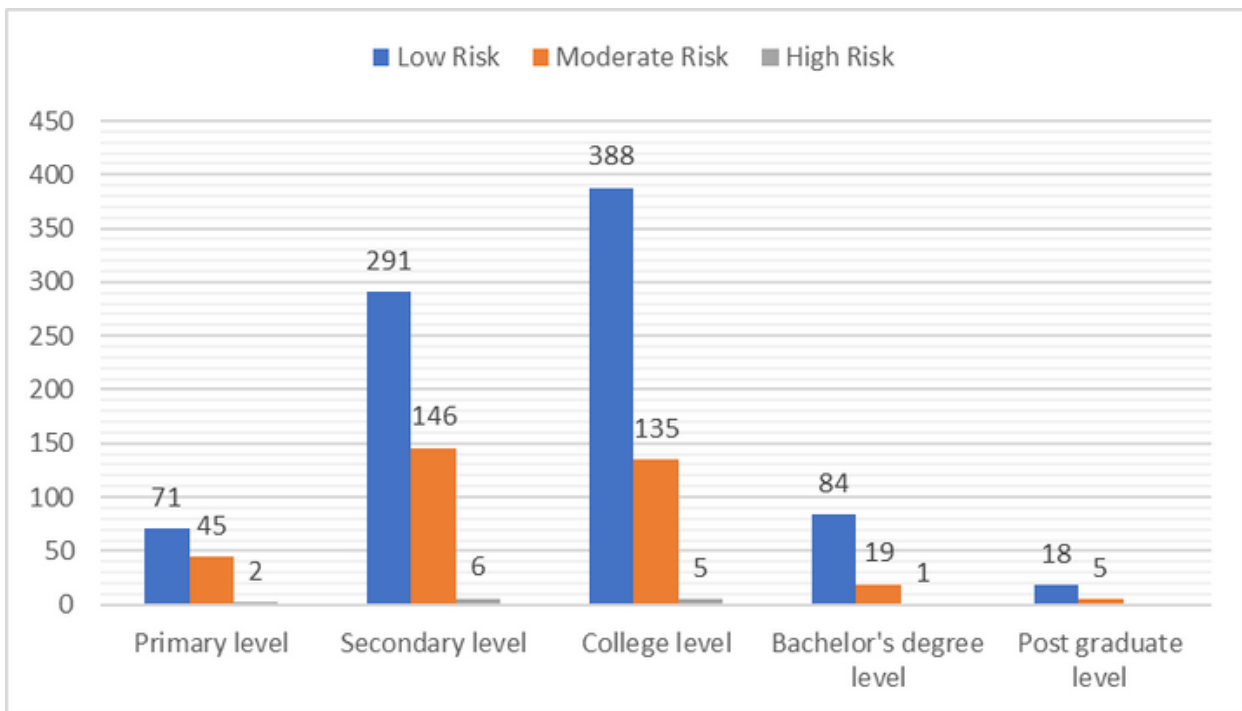
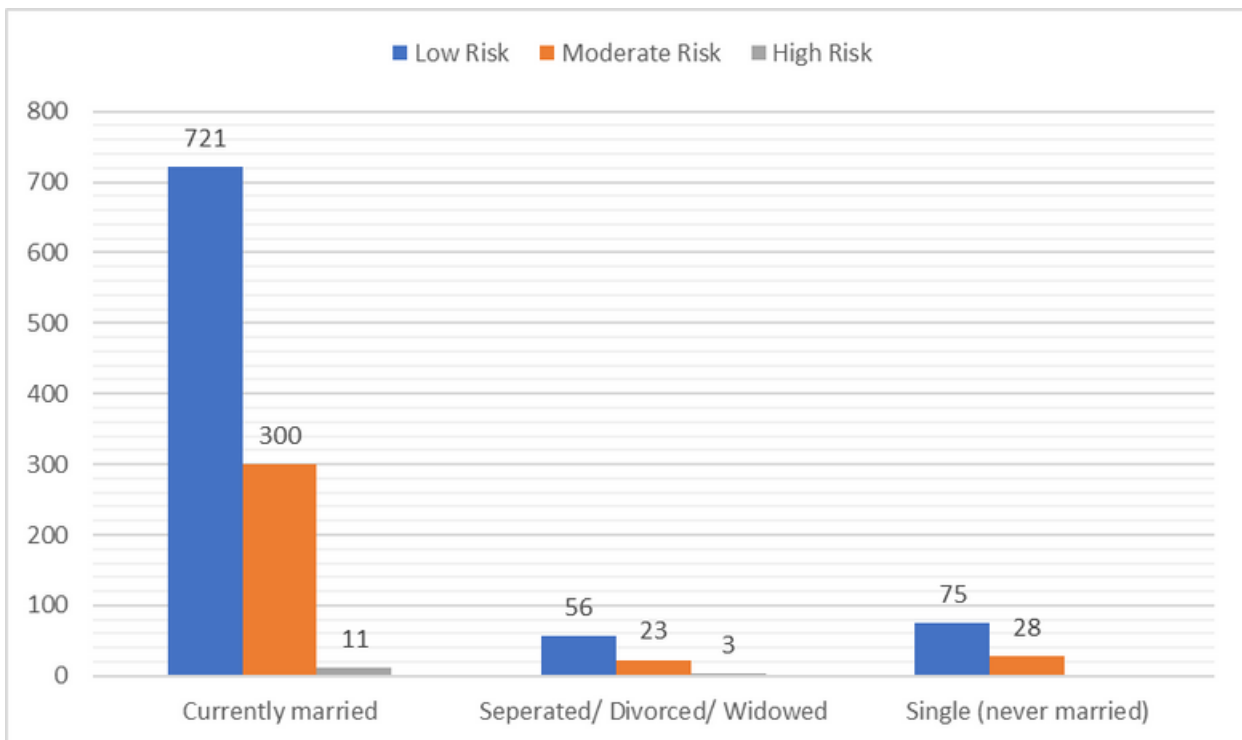## Sex and responses to ASSIST
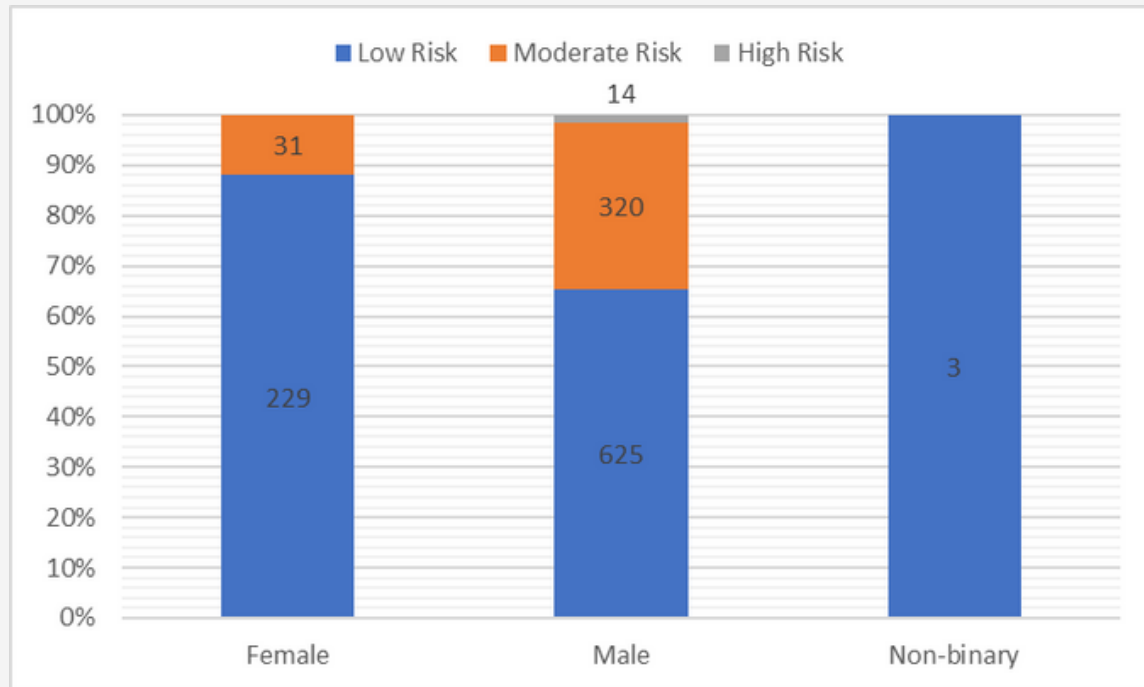
Age and responses to ASSIST
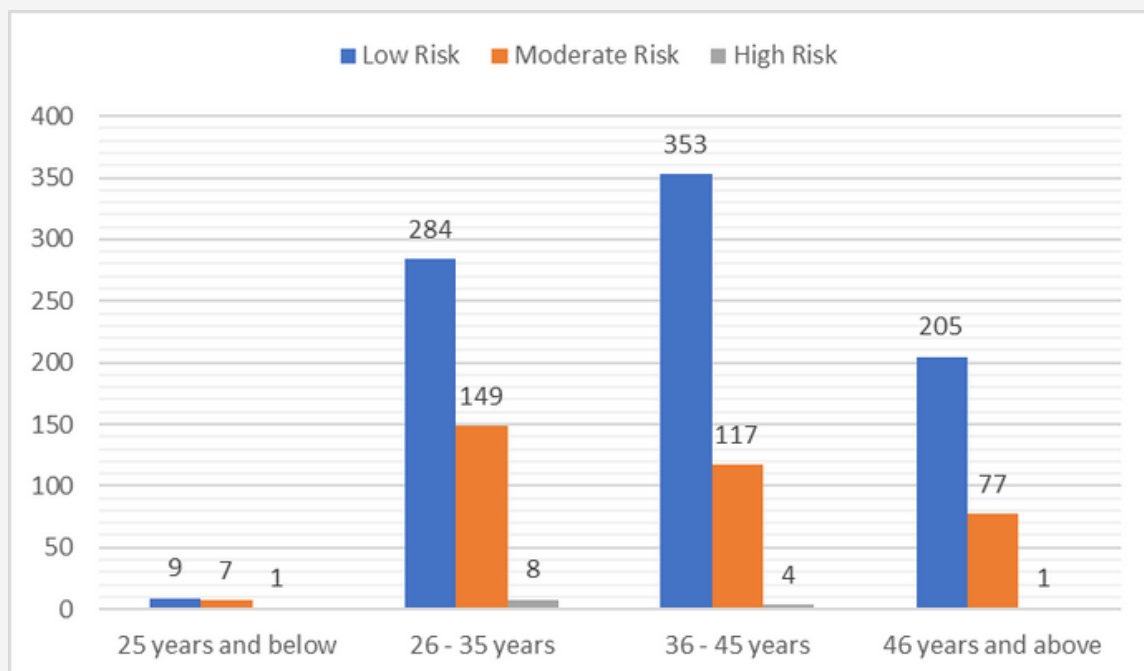
The ASSIST consists of eight questions. Scoring is done by adding scores of questions. A risk score is provided for each substance, and scores are grouped into 'low risk', 'moderate risk' or 'high risk'.

