



Drug Checking at New Zealand Festivals Final Report November 2020

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Executive summary

In summary the research contained in this report provided a high level of support for drug checking services like KYSNZ, and for the law to be changed to allow drug checking legal status. The data were gathered using a mixed methods approach, utilising structured and semi-structured interviews, as well as surveys that were administered online and in person at festivals/events to a diverse range of participants. Four groups of people were interviewed: festival/event organisers; medical personnel who worked at festivals and events; volunteers working for KYSNZ; festival attendees/wider New Zealand public (recruited via the survey). Overall 66 people were interviewed, and 911 surveys were completed, with the final survey sample after cleaning totalling 861. The sample was a purposeful, focused, non-random sample.

Key findings – survey

Surveys were administered in person at festivals and online to samples that included both those who attended festivals and those who did not. These two samples were combined for analysis and separated out as those who did and did not attend festivals. The sample was mainly heterosexual, with the majority identifying as New Zealand European/Pākehā, and as man/woman in terms of gender.

Of the survey respondents who attended festivals over half the sample drank alcohol at festivals with most people consuming between 5-12 drinks per day. Just over three quarters (78%) of this group reported that they were planning to, or usually used illegal drugs at festivals, with only 4% reporting that they used the planned drugs for the first time in the festival context. MDMA, cannabis and LSD were the most common illegal drugs used by this sample.

Of the survey participants that have used KYSNZ drug checking services (n=155), 68% reported that they had changed their behaviour after using the service, with 87% of those that used KYSNZ reporting that their knowledge of harm reduction had improved. 53% reported it had improved a lot and 34% reported that it had improved a little. Survey participants demonstrated that regardless of whether their drug taking behaviour changed or not, behaviour change in terms of harm reduction practices often occurred. This is also consistent with the findings of international research (Besnschop et al., 2002; Measham 2019, Olsen et al., 2019; Kerr & Tupper, Brunt, 2017; Valente, Martins, Carvalho, Pires, Carvalho, Pinto, & Barratt, 2019).

Regardless of whether survey respondents attended festivals or not, there was strong support for drug checking services like KYSNZ. For example:

- 97% of those who *attended* festivals and 97% of those who *did not* attend festivals 'agreed' or 'strongly agreed' that drug checking services were a good idea.
- 95% of those who *attended* festivals 'agreed' or 'strongly agreed' that drug checking services reduced drug related harm, with 97% of those who *did not attend* festivals agreeing or strongly agreeing that drug checking services reduced drug related harm.
- 95% of those who *attended* festivals 'agreed' or strongly agreed' that the law should be changed to make drug checking services like KYSNZ legal. 97% of those who *did not* attend festivals 'agreed' or 'strongly agreed' that the law should be changed to make drug checking services like KYSNZ legal.

Key findings – interviews

All 66 people who were interviewed (interview participants were recruited through the survey) thought drug checking was a good idea, that it reduced harm and supported a change in the law to give drug checking legal status.

Medical personnel supported a law change to allow drug checking services due to dealing with festival and event patrons who presented with unusual symptoms from ingesting unknown substances. They considered that drug checking services reduced drug related harm as they provided information about the substances used as well as offering wider support around harm reduction. Medical personnel interviewed reported that young people would take drugs regardless of their illegal status, and that to try and reduce the risks around substance use was a positive and useful intervention.

Festival organisers were keen to have KYSNZ at their events but the law as it currently stands was seen as a key barrier. KYSNZ was viewed by festival organisers as an essential harm reduction intervention that would complement other harm reduction initiatives at their events such as 'chill out' spaces and medical professionals on site. Festival organisers that invited KYSNZ, despite the legal risks, noted that they had fewer serious incidents related to the consumption of illegal drugs after KYSNZ had started offering drug checking at their events.

KYSNZ volunteers supported drug checking as a harm reduction approach to illegal drug use, and their involvement in KYSNZ was motivated by a number of factors: to help people, to reduce harm, to educate people, personal experiences with psychoactive substances. KYSNZ volunteers also noted that they had witnessed a number of patrons disposing of substances when test results indicated an unknown or potentially hazardous substance. One of the key findings from this group was that drug checking was about *more than* the test itself - the dissemination of harm reduction information about dosing and drug interactions was seen to be a valuable part of the service. This was particularly the case for patrons whose drugs were as presumed, and who would be consuming the substance they presented for checking. Therefore, behaviour change should not just be measured in terms of drug disposals. Those who did not dispose of their drugs also changed their behaviour and acted on harm reduction advice. This is consistent with the findings of international research (see for example, Measham, 2019; Olesen, Wong & MacDonald, 2019).

The interviewees that were recruited through the survey (general public/community) included those who attended festivals and had indicated their willingness to be interviewed on the hard copies completed in-situ, as well as those recruited through the revised online version of the survey. Within this group, several were parents who had concerns about their teenage/adult children and supported making drug checking services legal to protect their children from harms from adulterated substances. They supported a harm reduction approach to drug use and recognised that their children may use drugs regardless of whether they were illegal or not. Drug checking services were seen as a way to encourage safer drug use and to educate young people about substance use, and this was a common finding across this group of interviewees. Also commonly reported by this group was that drug use should be seen as a health and not a moral issue and that to make drug checking services like KYSNZ legal was a 'no brainer'. Those from the wider public group who used illegal drugs and had used KYSNZ valued the service highly. They also viewed drug checking as about *more than* the test itself and appreciated the harm reduction information given alongside the actual testing of their substance/s.

Key findings: KYSNZ self-reported data

KYSNZ data found that most substances clients brought in for testing were as presumed when bought, and that consistency with presumed content had increased over time from 2016-2020. A relatively high number, 52%, of those using KYSNZ drug checking services noted that they would not take a substance if it was not as presumed, an encouraging finding. However, data from KYSNZ also demonstrated that decisions around whether to take a substance or not are affected by multiple factors, and further research in this area would be beneficial.

Key findings: conclusions

The research detailed in this report and the international literature support drug checking services and demonstrate the effectiveness of drug checking as a harm reduction measure. There is no evidence that drug checking increases drug use or encourages those who do not use illegal drugs to begin using them. The face-to-face harm reduction interventions utilised by KYSNZ were highly valued and this mirrors international research – that drug checking is about *more than* just the test itself. Behaviour change ‘success’ should not therefore be measured only in terms of drug disposals as the wrap around discussion about harm reduction is also of crucial importance.

Recommendations

1. Amend s.12 of the Misuse of Drugs Act 1975 (MODA 1975) to allow drug checking and make services like KYSNZ legal.
2. Support the expansion of drug checking services and a harm reduction approach to illegal drugs in principle.
3. Develop a long term plan for drug checking and harm reduction in New Zealand.
4. Support further research about and evaluation of drug checking in the New Zealand context, with a focus on why people do or do not change their behaviour after receiving drug checking results, and the effects of drug checking on the underground ‘black’ market.
5. Consider a range of harm reduction initiatives and policy options both at festivals, other settings, and the wider community.

Drug Checking at New Zealand Festivals

1 Introduction

The issue of drug checking at events such as music festivals has come to the fore in recent years in New Zealand and other countries such as Australia and the UK. 'Drug checking', sometimes referred to as 'pill testing', involves testing a small amount of an illegal drug such as MDMA to determine its contents, and any adulteration. Widely regarded as a much needed harm reduction intervention at youth focused events, drug checking remains contested, as its status under the law is unclear. Organisations carrying out drug checking are often unfunded and staffed by volunteers, adding to the ad hoc nature of drug checking services. See for example;

<https://wearetheloop.org> <https://www.theloop.org.au> <https://knowyourstuff.nz>¹

The New Zealand Government has expressed support for harm reduction policies related to illegal drugs and in particular drug checking. To this end the Government has put forward a proposal to change section 12 of the Misuse of Drugs Act 1975 (MODA 1975) to allow drug checking legal status². Part of this proposed change is to undertake research to provide an evidence base for discussions around changing the legal status of drug checking services. This would be a world leading approach, recognising the principles of harm reduction and supporting services that reduce drug related harms (Fisher & Measham, 2018; Measham, 2019; Valente et al., 2019).

Funding was made available to carry out research examining some of the issues related to drug checking in the New Zealand context. Ethical approval for the project was obtained from the Victoria University Human Ethics Committee on December 4th, 2019, approval #28192. The project was adversely affected by the advent of COVID-19, but fieldwork was still able to be completed at three festival sites: Splore, Electric Avenue and 121, from February to March 2020.

¹ KnowYourStuff (KYSNZ) are a New Zealand based organisation committed to harm reduction that carry out drug checking at festivals and at static clinics in Wellington and Auckland.

² Section 12 of the MODA 1975 criminalises those who allow their premises to be used for illicit drug use – this could apply to festival promoters who allow drug checking as they are admitting that illegal drug use happens at their festival/premises. Therefore, drug checking services operate in a grey area under the law.

2 Drug checking: key themes and debates

2.1 Defining terms

For the purposes of this report the term 'drug checking' will be used to refer to the practice of testing unregulated substances to determine whether the purported drug was as thought at the time of purchase and to identify any adulterants that may be present. 'Drug checking' is the common term in the New Zealand context, to differentiate it from 'drug testing' often carried out by employers and other agencies. Other jurisdictions refer to drug checking as 'pill testing' or 'drug safety testing', and these terms are common in the literature. When discussing the New Zealand context the term 'drug checking' will be used and when referring to international literature the terms used by the publication e.g. 'pill testing' will be used.

Harm reduction is an approach to alcohol and other drugs that recognises abstinence messages are often ineffective at stopping some people from using illegal drugs or drinking in ways that are deemed hazardous. Contemporary forms of harm reduction developed from the field of illicit drugs in the 1980s mainly as a response to HIV/AIDS but have since broadened out into other fields such as alcohol. Harm reduction refers to '*policies and programmes that are aimed at reducing the harms from drugs but not drug use per se*' (Ritter & Cameron 2006, p. 611), with a non-judgemental approach to substance use a central feature of harm reduction policies and programmes. Harm reduction approaches argue that the aim should be to help people use drugs in a safer way, and to reduce risks, rather than focusing on largely ineffective abstinence messages (Barton, 2020). Drug checking services are underpinned by this ethos of harm reduction, and while recognising that no drug use is the safest drug use, they encourage users to engage with practices that make drug use safer and which reduce drug related harms.