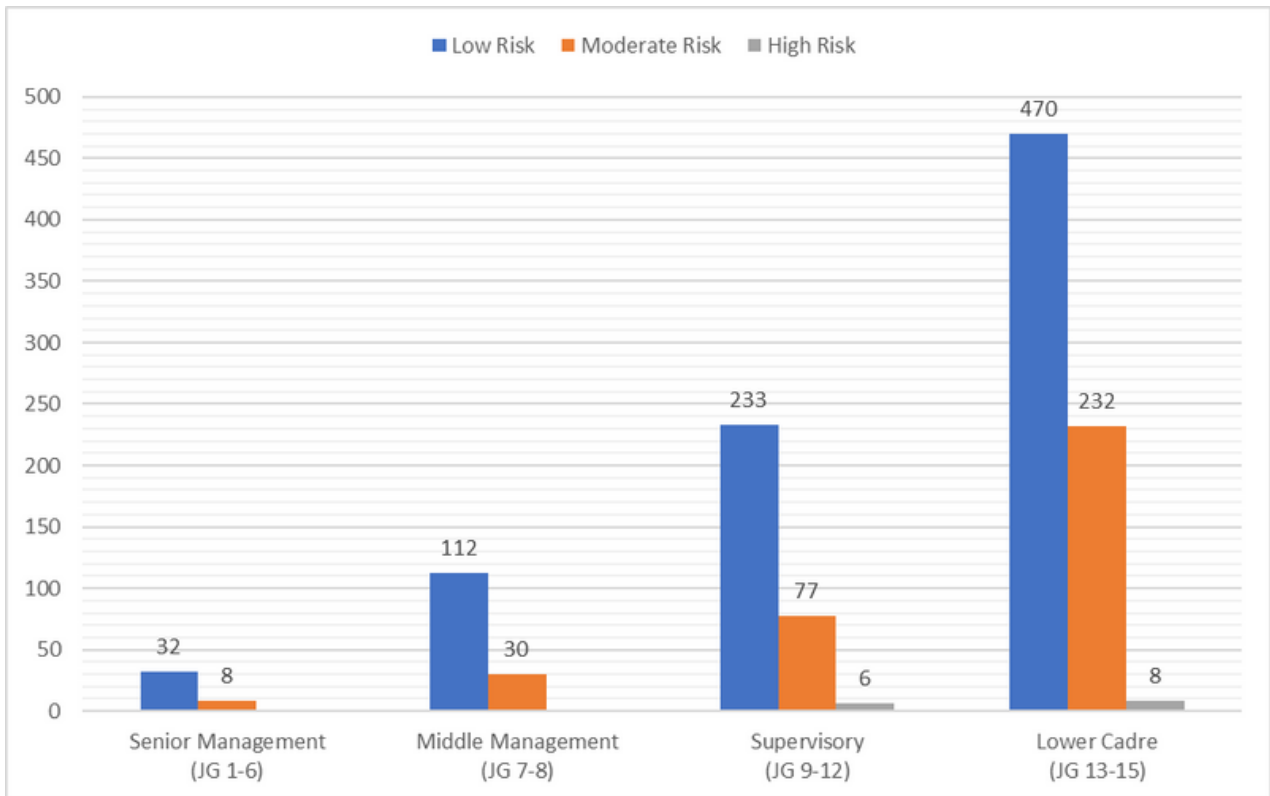# Level of Education and responses to ASSIST

Marital Status and responses to ASSIST

The ASSIST consists of eight questions. Scoring is done by adding scores of questions. A risk score is provided for each substance, and scores are grouped into 'low risk', 'moderate risk' or 'high risk'.

Job Category and responses to ASSIST

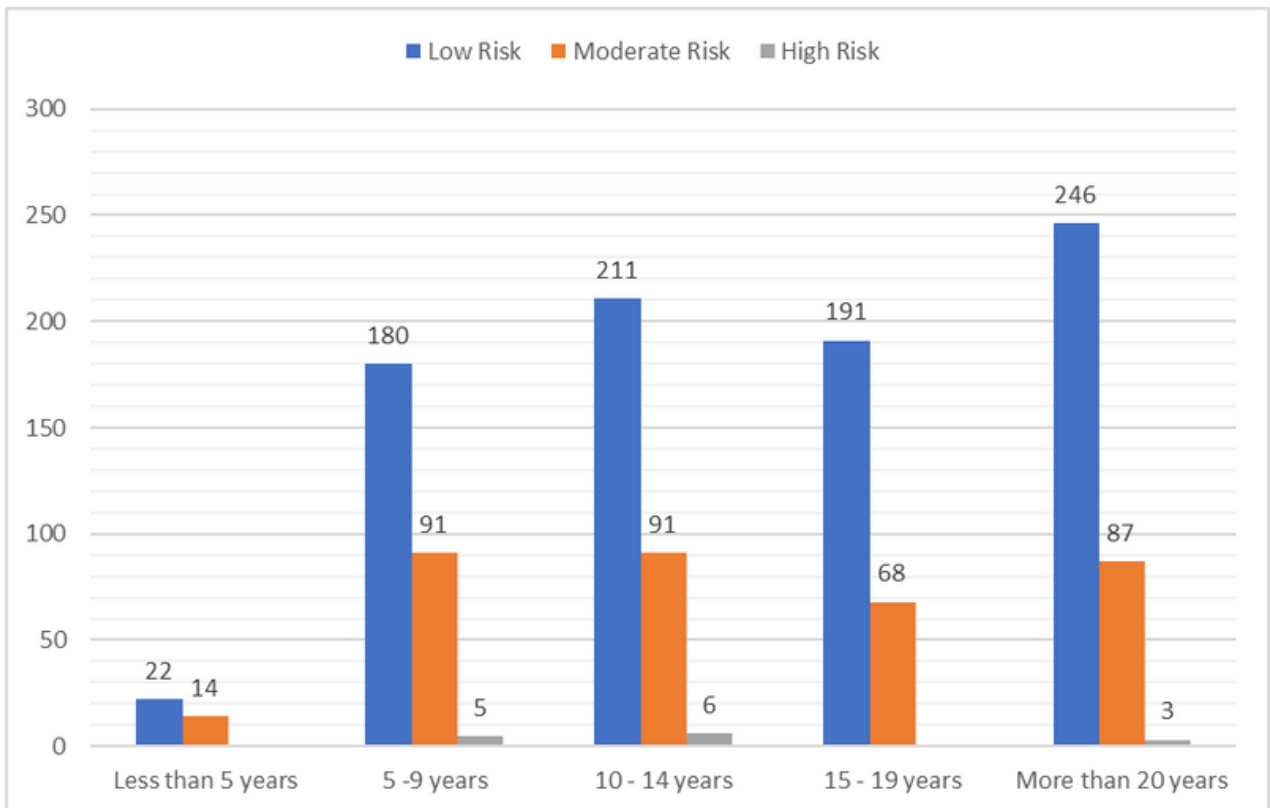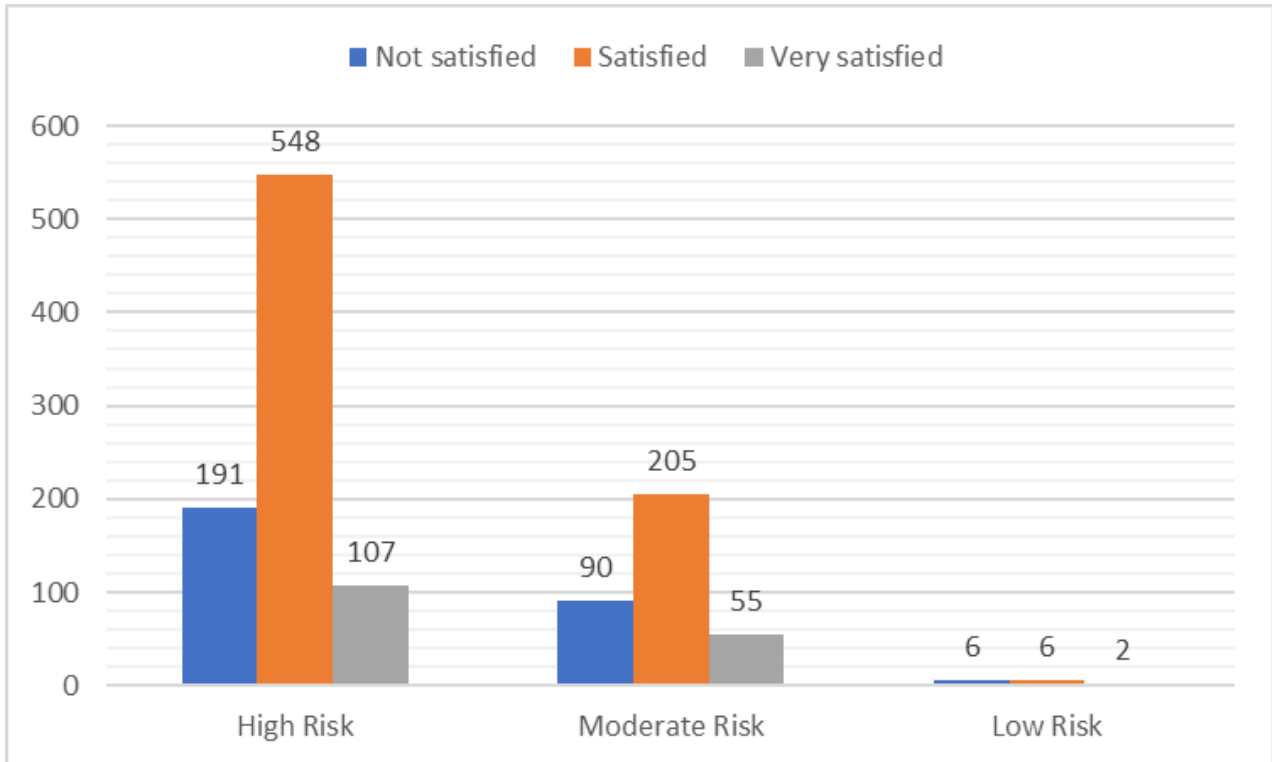# Length of Service and responses to ASSIST