2.2 Drug checking: legal status

Drug checking in the New Zealand context operates in a 'grey' legal area. KYSNZ volunteers avoid handling any of the drugs they test and so cannot be prosecuted for possession of illegal substances. However, festival and event organisers could be prosecuted under Section 12 of the Misuse of Drugs Act 1975 for allowing drug taking on their 'premises'. It is unsurprising that drug checking has been described as a '*daring and pioneering exercise*' due to these kinds of challenges (Brunt, 2017, p.15). This has meant that KYSNZ have operated underground for the past five years or so, unable to advertise, have clear signage or to let festival attendees know which events they will be present at. Many of the festival organisers that were interviewed for this research were very anxious about

confidentiality and did not want to be identified or have it known that KYSNZ were present at their events. The legal ambiguity surrounding drug checking has been cited as a barrier to implementing and evaluating drug checking services (Kerr & Tupper, 2017). Olsen et al. (2019) found that users of the Australian Capital Territory (ACT) pill testing trial were anxious about the law enforcement consequences and worried about being seen to use the pill testing service. In New Zealand KYSNZ have established good relationships with the police and such concerns are not as evident for festival attendees.

2.3 Drug checking: background

Drug checking as a harm reduction intervention is not a new phenomenon with some countries like the Netherlands carrying out drug checking for nearly 30 years, since 1992. However, almost half of the drug checking services identified by Barratt, Kowalski, Maier and Ritter (2018) have developed since 2013. Their global review of drug checking found 31 drug checking services operating in 20 countries. Whist mostly operating in the European context in places like France, Switzerland, Spain, Italy and the United Kingdom, drug checking services were also found in Canada, Colombia, Mexico and Uruguay. Only two services operated in Australasia, one in Australia and one in New Zealand (Barratt et al., 2018). As well as testing substances the majority of the drug checking services identified also provided a brief face-to-face harm reduction intervention as well as providing the results of the drug test (Barratt et al., 2018), and this is the model that KYSNZ follow. One of the advantages of using this model is that offering the actual substance test encourages an often overlooked drug using population into the service, providing an opportunity for further engagement around harm reduction and the offering of important information to people who use illegal drugs (Hungerbuehler, Buecheli & Schaub, 2011). Drug checking is therefore about *more than* just the actual test itself.

In terms of the technology used to conduct the testing, often multiple ways of testing substances are employed by drug checking services. Reagent testing has been criticised for being inaccurate and that it may give users a false sense of security (Winstock, Wolff & Ramsey, 2001). However, reagent testing alone is rarely used and KYSNZ use both reagent testing and the more reliable and accurate method of infra-red spectroscopy testing (FTIR). FTIR is a relatively new way of conducting drug tests which may address early criticisms of drug checking services in that new more accurate technologies around testing are currently being used (Brunt, 2017). Furthermore, the face-to-face brief intervention that most drug checking services provide, educates users about the meaning of their test results and about the potential risk of using illegal drugs, and this often eradicates any false sense of security (Brunt, 2017). For example, KYSNZ are clear about the limitations of their testing services e.g. that purity

cannot be determined/tests cannot identify all harmful substances, and they also remind those who use their drug checking service that the *'safest option is always not to take a substance'*

(<https://knowyourstuff.nz/about-us/our-service/>)

The research evidence and academic publications about drug checking and its effectiveness at reducing harm have been gathering momentum over the last few years (Barratt, Brunao, Ezard, & Ritter, 2018; Day, Criss, Griffiths, Gurjal, John-Leader, Johnston & Pit, 2018; Groves, 2018; Hakkarainen, O'Gorman, Lamy, & Kataja; Hollett & Gately, 2019; McRae, Tobais, Tupper, Arredondo, Herny, Wood, & Ti, 2019; Measham, 2019, 2020), although discussions of and evaluations about drug checking were published in the early 2000s (Johnston, Barratt, Fry, Kinner, Stoove, Dgenhart, George, Jenskinson, Dunn & Bruno, 2006; Benschop, Rabes & Korf, 2002; Kriener, Billeth, Gollner, Lachout, Neubauer & Schmid, 2001; Spruit, 2001). Grass roots organisations such as 'KnowYourStuff' in New Zealand and 'The loop' in the UK and Australia have also been advocating for and carrying out drug checking for five, eight and two years respectively. In Australia the political debates around pill testing have been fraught with advocacy groups struggling to get harm reduction on the political agenda (Olsen, 2019, Makkai, Mcleod, Vumbaca, Hill, Calidcott, Noffs, Tzanetis & Hansen , 2018). The policing of festivals and other venues in the night time economy (NTE) in the Australian context is often considered highly problematic with the use of drug dogs and strip searching of festival patrons on the way to events, inadvertently encouraging risky consumption of illicit substances (see for example, Malins, 2019). Recently, the NSW government ruled out the introduction of pill testing despite the deaths of six young people at music events from 2018 to 2019 and the strong recommendation of the Deputy Coroner to allow pill testing at music festivals as well as scrapping the use of sniffer dogs and overhauling the use of strip-searches

([https://coroners.nsw.gov.au/coroners-court/download.html/documents/findings/2019/Music Festival Redacted findings in the joint inquest into deaths arising at music festivals .pdf](https://coroners.nsw.gov.au/coroners-court/download.html/documents/findings/2019/Music%20Festival%20Redacted%20findings%20in%20the%20joint%20inquest%20into%20deaths%20arising%20at%20music%20festivals.pdf)).

More positively recent evaluations of the ACT pill testing trials in 2018 and 2019 (Makkai et al., 2019; Olsen et al., 2019) have provided the impetus to set up pill testing sites in the 2019-2020 summer festival season. In the New Zealand context, while there are, as yet, no known deaths that have been linked to the use of drugs such as MDMA at festivals and events, in 2018, thirteen people were hospitalised due to the use of contaminated MDMA, and in February 2020 a woman was hospitalised after taking MDMA at a music concert, demonstrating a need for drug checking services in the New Zealand context. The New Zealand government has also affirmed its commitment to treating drug use

as a health issue and to the concept of harm reduction in the drugs field, with the current Prime Minister publicly supporting drug checking, paving the way for constructive discussion about drug checking and harm reduction (see for example, <https://www.newshub.co.nz/home/politics/2019/10/prime-minister-jacinda-ardern-supports-festival-drug-testing-new-zealand-first-support-not-ruled-out.html>).

2.4 Drug checking: key debates

Drug checking as a harm reduction intervention has been used to access a hard to reach, niche drug using population, that is mainly young recreational³ users of MDMA and other drugs that are common on electronic music or ‘dance’ scenes. Research in this area has noted that consumers of MDMA and other drugs associated with the dance scene do not see their drug use as problematic and view themselves as separate from people who inject opiates, and separate from those who have addictions to other illegal substances (Hutton, 2006, 2010; Henderson, 1996). ‘Dance’ drug users tend to engage in illicit drug use to enhance life experiences and pleasures, whereas those who consume opiates tend to use drugs to escape or cope with life. Drug harm reduction services such as needle exchanges are often seen as inappropriate for this population of drug consumers, because currently the cultural pattern of drug use at festivals does not involve injecting drugs. Although this does not mean that this group of illicit drug users would not benefit from harm reduction services and interventions. For example, those engaging with dance scenes at festivals and within the NTE are often polydrug users, using more than one substance at a time. Polydrug use requires a degree of knowledge that users must develop to combine their substances as safely as possible, for maximum pleasure and calculated levels of intoxication (Hakkarainen, et al., 2019). Alcohol was also perceived by some users as the ‘foundation’ for polydrug use, which means that knowing how other substances react with alcohol is important in reducing harms (Hakkarainen et al., 2019). Offering drug checking services at festivals and other events is one way of engaging with polydrug using young people to provide relevant, useful harm reduction information to this specific group of drug users (Brunt, 2017; Kerr & Tupper, 2015). Furthermore, research by Hungerbuehler, Buecheli & Schaub (2011) found that the demographic using an onsite drug checking service in Zurich were young people who were polydrug users who had little or no engagement with drug agencies, and that for many people drug checking is often the first point of contact for populations who engage in high risk drug consumption.

³ Recreational drug use is used here to refer to use of drugs such as MDMA, amphetamines, cannabis, ‘magic mushrooms’, LSD, Ketamine by (mainly) young people in the context of the dance and music festival scenes. However, it should be noted that recreational use is not necessarily free of harms or non-problematic (see Hutton, 2010).

Research in this area has also found that people who use illegal drugs at festivals and other events are aware of the risks associated with their use and are keen to utilise harm reduction services such as drug checking (Peacock, Gibbs, Barratt, Bruno, Sutherland, Page, Uporova, Salom, Hill, Dietze, Lenton, Degenhardt, & Ezard, 2019; Barratt, Bruno et al., 2018; Day et al., 2018). Barratt, Bruno and colleagues (2018) found that 94% of their survey participants would use a festival based drug checking service and that 80% were willing to wait up to an hour for their results. Young people who take drugs often use unreliable sources such as friends, dealers and websites to try and ascertain the risks related to substance use (Day et al., 2018; Johnston, Barratt, Fry, Kinner, Stooze, Degenhart, Goerge, Jenkinson, Dunn & Bruno, 2006), and as Olsen et al. (2019) note drug checking services are likely to provide more reliable information about drug use than the sources currently used by young people. Day et al. (2018) also found that 84.9% of their participants believed that drug checking services would reduce drug-related harm. Their findings additionally suggest that a proportion of drug users would alter their drug-taking behaviour if drug checking revealed unexpected or undesired substances in their purchased products, and that drug checking has the potential to change the behaviour of users and reduce drug-related harms amongst festival-goers.

Drug checking services are argued to reduce harm by identifying any adulterants in the substances presented for checking as well as through offering brief face-to-face interventions about how to make using particular substances safer. Given that a Canadian study found more than one quarter of all samples contained additional unexpected adulterants there is a pressing need for drug checking services both at festivals and more widely in premises outside of these specific spaces (McRae, Tobias, Tupper, Arrendondo, Henry, Mema, Wood & Ti, 2019). A recent Australian study also found that drug toxicity was a direct cause of death in 74% of the 82 fatalities linked to MDMA, and a contributing cause in a further 18%, again demonstrating the need to reduce the prevalence of contaminated substances in circulation (Scott & Scott, 2020). However, opponents of drug checking services claim that drug checking creates a false sense of security for those who have their drugs checked, that users will consume their drugs regardless of the test results, that testing cannot pick up all dangerous adulterants, and that drug checking services encourage young people to take drugs (Brunt, 2017; Winstock, Wolff & Ramsey, 2001). Other criticisms involve that drug checking services focus on risky substances rather than risky behaviour such as polydrug use, that temporary laboratory sites at festivals may give inaccurate results, and that there is a limited evidence base about the information received through drug checking services and actual behaviour change (Measham, 2019).

However, as noted earlier the majority of drug checking services involve a face-to-face harm reduction intervention (Barratt et al., 2018), and groups like KYSNZ are clear about the limitations of the testing that they offer. The equipment used by KYSNZ is also considered to be the most reliable currently available to conduct drug checks (Olsen et al., 2019; Brunt, 2017), and reagent testing is rarely used on its own – only four of the drug checking services identified in a global review used reagent testing alone (Barratt et al., 2018). This type of approach helps to eliminate any false sense of security that drug consumers may have. Including a discussion about harm reduction, alongside the actual drug test, may also address issues related to polydrug use and other behaviour that is perceived as 'risky'. By providing drug checking services, people at festivals are brought into contact with a drug agency where they can receive accurate and reliable information and helped to review their drug using behaviour.

The evidence base around drug checking is growing, although research efforts have been hampered by the illegal or grey legal status that drug checking has in many countries. Thus far, the evidence notes that services such as the the Drugs Information and Monitoring System (DIMS) in the Netherlands serve a crucial monitoring function in detecting new psychoactive substances (NPS) as well as identifying any dangerous adulterants that might be circulation (EMCCDA, 2020). For example, in 2014 DIMS found PMMA (*para*-Methoxy-*N*-methylamphetamine) in pink 'Superman' pills and issued a red alert through a variety of media channels. No deaths occurred as a result of the early warning system. In comparison in the UK without a similar national testing service, tragically four people died after taking similar pink 'superman' pills containing PMMA (Hill, 2015; Measham 2019; Siddique, 2015). Apart from removing hazardous substances from the market and deterring dealers from selling such products (Spruit, 2001; Bardwell, Boyd, Arredondo, McNeil, & Kerr, 2019), an additional benefit of drug checking and monitoring services is the potential effect that they may have on illegal drug markets. In countries that have drug checking services the ingredients of illegal drugs more closely matches what is expected compared to countries that do not have drug checking systems (Kriener et al., 2001; Parrott, 2004). There is no evidence so far that mortality rates or drug prevalence rates have increased in European countries with drug checking services compared to those without (EMCDDA, 2016; Measham, 2019; Hungerbuehler et al., 2011). Research also notes that that drug use does not increase following the introduction of drug checking services (Bucheli, Quinteros–Hungerbühler & Schaub, 2011). Therefore, the criticism that drug checking encourages young people to take drugs appears to be unfounded. Benschop et al. (2002) also found that those who use drug checking services do not use more drugs than those who do not, and drug checking services do not encourage non-users to begin using drugs. A more recent UK study noted that a substantial

proportion of people who used drug checking services had concerns about the sample provided for testing and that a significant number of the samples had been missold. Therefore concluding that testing is more likely to have a *'deterrent rather than a stimulant effect on drug supply and use within the festival grounds'* (Measham, 2019, p. 106).

Research exploring the behavioural outcomes of those who use drug checking services have focused on whether users intend to dispose of the drugs they have had tested. The strongest measure of behavioural change is immediate disposal after hearing the test results (Measham, 2019), although studies have used measures such disposal or other intentions after hearing the results, and hypothetical intentions in the future (Benschop et al., 2002; Day et al., 2018)). In Measham's (2019) UK study 21.3% of those who used the Multi Agency Safety Testing (MAST) services at a festival chose to dispose of their drugs. Two thirds of those whose test results showed the sample was not as sold gave over other drugs in their possession to be disposed of. Those who had bought their drugs inside the festival, were nearly twice as likely to use the disposal service than those who had bought their drugs outside of the festival environment (27% v 14.8%) (Measham, 2019, p. 105). This study also found that nearly one in five samples (19.5%) did not correspond with what they were sold as. In terms of behaviour change and the incorporation of harm reduction information into their drug taking practices, MAST users reported intentions to take smaller quantities of their drugs and to take these over a longer time period. Some MAST users also reported that they would be more careful about combining particular substances during the festival (Measham, 2019, p. 106).

Another recent evaluation of drug checking services was the ACT pill testing trial evaluation in 2019 (Olsen et al. 2019). This Australian study, conducted at 'Groovin the Moo', a one day event, found that all those who test results detected a dangerous adulterant disposed of that drug in the amnesty bins provided. Additionally participants noted an increase in their knowledge of harm reduction with a higher proportion of participants stating they had 'good' (44% post-test v 38% pre-test) or 'very good knowledge' (44% post-test v 23% pre-test) of harm reduction in the post-test survey compared to the pre-test survey. Most of the participants in this evaluation (88%) found that their test results matched what they thought they had, with only a small number (8%) reporting that they would discard the drugs in the post-test survey. This is a lower disposal rate than reported in other studies such as Measham (2019) for example, but this may have been due to the fact that the test results were in concordance with what participants thought their drugs were. Thus, if participants thought they had MDMA and the test result showed that their sample was MDMA they would take it rather than dispose of it (Olsen et al., 2019). Similar to participants in Measham's (2019) study those in Olsen et al.'s (2019)

evaluation reported that they were not going to use more drugs during the event than they had intended to prior to testing, and that they adopted less risky behaviours such as using less of the substance they had tested. Interview findings from this study also found that users reported an increased intention to engage in harm reduction behaviours such as not taking all of the substance at one time, increasing the amount of time between consumption of substances, being aware of overexertion and hydration (Olsen et al. 2019, p. 33).

While disposal of drugs is the safest outcome, it should be remembered that the purpose of drug checking services is to reduce harm and whenever possible prevent fatalities. Drug checking services, as these two studies demonstrate, can reduce drug related harm even if users do not choose to dispose of their drugs. Other studies such as a survey of 'Checkit!' users in Vienna found that two out of three participants reported they would not use a drug that tested positive for hazardous or unusual substances (Schmid, 2013 cited in Kerr & Tupper 2017, p.21). Of the drug checking service users at the Shambhala festival in British Columbia, 50% reported that they would discard the substance if testing showed the presence of a hazardous substance (BC Ministry of Harm Reduction, 2005 cited in Kerr & Tupper, 2017, p.21). ANKORS the organisation carrying out drug checking at Shambhala in 2015 reported that 31% of substances that contained hazardous substances were discarded (Sage & Michelow, 2016, cited in Kerr & Tupper, 2017, p. 21). Southey, Kathirgamalingam, Crawford, Kaul, McNamara, John-Leader, Heslop & Pit (2020) found that of participants in their survey who used illicit drug 52.3% would not take a substance if testing results showed a harmful substance. A further study by Saleemi, Pennybaker, Woolridge and Johnson (2017) in the US context adds to the body of literature which suggests that test results indicating negative or adulterated pills result may be effective in reducing intent to consume drugs at festivals, suggesting pill testing may be an effective means of harm reduction. Their findings highlight that pill testing decreases intent to consume potentially dangerous substances. This report and the research it is based on aim to add to this growing body of knowledge about drug checking services, specifically in the New Zealand context.

3 Methods

The key aims of the research were to gather as a range of views about drug checking and its effectiveness at reducing drug-related harm, as well as to explore any behavioural changes resulting from drug checking that users of KYSNZ reported. In order to explore these issues it was considered most appropriate to gather information from those who had, or may have had knowledge of drug checking services in the New Zealand context. It was hoped that this would facilitate accurate and reliable information about drug checking services such as KYSNZ, as well as capturing those who had

actually used KYSNZ to reduce drug related harm. The samples were therefore focused on festival attendees, users or potential users of drug checking services, those who provided drug checking services, those who facilitated drug checking services e.g. festival and event organisers and young people, with the 'general public /community' sample capturing a small group (n=105) of those who did not attend festivals, but who supported the idea of drug checking services. Using a mixed methods approach, combining qualitative and quantitative methods, enabled a broad brush and more in-depth analysis that gathered a diverse range of opinions and experiences.

3.1 Online & in-situ survey

Targeted audience of festival attendees (FEST/FEST Gen, n=667): an online survey was developed using 'Qualtrics' (see Appendix 1), which was then distributed via flyers (see Appendix 2) at Victoria University 'O' week events, and via hard copies that were filled out at three festival sites (participants could also fill out the survey online, using a QR code or a link on the flyer & posters at the festival data gathering stalls). The majority of surveys (n=577) were completed in-situ, with just 90 surveys completed online. A research team of three people set up a stall at the three data gathering sites (Splore, Electric Avenue and 121⁴). Permission to conduct the research was sought from festival and event organisers during the interviews conducted in Dec 2019-Feb 2020. All three festival/event organisers offered free entry and equipment to the research team, as well as prominent sites for optimum engagement with festival attendees. Their enthusiasm and support for the research was much appreciated and contributed to the success of the project. The stalls displayed paper copies of the survey, posters (see appendix 2), ethics consent alongside fruit, water, sunscreen and lollies that were on offer to attract attendees to the stall.

General public/community survey (Gen): a slightly revised version of the online survey was developed for a wider audience recruited through links in the community (see Appendix 3). This version of the survey was distributed via social media e.g. the lead researcher's Twitter account, 'Vic Deals' and the Facebook pages of 'Justspeak', the 'New Zealand Drug Foundation', 'KnowYourStuff' (KYSNZ). The aim was to collect views from a more general sample. This included those who do not attend festivals (n=105) and who may or may not use illegal drugs, in addition to those who attended festivals and were current or potential users of existing drug checking services at New Zealand festivals and the recently implemented static clinics in Wellington⁵. In total 911 questionnaires were completed either online or at the festival sites. The hard copy questionnaires from the festival data collection sites were

⁴ The organisers of 'Homegrown' also supported the research and a data gathering stall was planned for this event - unfortunately 'Homegrown' was cancelled due to COVID-19 lockdown and the research was not able to go ahead at this event.

⁵ Static clinics have been held in Wellington at the NZ Drug Foundation offices in the CBD to provide drug checking services outside of the festival context. Since this project was completed static clinics have also been introduced in Auckland.

manually entered into Qualtrics. Surveys that were completed by those deemed too intoxicated to give informed consent⁶ or which contained no useable information, and those under 15 years of age (n=20) were excluded from data entry. After cleaning the data the final sample was 891. In summary the sample consisted of two surveys as follows:

1. FEST surveys (n=577) completed at festivals and FEST (Gen) handed out at festivals and completed later (n=90)
2. GEN surveys (n=233) recruited through links in the community – of which n=128 attended festivals and n= 105 did not.

3.2 Interviews

The qualitative part of the project carried out structured or semi-structured interviews with the following groups:

3.2.1 Medical personnel

Eleven in-situ structured interviews were carried out with medical personal from St. John's Ambulance Service, Wellington Free Ambulance or first aid volunteers at the three festival sites (3 from Electric Avenue, 2 from 121, 6 from Splore). The interviews with medical staff on the three sites were structured, rather than semi-structured, due to pressures on their time, and were carried out during breaks from attending incidents and supporting festival attendees.

3.2.2 Festival organisers

Festival organisers were contacted with the help of 'KnowYourStuff' (KYSNZ) and were interviewed either by phone or in person. Most interviews were carried out via phone in December 2019, with only one carried out in person at the beginning of February 2020. Nine semi-structured interviews were carried out with festival organisers.