The ASSIST consists of eight questions. Scoring is done by adding scores of questions. A risk score is provided for each substance, and scores are grouped into 'low risk', 'moderate risk' or 'high risk'.

Job Satisfaction and responses to ASSIST

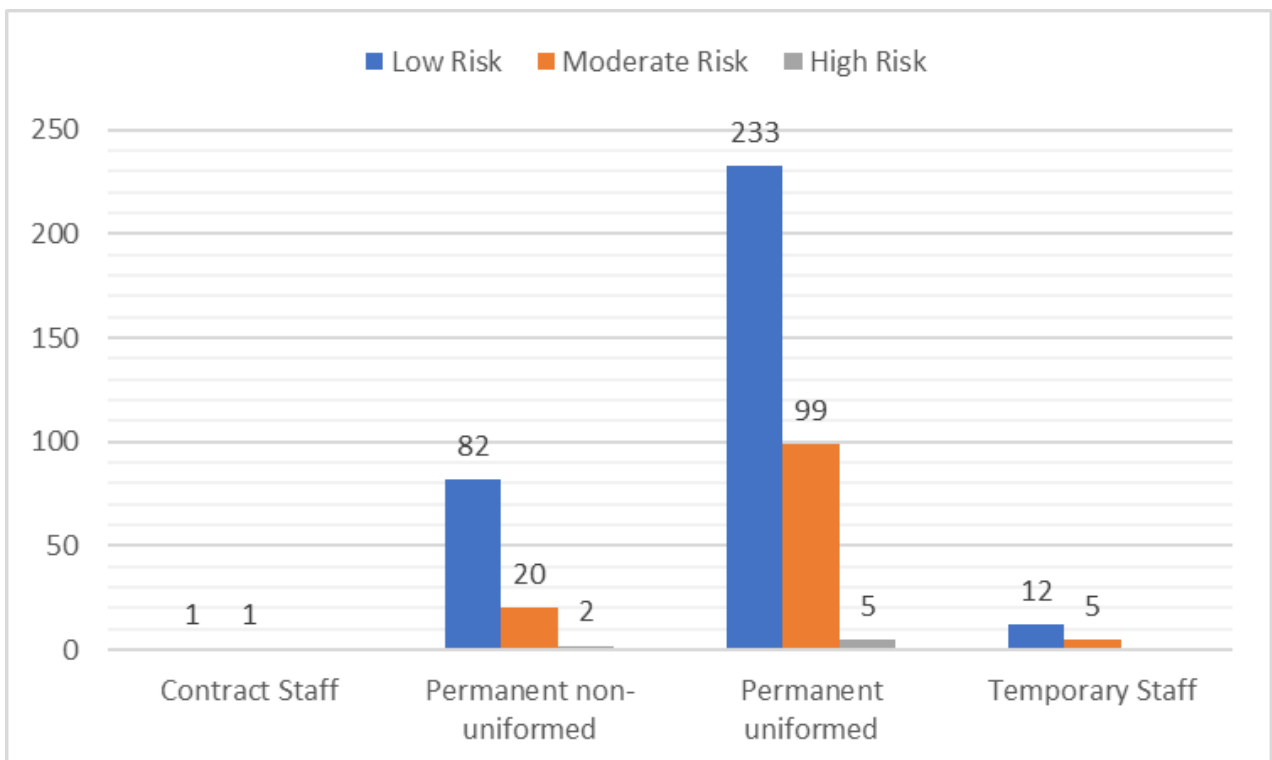## Employment Type and responses to ASSIST

The ASSIST consists of eight questions. Scoring is done by adding scores of questions. A risk score is provided for each substance, and scores are grouped into 'low risk', 'moderate risk' or 'high risk'.

16. NACADA Indicators

"The National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA) is a Semi-Autonomous State Corporation under the Ministry of Interior and Coordination of National Government. NACADA supports the public sector institutions to mainstream alcohol and drug abuse prevention, treatment and rehabilitation programs in their workplace. Towards supporting Ministries, Departments, Agencies and County Governments (MDA) and County Governments to undertake alcohol and drug abuse baseline and follow-up surveys, the Authority has developed guidelines that document all the key indicators that are required to facilitate evidence-based programming. The indicators provide quantitative measurements that will be tracked over the years to assess the effectiveness of the implemented ADA interventions."

Guidelines to Undertake Baseline Survey on the Status of Alcohol and Drug Abuse (ADA) Among Employees of Ministries, Departments Agencies and County Governments, July 2020

16.1 Reporting to work while drunk

Does not know of a situation where a colleague reported to work while drunk

27.6%

72.4%
Know of a colleague who reported to work while drunk
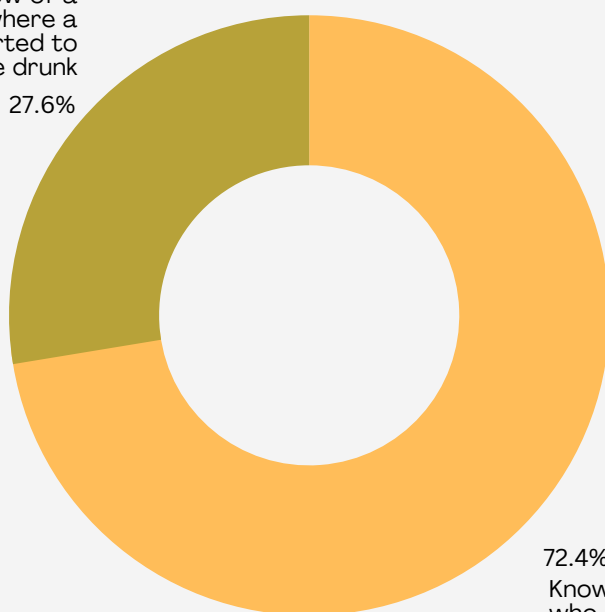
One of the indicators of alcohol misuse is the tendency of employees reporting to the workplace while drunk. 72.4% of respondents (n = 1013) stated that they know of a colleague who has reported to work drunk.

16.2 Level of institution's commitment in handling alcohol and drug use issues

16.2.1 Employee awareness of Drug and Alcohol Use Activities

Not aware of activities to address substance use by KWS
43.3%

56.7%
Aware of activities to address substance use by KWS

56.7% (n = 793) of the respondents indicated that they were aware of activities undertaken in KWS to address harmful alcohol and drug use at the workplace.
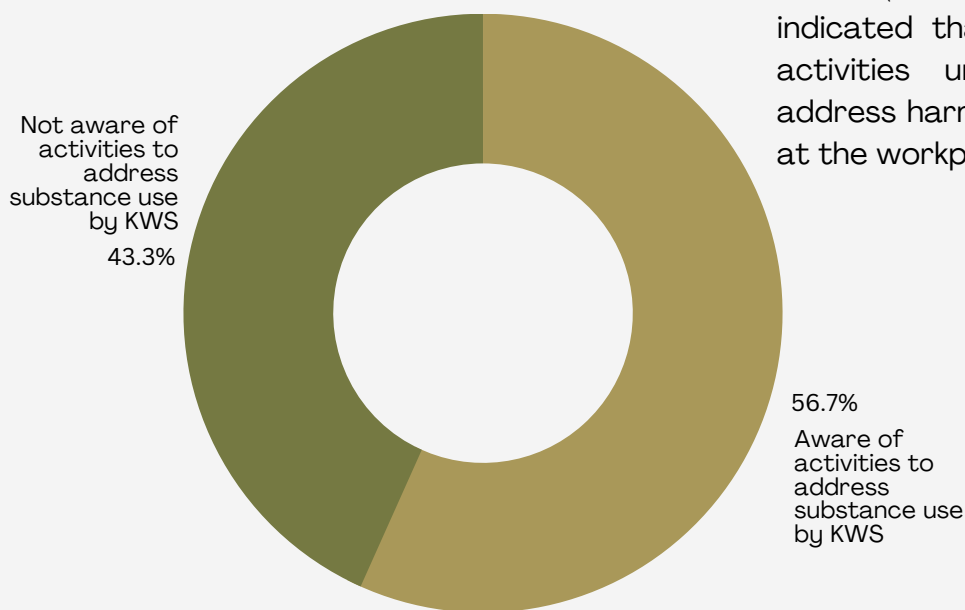
16.2.2 Number of employee training sensitizations attended

1 training
0.6%

2 - 3 trainings
2.5%

4 or more trainings
83%

83% (n = 1156) reported that they had never attended a training/ sensitization on alcohol and drug use. 11.6% (n = 162) reported that they had attended one training ever, 2.5% (n=35) reported that they had attended 2-3 times over the past year, and 0.6% (n = 9) attended a training 4 or more times over the past year.

Have never attended a training 83%
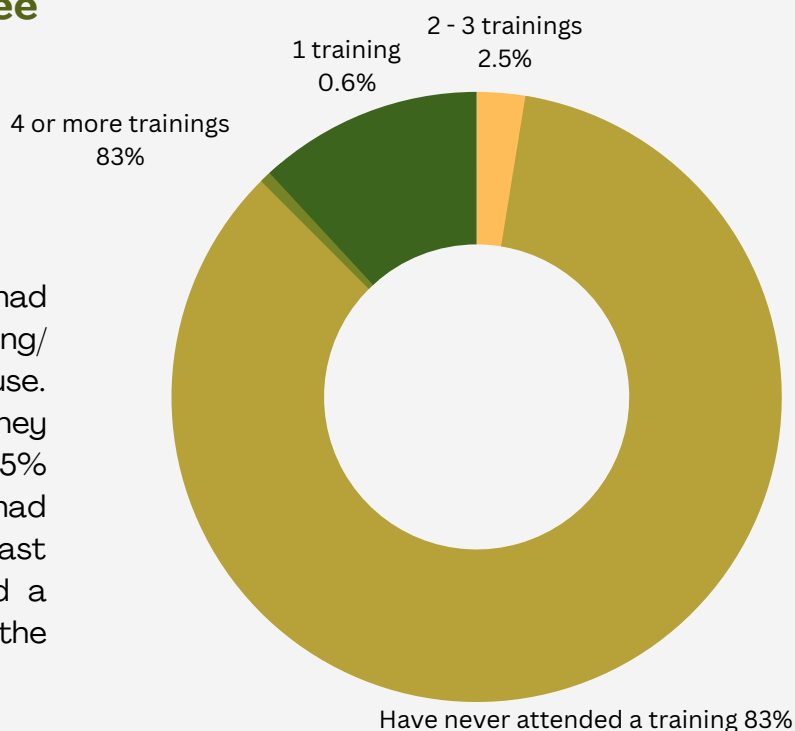
According to discussions with KWS staff members, a training is only considered as such if a certificate is issued upon completion.