3.2.3 KYSNZ volunteers

Thirteen interviews were completed with KYSNZ volunteers. KYSNZ have been carrying out drug checking at various events in New Zealand for the past five years. Therefore, those involved in developing and sustaining this harm reduction service were offered the opportunity to contribute to the research. The original idea was that there would be focus groups, in Wellington, Auckland and

⁶ The idea of informed consent can present difficulties when conducting research in spaces where intoxication is the norm. The research team at festivals overseeing the hard copy surveys, discreetly placed an 'i' in the corner of any surveys where the participant seemed too intoxicated to properly give informed consent e.g. if they were stumbling, banging against the table to stand, slurring words. These surveys were also often incomplete or had cartoons drawn on them and so did not contain useful data.

Christchurch carried out by the research assistants on the project. However, due to COVID lockdown these were done via phone or zoom by the lead researcher instead.

3.2.4 General public/community recruited via the survey

The survey had a space at the end for participants to signal whether they were interested in doing an interview or taking part in a focus group. 69 participants signalled that they were. All who gave their details were contacted and 34 interviews were completed with those who replied to the initial contact and were still keen to participate. The original plan for the interviews and focus groups was that they would be carried out in different geographical locations by the lead researcher and the research assistants working on the project. However, as with the KYSNZ volunteer interviews, due to COVID lockdown these were also carried out via phone or zoom (depending on the participant's preference) by the lead researcher instead.

4 Result: Surveys⁷

The two survey samples (completed at festivals and those online) were combined for analysis and separated out as those who attend (n= 786) and do not attend (n= 105) festivals.

4.1 Characteristics of the sample

Figures 1-4 demonstrate the descriptive characteristics of the sample overall. Those who said they did attend festivals were younger than those who did not. The sample was mainly heterosexual, with the majority identifying as New Zealand European/Pākehā, and as man/woman in terms of gender⁸.

⁷ It should be noted that these results cannot be considered to be representative of all New Zealand festival attendees

⁸ The categories of gender, ethnicity and sexuality have been collapsed to allow for statistical analysis - please see Appendix 3 for the full range of options and the number of participants who chose each option

Figure 1: Age of survey respondents

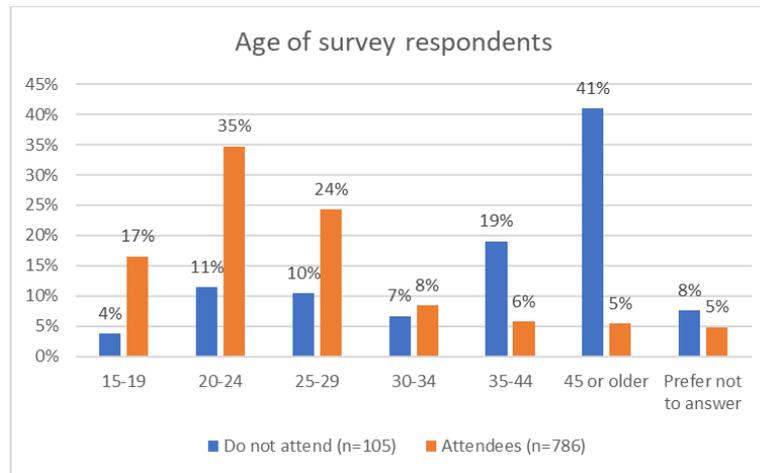


Figure 2: Ethnicity of survey respondents

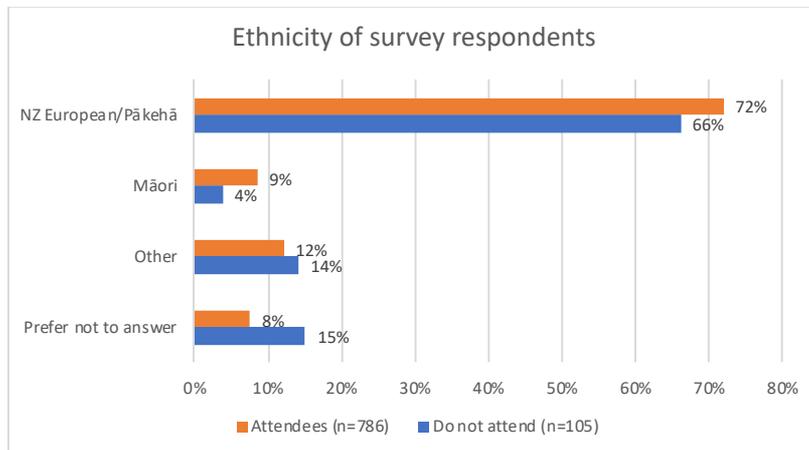


Figure 3: Gender of survey respondents

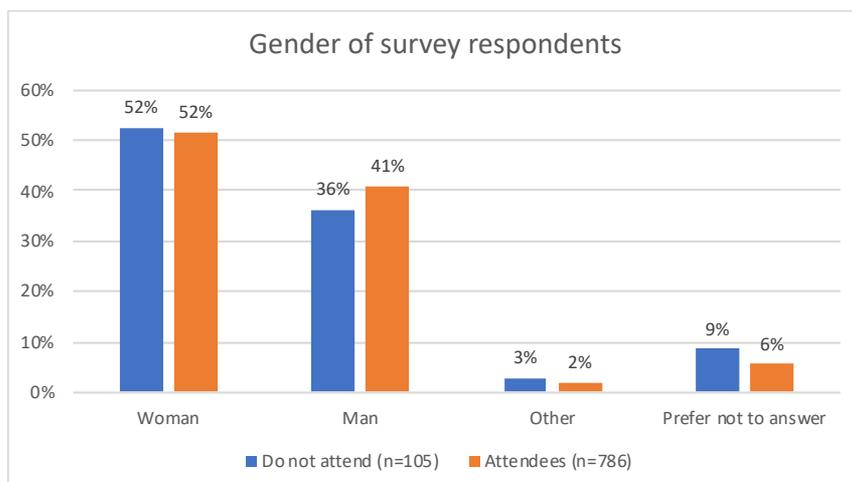
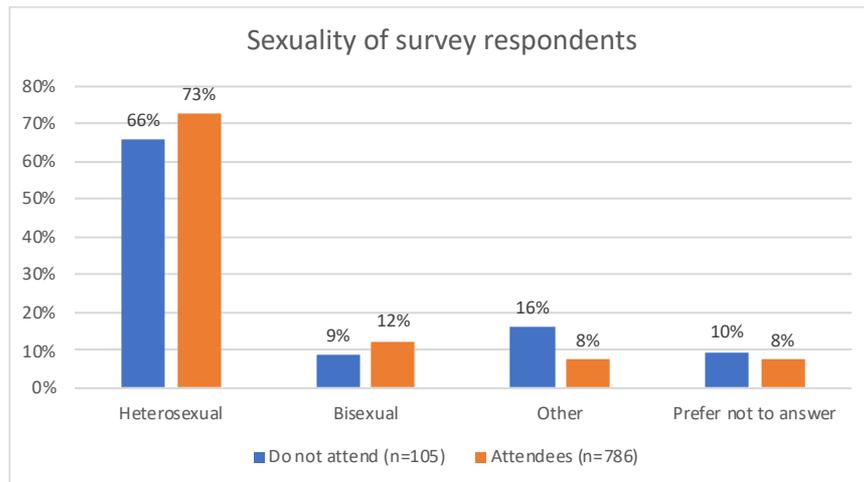


Figure 4: Sexuality of survey respondents



4.2 Alcohol and other drug use

All survey respondents attending festivals were asked about their use of alcohol at festivals and whether they planned to use illegal drugs at the festival they were attending when they filled in the survey. For members of the community who completed the online survey and indicated they attended festivals, they were asked whether they usually used illegal drugs at festivals.

Figure 5 demonstrates that of the 786 participants that attended festivals, over half the sample 'always' used alcohol at festivals with only 6% stating that they 'never' used alcohol at festivals. Those who used alcohol consumed mainly between 5-12 drinks per day, with a small number who drank more than 20 drinks per day (see figure 6), with figure 7 showing that just over three quarters (78%) of participants planned to or usually used illegal drugs at festivals. Of the participants who planned to use to or usually used illegal drugs at festivals only 4% (n=22) reported that they were planning to use or used these drugs for the first time in a festival setting. Therefore overall the sample consisted of drug polydrug users the majority of whom were not using substances for the first time in the festival context.

Figure 5: Frequency of consuming alcohol at festivals

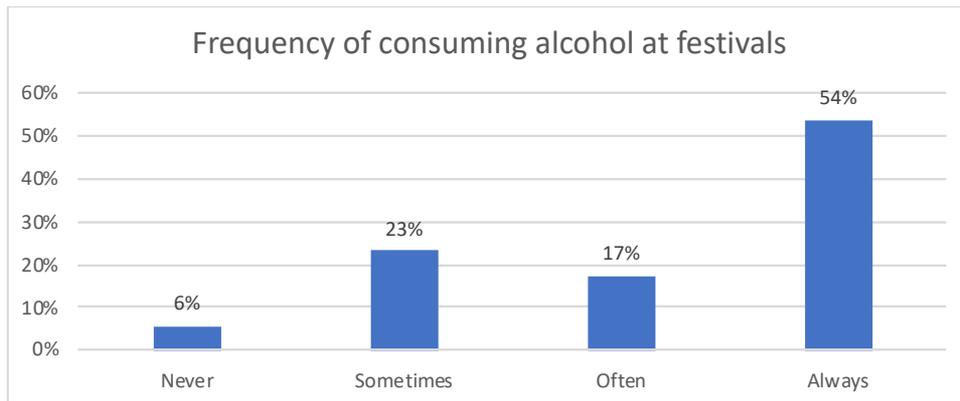


Figure 6: How many drinks per day (those that drink at festival)

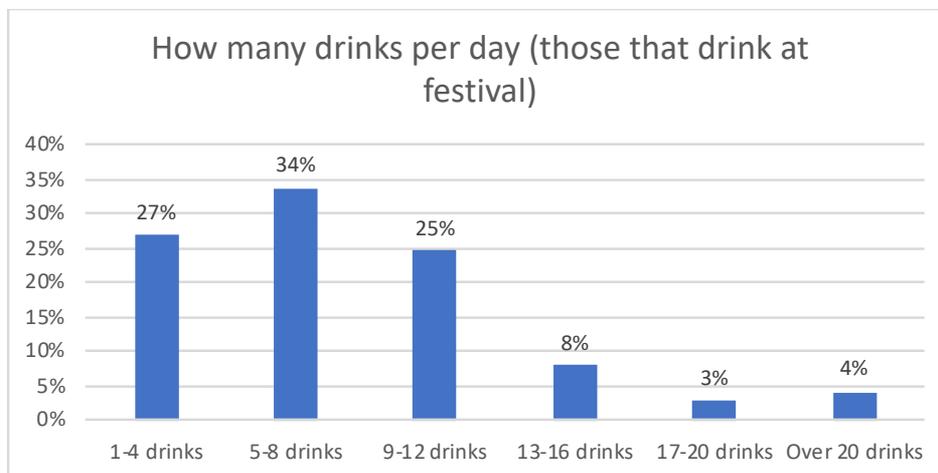
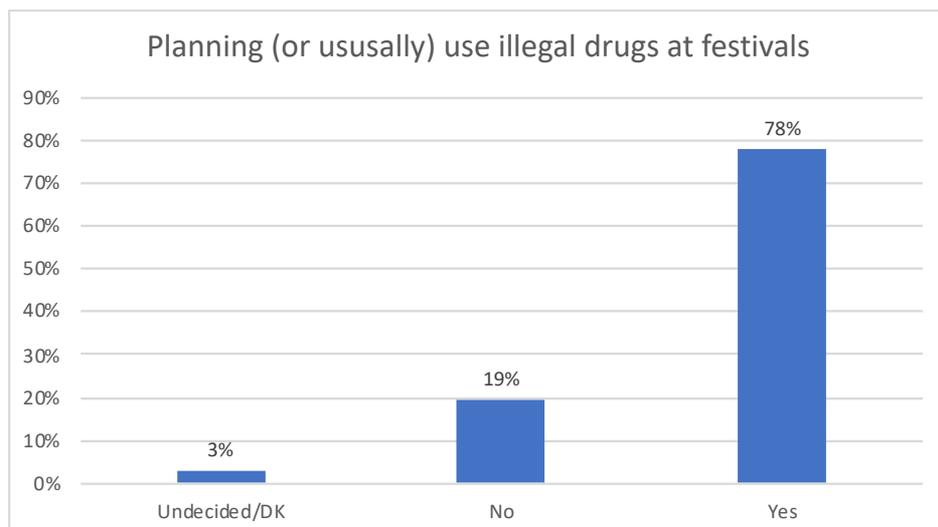


Figure 7: Planning to (or usually⁹) use illegal drugs at festivals



⁹ In the revised questionnaire the question ‘are you planning to use illegal drugs at this festival or large event?’ was changed to ‘if you are planning to use illegal drugs at festivals /events which ones do you commonly use’ (see appendices 1 and 3) as those responding may not have been festival attendees. The ‘usually use’ refers to those who attended festivals and said they were going to use illegal drugs at that event.

Table 1 shows the most common drugs that participants were planning to or usually used or at festivals,

Table 1: Drugs planned or usually used (n=795)

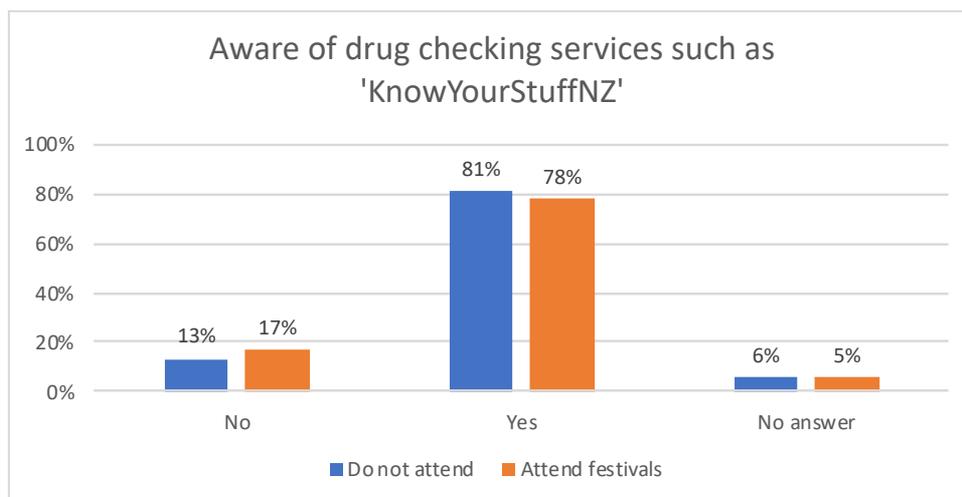
Drug	Frequency*	Percentage of sample
MDMA	496	62%
Cannabis	385	48%
LSD	273	34%
Ketamine	122	15%
Cocaine	81	10%
Magic Mushrooms	79	10%
Amphetamines ('speed')	51	6%
Methamphetamine	20	3%

*participants could choose more than one response for this question

5.3 Drug checking services: use

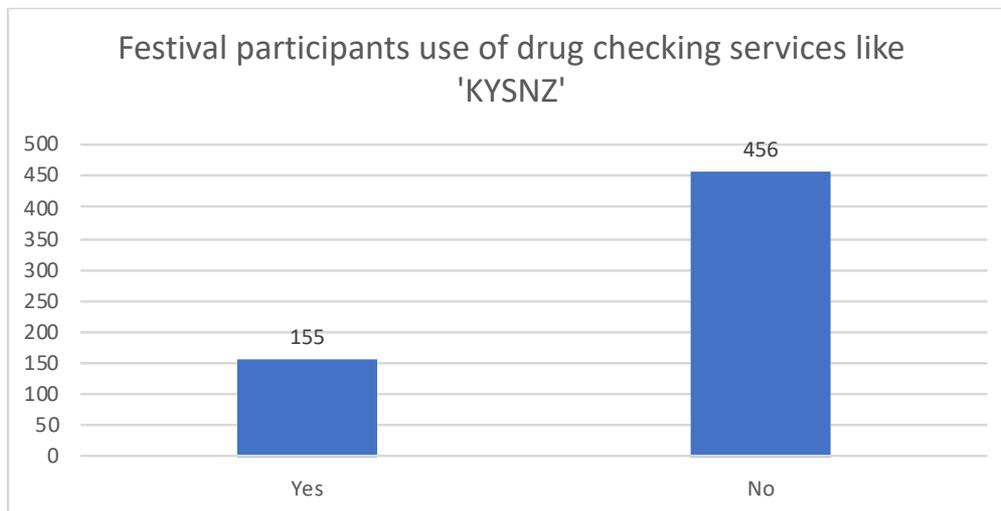
In terms of drug checking services most participants were aware of drug checking services, although perhaps unexpectedly those who did not attend festivals were slightly more aware of drug checking services like 'KYSNZ' (see figure 8).

Figure 8: Aware of drug checking service such as 'KnowYourStuffNZ'



Of all survey participants who attended festivals across the sample, 155 participants stated that they had used drug checking services like 'KYSNZ',

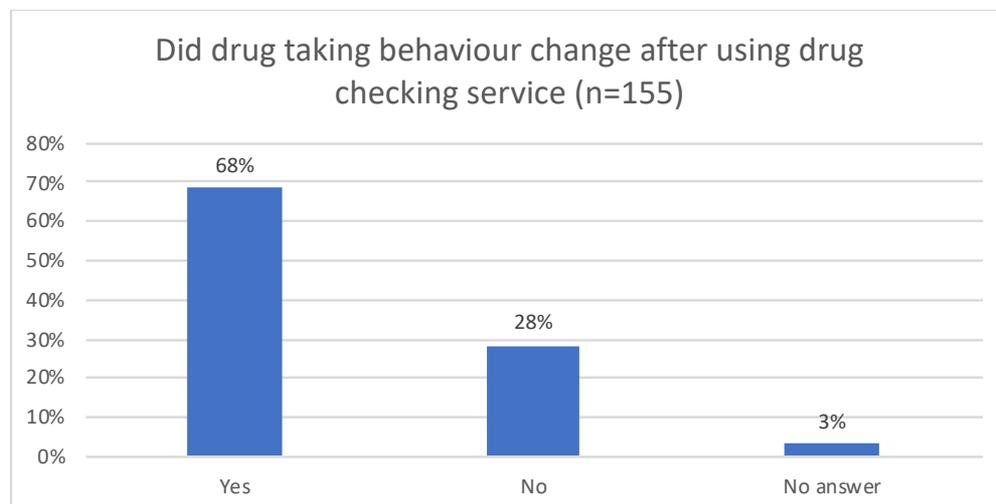
Figure 9: Festival participants use of drug checking services like 'KYSNZ'



5.4 Drug checking services: behaviour change/knowledge of harm reduction change

The majority of those that used the service stated that their drug taking behaviour had changed after using the service,

Figure 10: Did drug taking behaviour change after using the drug checking service



Figures 11-14 show changes in drug taking behaviour by gender, sexuality, age and ethnicity. There was virtually no difference by gender, although, slightly more women stated that they had changed their drug taking behaviour after using KYSNZ (see figure 11). Those who identified as bisexual were more likely to have changed their drug taking behaviour after using KYSNZ, than those who identified

as heterosexual or 'other' (see figure 12). Māori were more likely to have changed their drug taking behaviour after using KYSNZ, than those who identified as NZ European/Pākehā or 'other' (see figure 13). In relation to age there were few differences, although those in the older age brackets of 35-44 and 45 and over were slightly more likely to state that they had changed their drug taking behaviour than those in the younger age categories (see figure 14).