16.2.3 Availability of Drug and Alcohol Use messages

In the past year, the majority of KWS personnel, 64% (n = 893), reported that they had not seen any messages on alcohol and drug use within the workplace,

Have seen messages on alcohol and drugs
37%

64%
Have not seen any messages on alcohol and drugs

16.2.4 Existence of counselling and treatment services

Are not aware of counselling and treatment for SUDs
35%

65% (n = 912) of KWS personnel reported that they are aware of the existence of counselling and treatment services for people with substance use disorders (SUDs) in KWS.

65%
Are aware of counsellling and treatment facilities for SUD

16.2.5 Employee perception of the organization's support of alcohol and drug use issues in the workplace
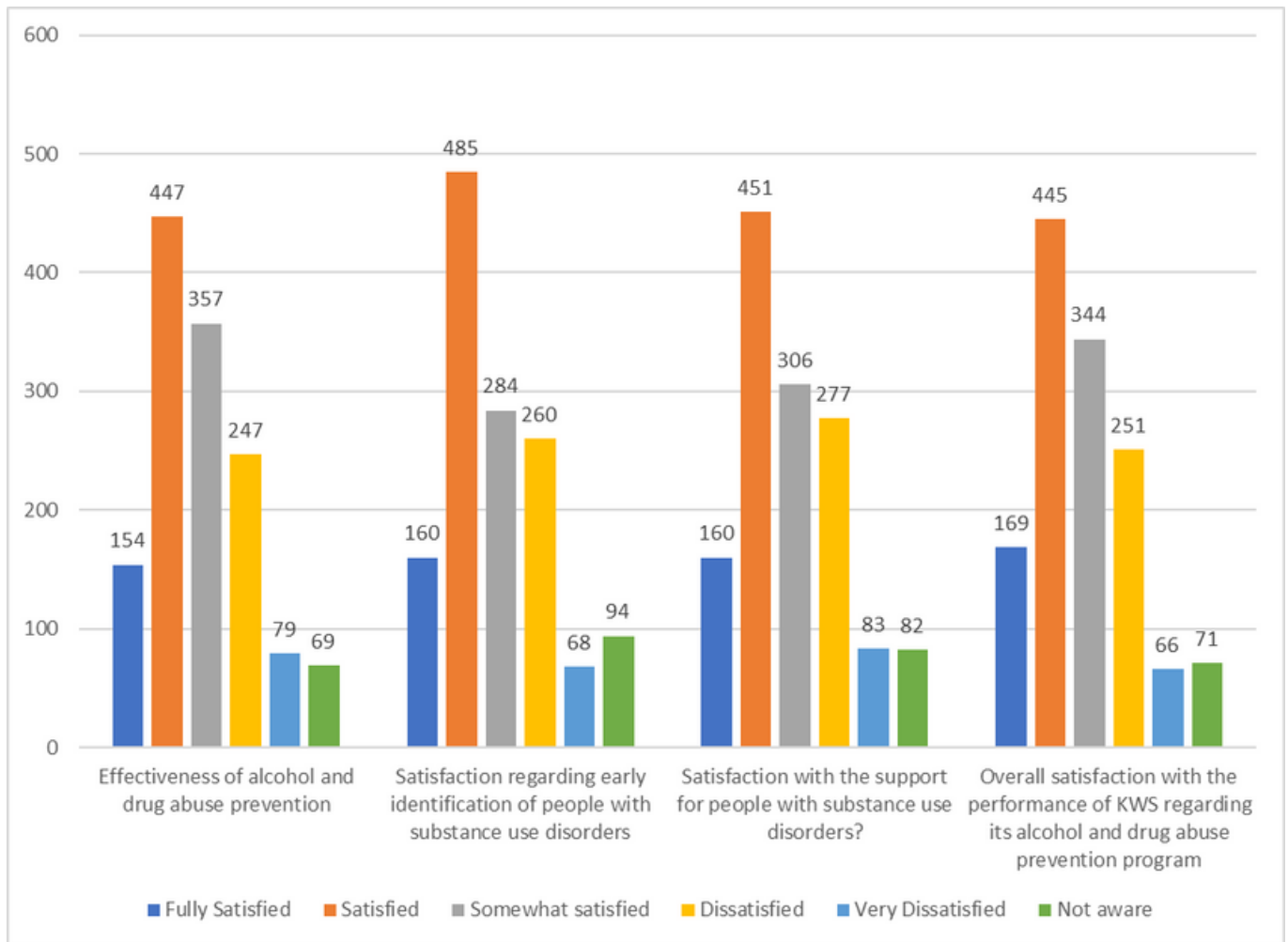
16.2.6 Knowledge of a colleague with a Drug and Alcohol use problem

66.5% (n=931) of the respondents reported that they know of a colleague struggling with drug or alcohol use.