Figure 11: Changed drug taking behaviour by gender

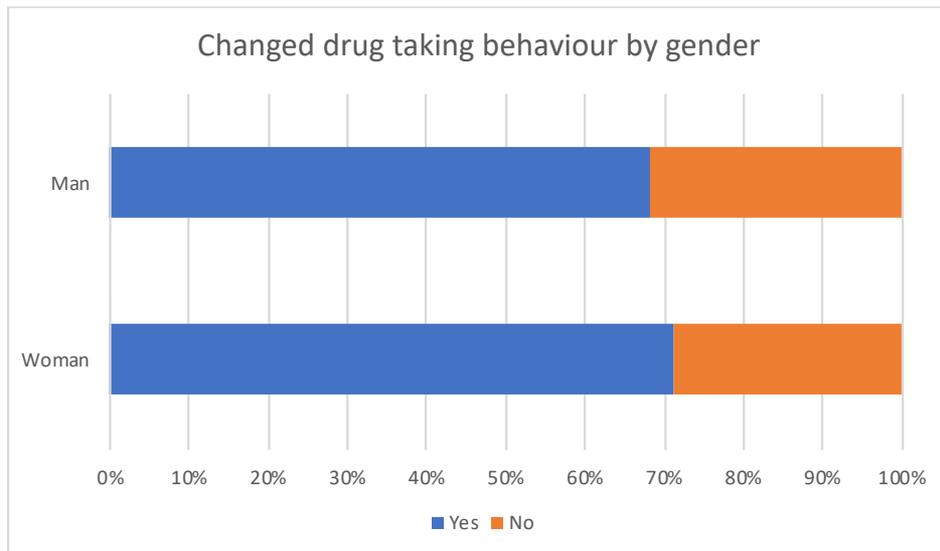


Figure 12: changed drug taking behaviour by sexuality

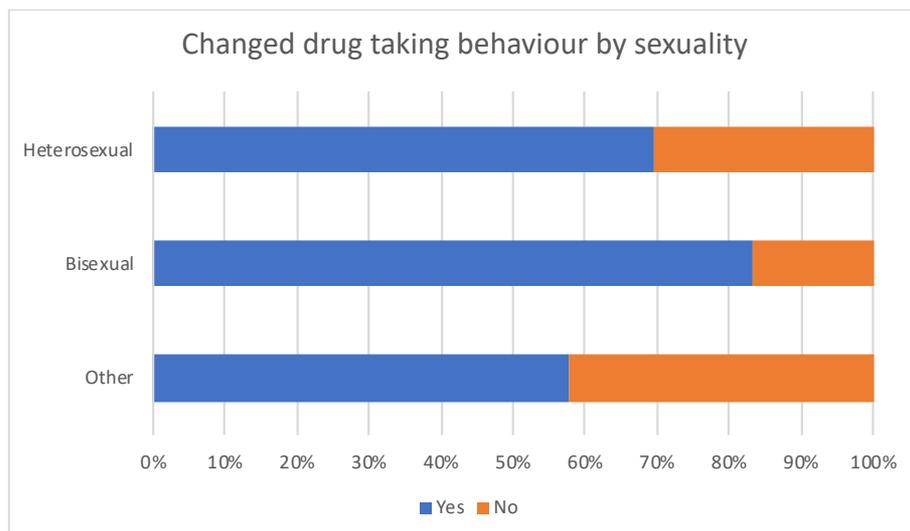


Figure 13: changed drug taking behaviour by ethnicity

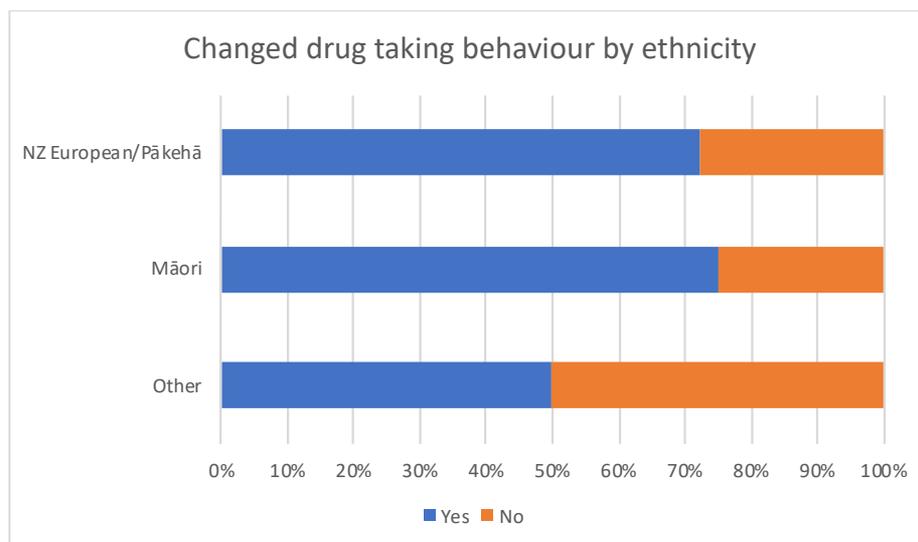
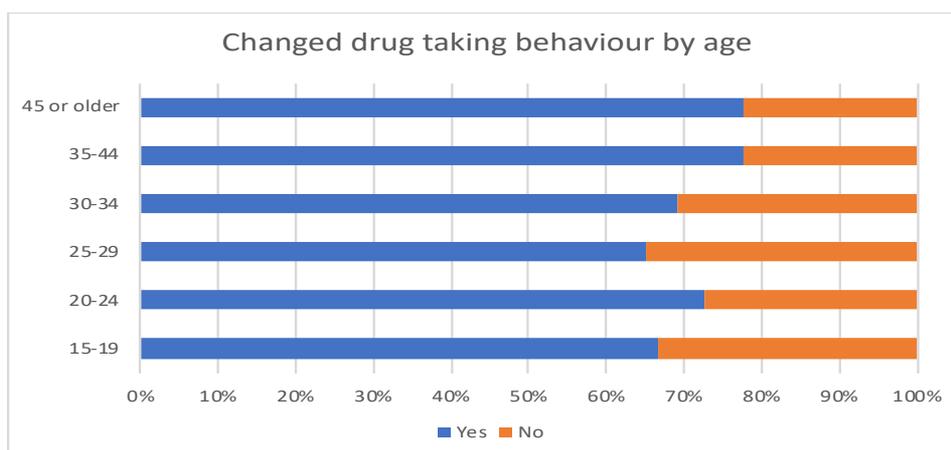


Figure 14: Changed drug taking behaviour by age



Of the 105 who reported changing their behaviour the most common reasons cited as to why participants *did* change their drug taking behaviour were: ‘decided to take only the drug I had tested and not to take with any other illegal drugs’ (n=39, 37%); ‘threw away/didn’t take the drugs’ (n= 29, 28%); ‘took less of the drug I had tested’ (n=33, 31%)¹⁰. Other less common reasons for behaviour change were ‘decided not to drink alcohol with the drugs I had tested’ (n= 27, 25%) and ‘decided to use alcohol only’ (n=7, 6%). There was also the option of choosing ‘other’ and entering the response in a text box to explain the response to Q13. These responses provide examples of how the KYSNZ service is able to change behaviour through education, although the numbers are small, so the results are indicative only. Those who reported that they changed their behaviour in response to the advice

¹⁰ Participants could choose more than one option for this question. Percentages are based on the 105 participants who reported changing their behaviour after using KYSNZ.

given indicated that they were more informed, had become regular users of drug checking services and that they often used their drugs more responsibly, being more careful about dose and frequency of consumption. One response in particular noted that *'I won't take anything that's not tested now and I'm a lot more careful when I do'*.

Understanding reasons for not changing drug taking behaviour were more difficult to analyse due to some changes in questions across surveys.¹¹ Of the 45 participants who indicated they had not changed their behaviour, most did not elaborate on the reason for this (n=18). However, just over a third (n=16) selected the pre-determined option of; 'no change because the drugs were what I thought when I had them tested'. There was also the option of choosing 'other' and entering the response in a text box to explain the response to Q13. The responses here, again a small number so the results are indicative only, suggest that at least some people did not change their behaviour because they were experienced drug users who were already aware of harm reduction information about using illegal drugs, that they tested their own using home checking kits¹² or that the drugs were what they thought when they had them checked.

Another important question around drug checking services is whether people who use the service increase their knowledge of harm reduction *regardless of whether their drug taking behaviour changes or not*. Behaviour change should not be cited as the only indicator of 'success'. As figure 15 demonstrates nine out of ten of those who used KYSNZ drug checking services had stated their knowledge of harm had improved. This included over half of those who stated that their knowledge of harm reduction had 'improved a great deal', with a further third stating that their knowledge of harm reduction had 'improved a little'. Figure 16 also demonstrates that the service KYSNZ offers around drug checking is highly valued by those who use it – with 93% rating the service as either 'excellent' or 'very good'.

¹¹ During data entry there seemed to be several people who had not changed their behaviour which seemed unusual, so the option *'no change because the drugs were what I thought when I had them tested'* was added into the revised survey to see if this was a reason why people chose 'no change'. This option was only added to the GEN survey after the FEST and FEST (Gen) surveys were collected at festivals and online. Therefore, all of those who chose *'no change because the drugs were what I thought when I had them tested'* were from the GEN survey sample. This is a limitation in interpreting the results of this question as it is not clear for the FEST and FEST (Gen) sample *why* their behaviour did not change.

¹² Some participants in the interviews noted that drug testing kits were available from 'head shops' or online, but that they preferred to use KYSNZ as they saw their testing as more rigorous and the results as more accurate.

Figure 15: How did knowledge of harm reduction change after using drug checking service

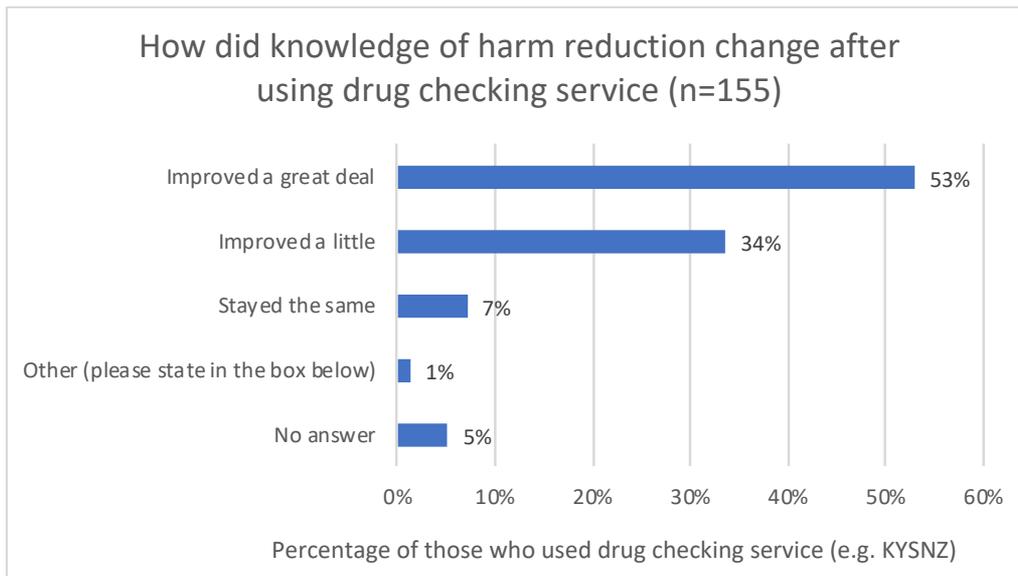
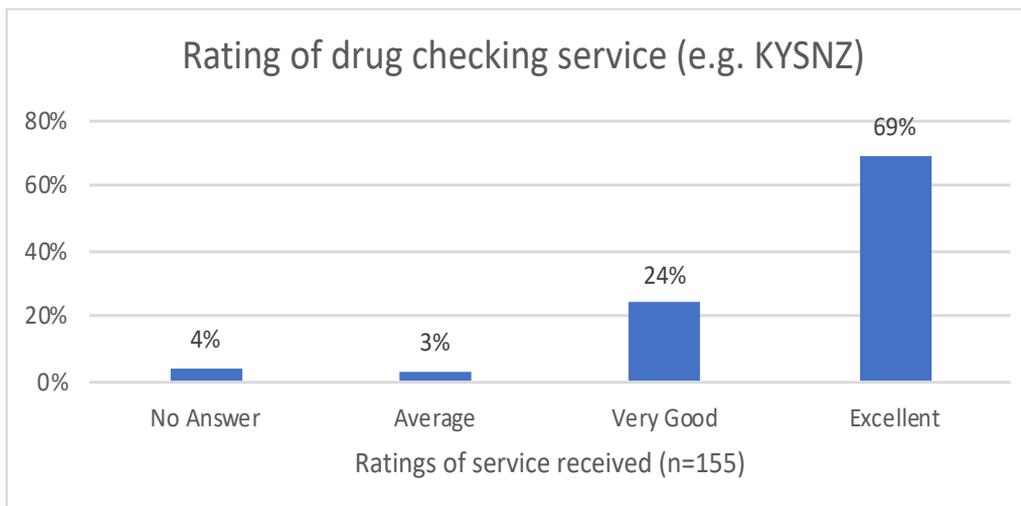


Figure 16: Rating of drug checking service (e.g. KYSNZ)*



*There were five ratings available: 'Very Poor', 'Poor', 'Average', 'Very Good' and 'Excellent'

Figures 17-20 show changes in participants' knowledge of harm reduction after using KYSNZ by gender, sexuality, age and ethnicity. Slightly more men stated that their knowledge of harm reduction had 'improved a great deal' after using KYSNZ (see figure 17). Those who identified as heterosexual were slightly more likely to say that their knowledge of harm reduction had 'improved a great deal' after using KYSNZ, than those who identified as heterosexual or 'other' (see figure 18). Those in the 25-29 age group were the most likely to respond that their knowledge of harm reduction had 'improved a great deal' after using KYSNZ (see figure 19). In relation to ethnicity those who identified as 'other' were more likely to say that their knowledge of harm reduction had 'improved a great deal' after using KYSNZ than those who identified as NZ European/Pākehā or 'other' (see figure 20).

Figure 17: Changed knowledge of harm reduction by gender

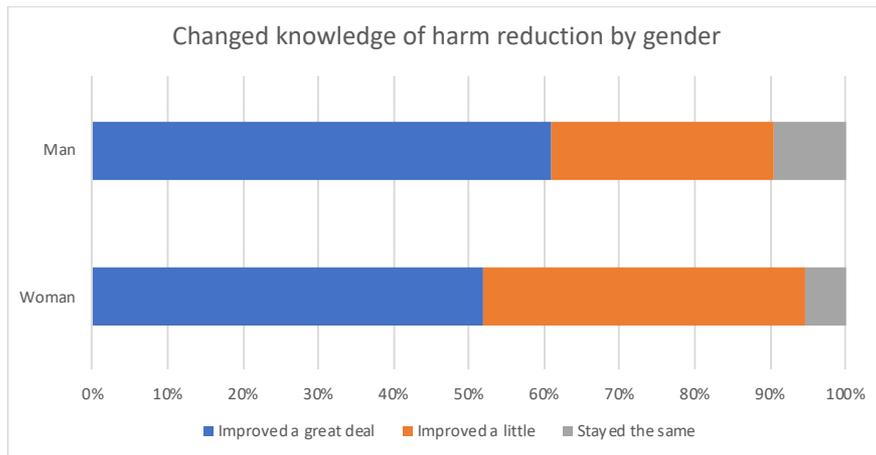


Figure 18: Changed knowledge of harm reduction by sexuality

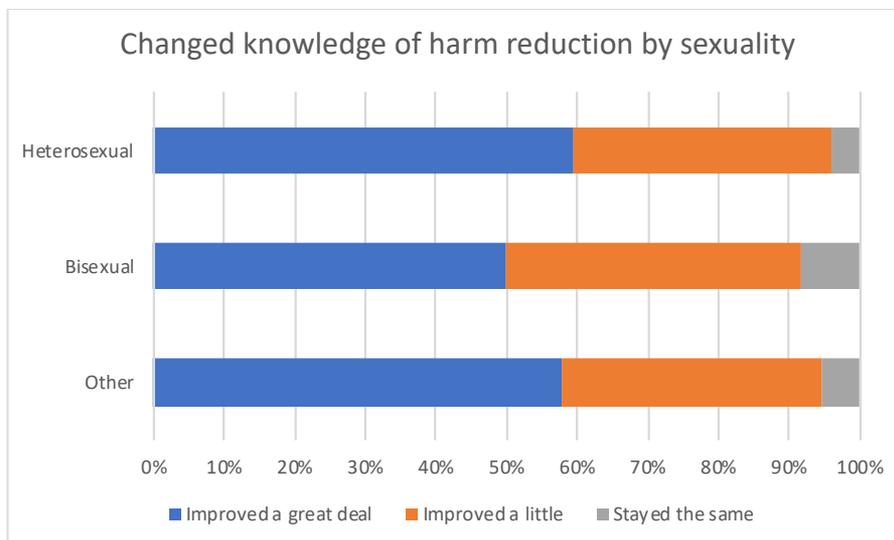


Figure 19: Change in knowledge of harm reduction by age

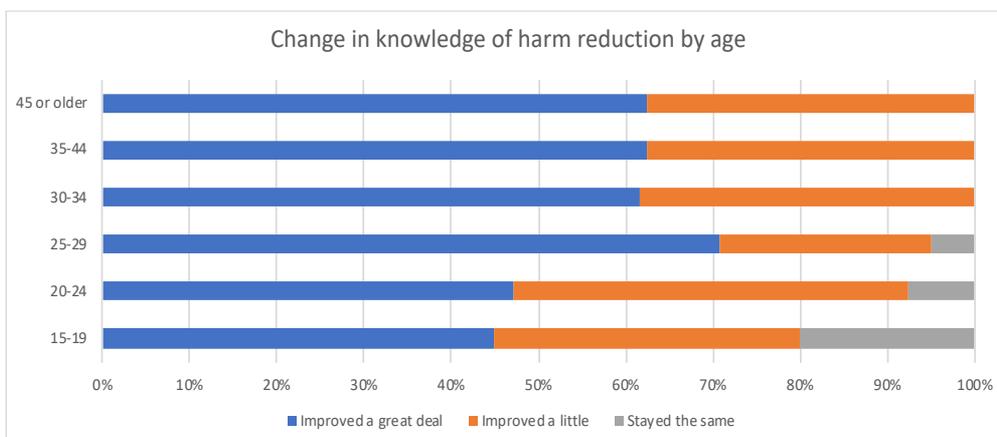
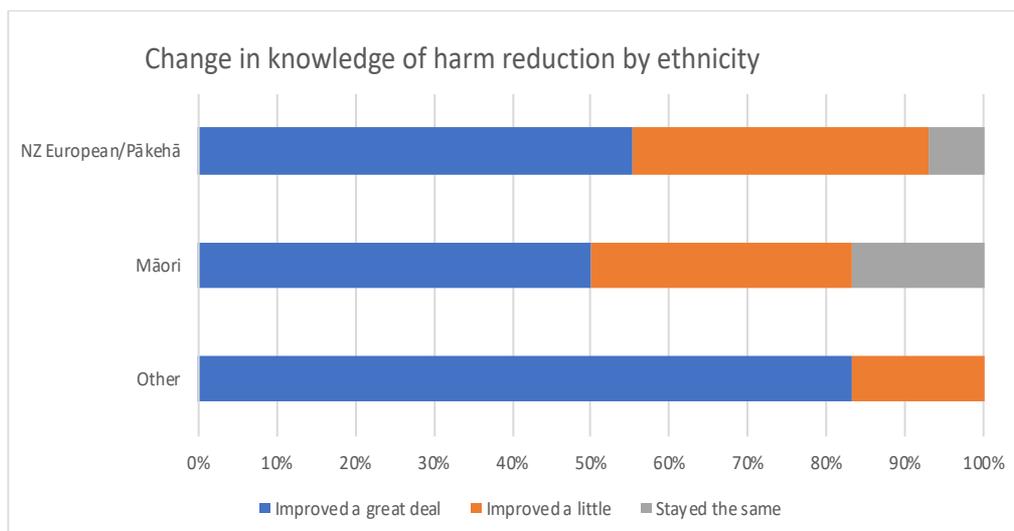


Figure 20: Change in knowledge of harm reduction by ethnicity



4.5 Drug checking services are a good idea/reduce harm/agree/disagree with law change

Question 16 (copied below) asked participants to rate the three statements on a 5-point scale from 'strongly disagree' to 'strongly agree'.

Q16 Indicate the extent you agree or disagree with the statements below
(Please put a tick or X to indicate your choices)

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
'Drug checking services like 'KnowYourStuff' are a good idea'					
'Drug checking services like 'KnowYourStuff' reduce drug related harms'					
'The New Zealand 1975 Misuse of Drugs Act should be changed to make drug checking services like 'KnowYourStuff' legal'					

In the online version of the questionnaire there was also an explanation at the start of the question of key terms and of the proposed change to s12 of the MODA 1975¹³.

All three statements were completed by the full sample of 891 participants. Overall, results suggested participants were in support of drug checking services like KYSNZ regardless of whether they attend festivals or not. For example, 97% of participants who *did* attend festivals 'agreed' or 'strongly agreed' that drug checking services were a good idea, with the same proportion, (97%) of participants who

¹³ The explanation on the online surveys was as follows: 'Drug checking' refers to testing a small amount of someone's drug e.g. MDMA to see if it is what they think it is, or whether it contains substances that could be dangerous. The MODA 1975, Section 12 states that it is illegal for anyone to allow their premises to be used for drug taking. Technically festival/event organizers could be prosecuted for allowing drug checking as they are admitting that drug use may happen at their events.'

did not attend festivals stating that they ‘agreed’ or ‘strongly agreed’ that drug checking services are a good idea (see figure 21).