Know a colleague that is struggling with their drug or alcohol use
66%

34%
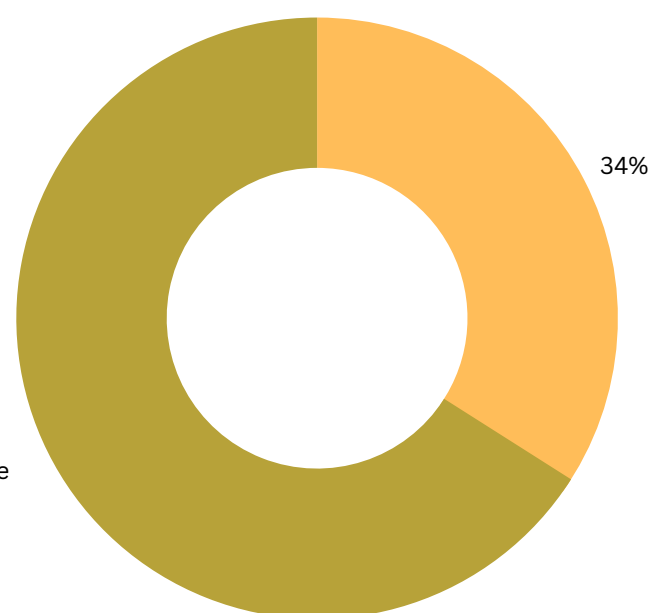
16.2.7 Drug and Alcohol Use-related knowledge and attitudes
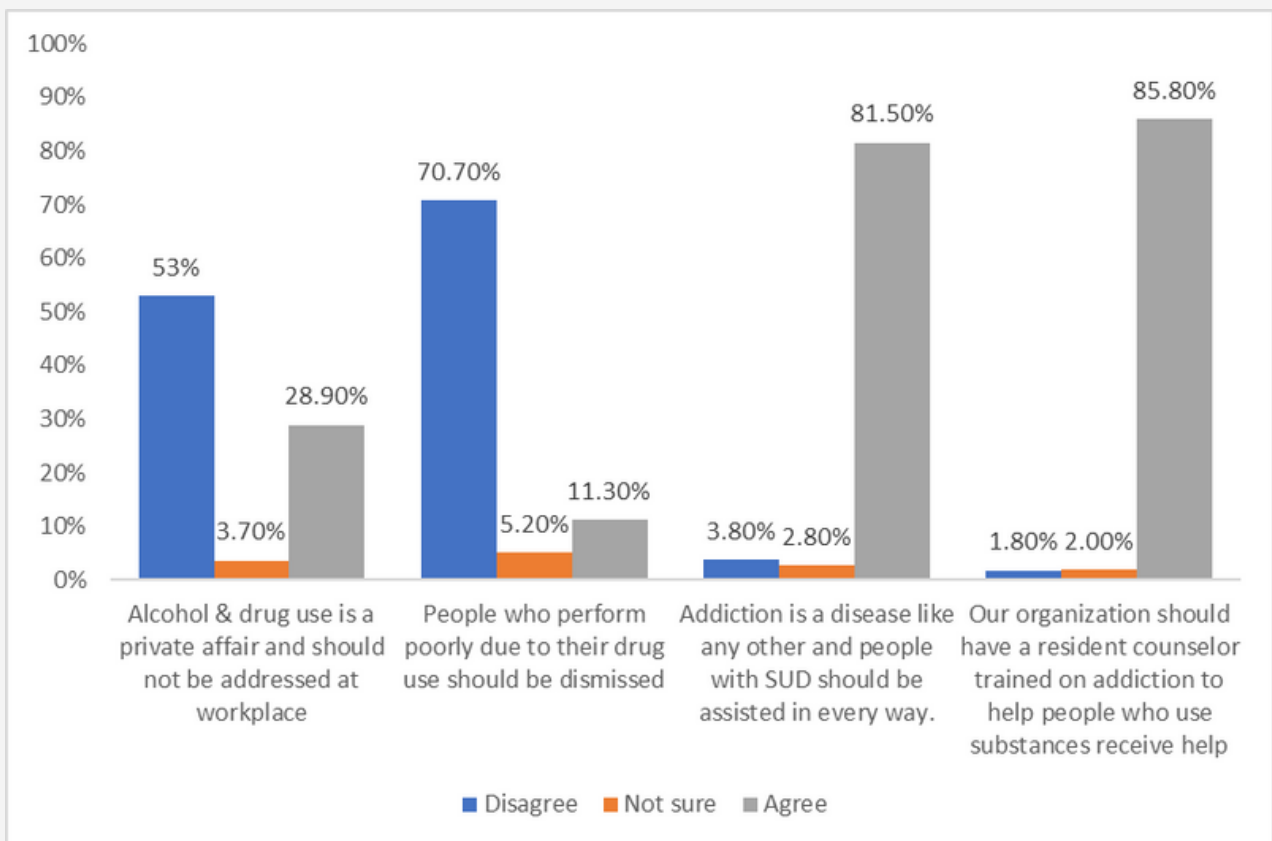
16.2.8 Knowledge of Drug and Alcohol treatment facilities

49.4%

Do not know a treatment facility
50.6 %

Less than one-half of the respondents (49.4%, n=691) indicated that they know of a place or facility where a person can be helped to receive treatment or support for their drug and alcohol use.
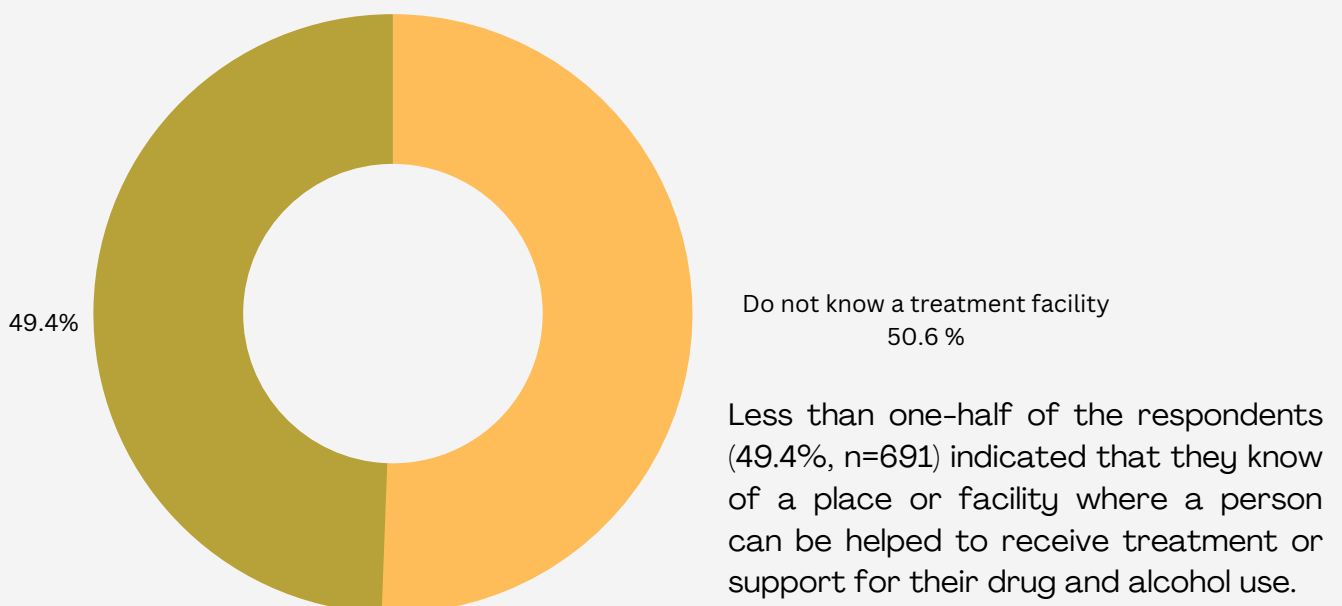
17. Key Findings

Alcohol and Substance Use

Onset of alcohol consumption

The results suggest that most officers begin to consume alcohol after entering KWS service.

Onset of substance use

The results suggest that those officers who regularly use drugs and other substances began to consume regularly after joining the KWS service.

Incidence of heavy or excessive alcohol consumption

4 out of 10 KWS personnel who acknowledge having consumed alcohol in the past year meet the World Health Organization criteria for excessive alcohol consumption, as measured by the number of drinks per day or per week and by the volume of alcohol consumed.

Cultural Acceptance of Khat

KWS Rangers and personnel in the field reported that khat, a 'natural amphetamine,' is widely used by personnel in the field so that rangers can patrol through the night and work long shifts. The consensus seemed to be that supervisors are aware of and tolerate the use of khat to ensure workforce coverage.

Intervention

There were positive responses regarding the importance of Leadership, Psychological and Spiritual Counseling, and Family Systems to effectuate intervention and treatment for alcohol and other substances. Notably, there was an acknowledgment that intervention and treatment change behaviour.

Hiring, Transfer, Advancement and Promotion

The strength of the KWS workforce has not been maintained. Researchers were advised that there have been no new ranger hires since 2013. Respondents explained that this lack of strength contributes to alcohol use, drug use, and general ill health. Further, personnel perceive that promotion, advancement, and transfer do not necessarily follow the posted civil service requirements, which contributes to the use of alcohol and drugs. Lastly, participants stated that many times personnel who use or misuse drugs and alcohol are transferred to a hardship or conflict zone as a 'corrective' measure.

Off-duty hours, Idleness, and Social Amenities

Personnel that are part of KWS sports activities stated that these are highly valued and contribute to a healthy physical and mental status. Yet, these opportunities are few and limited due to a lack of resources. Participants indicated that the lack of opportunity to engage in positive social, familial, behavioural, and physical activities contributes to alcohol and substance use.

Shift Work Balance, Fear/Safety

It is natural to assume that there is a level of tension between the individual's behaviour while off duty and the demands placed on KWS personnel to have their shift extended or to "report at a moment's notice" in the case of an emergency. However, participants reported a level of concern for their personal safety and the safety of the community when a co-worker is AWOL (absent without leave) or they report to work while intoxicated. Moreover, the sober ranger is often held accountable by their supervisor for the harmful behaviour of the intoxicated co-worker.

KWS Personnel Attitudes Towards Trauma

KWS personnel have a measurable exposure to trauma due to their occupation, and it falls to the organization to determine how to address individuals experiencing both stress and trauma. In focus group interviews and survey responses, participants reported using alcohol and other substances as a coping mechanism because they receive little psychological support.

Response patterns by sex

Patterns and consequences of alcohol and substance use consumption varied by the sex of the respondent. Across all three assessment/screening measures (CAGE, AUDIT, ASSIST), males reported being at a higher risk for use disorder than females. The most common reason given by both male and female respondents is that women refrain from use or misuse because they have greater responsibilities to take care of their children and their families. In the field especially, it was also noted that female personnel are placed at greater risk of harm and sexual harassment than their male counterparts due to patterns of male drunkenness and lack of effective supervisory response.

Organization Development

Leadership Effectiveness

Respondents acknowledge the role of supervisory leadership, sharing of information, and understanding of the personnel needs as key components towards building a culture of health and wellness. This was particularly noted with regard to family obligations, leave time, salary, and loans.

Communication

There is a widespread level of distrust in the organization, as this relates to the perceived lack of consistent processes and expectations. Respondents stated that this widely contributes to alcohol and drug use in the service

18. Opportunities & Recommendations

The study assessment affirmed that amongst its greatest assets, the strength of the Kenya Wildlife Service is its people. The "Baseline Assessment of Drug and Alcohol Use" sheds light on how acute vulnerabilities related to the workforce, if not responded to, will threaten the organization's goal to achieve its mission, which is "to sustainably manage Kenya's wildlife and its habitats for the benefit of nature and humanity". Based upon this research, three key strategies are identified to ameliorate alcohol and drug use, while importantly to build an Occupational-Resilient framework for the Kenya Wildlife Service in the 21st Century. These are identified and described in the following section. The authors conclude by

I. Culture Change in the Workplace

II. Broad-brush Wellness Programs

IV. Resilient Leadership Development

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Endnote References

[1] Due to the small proportion of females across the KWS overall and in specific duty stations and sampling sites, the analysis and findings do not report by specific Conservation areas, parks, or Duty stations. (Page 22)

[2] https://www.humanitarianresponse.info/en/applications/kobotoolbox (Page 27)

[3] The researchers will follow the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) guidelines for the disinfection of mobile computers and tablets. Each tablet will be disinfected at the beginning of the research study. Survey participants will be asked to disinfect their hands prior to touching the tablet and upon completion of the survey. The field research team will subsequently disinfect each tablet as an additional measure. (Page 27)

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SHIMONI
FLOATING JETTY

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TELECOMMUNICATION UNIT 200 M

KENYA WILDLIFE SERVICE
LAW ENFORCEMENT ACADEMY

KENYA WILDLIFE SERVICE
NAIVASHA STATION →
CAMPING SITE AVAILABLE

KENYA WILDLIFE SERVICE
NGURUMANI STATION
P O BOX 79
MAGADI →

icipe
International Centre of Insect
Physiology and Ecology
NGURUMAN FIELD STATION

KENYA WILDLIFE SERVICE
SAIWA SWAMP NATIONAL PARK
MAIN GATE 500 MTS

MINISTRY OF EDUCATION
HAVILAH SCHOOL
AND HOPE CENTRE

KENYA WILDLIFE SERVICE
WESTERN CONSERVATION AREA HEADQUARTERS
KITALE

K.W.S ROAD

KENYA WILDLIFE SERVICE
NAROK STATION
ADMINISTRATION BLOCK

WORKSHOP
STAFFQUARTERS
DISPENSARY