Figure 21: Drug checking services are good idea

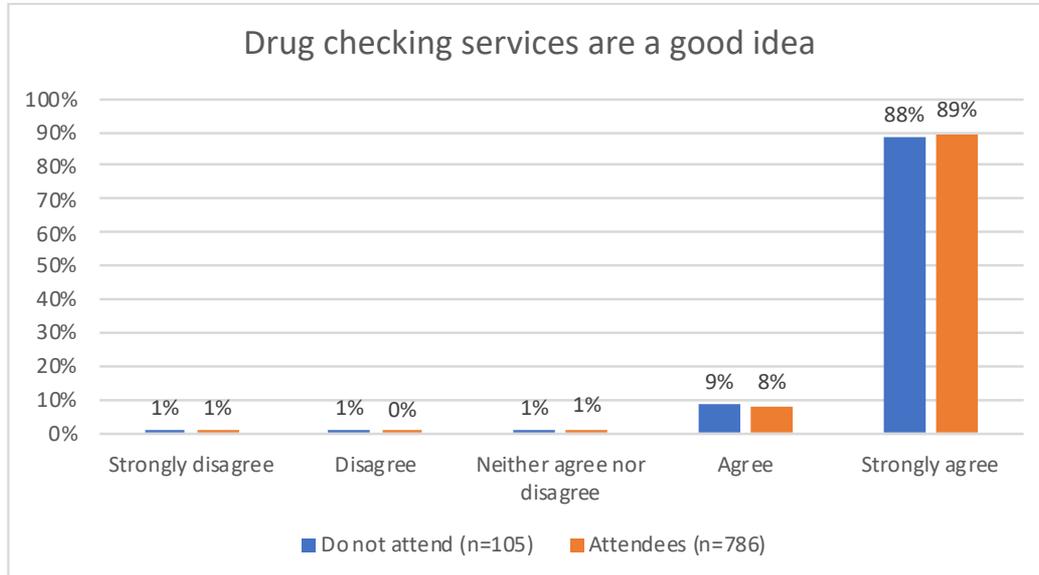
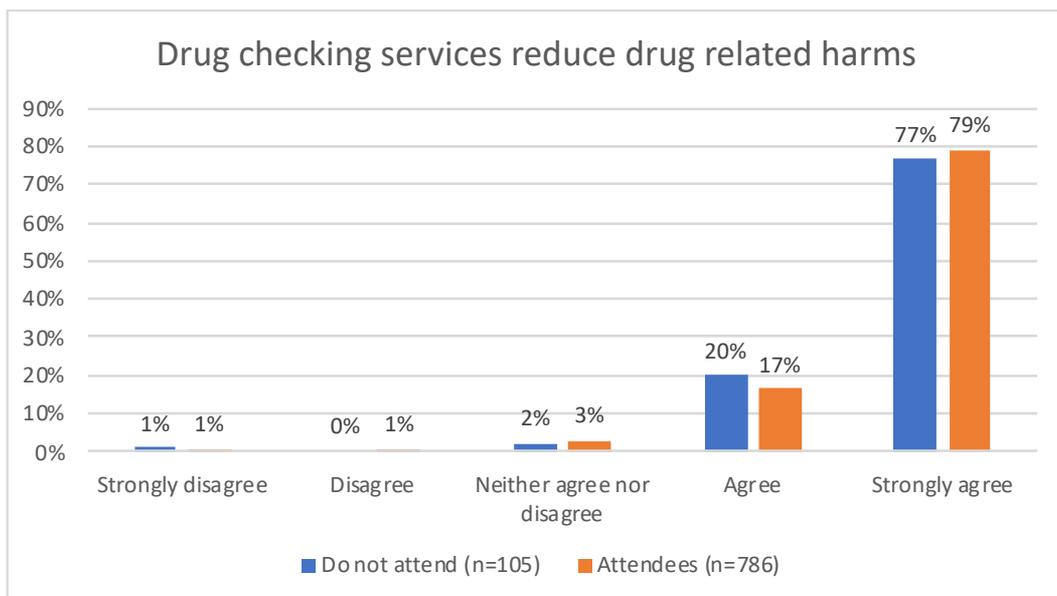


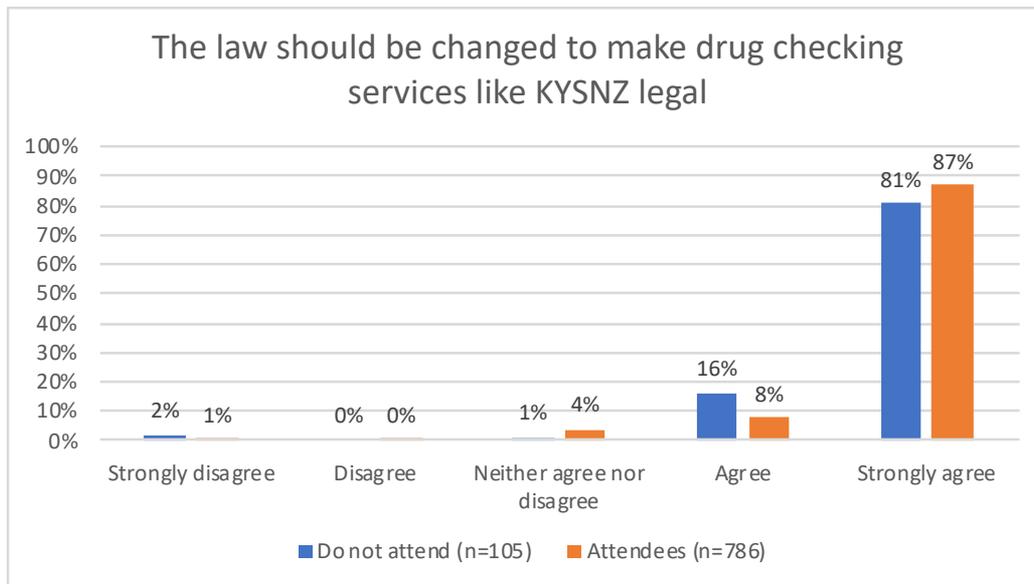
Figure 22 demonstrates that 95% of those who *attended* festivals ‘agreed’ or ‘strongly agreed’ that drug checking services reduced drug related harms, and that 97% of those who *did not attend* festivals ‘agreed’ or ‘strongly agreed’ that drug checking services reduced drug related harms.

Figure 22 : Drug checking services reduce drug related harms



In response to the final question in this section 95% of those who *attended* festivals ‘agreed’ or ‘strongly agreed’ that the law should be changed to make drug checking services like KYSNZ legal. 97% of those who *did not attend* festivals ‘agreed’ or ‘strongly agreed’ that the law should be changed to make drug checking services like KYSNZ legal (as noted in figure 23).

Figure 23: The law should be changed to make drug checking services like KYSNZ legal



Non parametric analysis using a Mann-Whitney U test found no statistically significant differences in support for KYSNZ for those who attended festivals compared to those that did not (i.e. no differences in level of agreement to the three statements in question 16)¹⁴.

4.6 Survey discussion

The survey results demonstrate that drug checking services have an effect on peoples’ drug taking behaviour. 68% of those who had used KYSNZ stated that they changed their behaviour after using the service. For some this included disposing of the substances they had tested, for others, they changed their behaviour by adhering to the harm reduction advice that KYSNZ volunteers gave in their brief face-to-face interventions by for example, taking less of the drug they had tested. 87% of survey participants that used KYSNZ also stated that their knowledge of harm reduction had improved a great deal or improved a little. The survey results also show a high level of support for drug checking services. The majority of participants supported the idea that drug checking reduced drug related

¹⁴ Independent-Samples Mann-Whitney U test results were as follows, Q16a Drug checking services like ‘KnowYourStuff’ are a good idea, Mann-Whitney U=34027, p=0.743; Q16b Drug checking services like ‘KnowYourStuff’ reduce drug related harm, Mann-Whitney U=34413, p=0.529; and Q16c The New Zealand 1975 Misuse of Drugs Act should be changed to make drug checking services like ‘KnowYourStuff’ legal, Mann-Whitney U=35216, p=0.108.

harm and wanted to see the law changed to accommodate drug checking at festivals and events. The majority of participants also agreed that drug checking services were a good idea. Given that the sample were, in the main, not novice substance users, this is a significant finding, that those who use illegal drugs on a regular basis value the harm reduction advice gained from drug checking services. Just over a quarter of participants who stated that they did not change their behaviour reported that this was because *'because the drugs were what I thought when I had them tested'*, indicating that on having confirmation that their substances were what they thought participants will take them as intended. However, this does not mean that they do not use or benefit from the advice that is given to them in the brief harm reduction intervention that accompanies testing and further research focusing on this group of people who use drugs is recommended. The Mann-Whitney U test results did not show any statistically significant differences in support for KYSNZ for those who attended festivals compared to those that did not. In the analysis of Q16 and support for the three statements about drug checking there were no differences in levels of agreement. Therefore, based on those surveyed for this research, support for drug checking services and for changing the law to make drug checking legal can be found across festival attendees, non- attendees and other general public/community respondents.

5 Results: interviews

5.1 Medical personnel

The medical personnel interviewed ranged in age from 20-80 years. Five were under 30, two were under 40, and two were over 60. Five identified as New Zealand European, one as Pākehā, one as Māori, two as German, one as British, and one as being from the US. All eleven medical personnel interviewed at the three sites supported the idea of drug checking services. The reasons given were very similar, and most of the medics interviewed thought that telling people what was in the drugs they had bought was hugely beneficial. In response to the question *'what issues have you dealt with so far in relation to drugs?'* one of the medics noted,

'Definitely overdose.... last time we had [names festival/event] there was the drug that was spiked with something else and it created a whole new set of symptoms and that was a bad batch of MDMA or something like that, and so it was quite new for us to have these different reactions' (Paramedic¹⁵)

¹⁵ To retain confidentiality only the job titles of medical personnel interviewed are noted.

And that,

'...we used to be able to tell, like if someone does MDMA you know what they're looking like, how they're presenting.....last time they had mixed symptoms so instead of having low blood pressure they had high blood pressure and had different aspects to it so we were like "ahhh have they taken a mixture of drugs?" soit makes it a lot more difficult to treat' (Paramedic)

Another noted that the most serious issue in relation to illegal drugs was *'massive overdose of unknown or not established drugs'* (First Aider).

Other medical staff highlighted similar issues,

'I think at the minute as well there's been a lot of drugs that have been mixed in so normally we would get symptoms which aren't presented fully, but now it has actual symptoms so like tachycardia, hypertension, pretty much they're presenting as a heart attack' (First Responder)

This was a key issue for the medical staff at festivals and large events, dealing with people who had unfamiliar symptoms that were quite serious, but hard to treat as the substance taken was hard to pin down. This lack of knowledge was also noted in the following account from an emergency medical technician (EMT), as well as consumers' lack of knowledge about the proper dosage of drugs such as MDMA,

'when people don't actually know what they're takinga lot of them are.... maybe I don't want to say inexperienced but they think they're getting this and they don't...again there's no way to test it, they don't know what they're really taking and so I think people get stuff that's mixed' (Emergency medical technician (EMT))

'a lot if the issues is [sic] they don't know what they're taking and a lot of them don't know how much to take so the biggest issue I've found wasone girl it was her first time taking it [MDMA], she'd totally overdosed, was seizing....all of her muscles had turned stiff and she basically kinda [sic] curled into herself, but then would seize up....her eyes were rolling back in her head and she was not conscious' (EMT)

Due to attending the kinds of incidents described all of the medics interviewed supported drug checking services being available,

'I think its [drug checking] is a good idea definitely 'cos [sic] a lot of people probably don't know what's in [emphasis in the original] their drugs and what they're taking and to make people more aware.....I think it's good' (First Responder)

'The thing for me is that....my experience has been that people take recreational substances whether they're supposed to or not and my experience has also been that people take it thinking "it's probably this", but actually knowing that it probably isn't or it could be mixed with a whole bunch of other things, and I don't think there's much awareness of understanding what the risks are with doing something like that...having been someone who has dealt with people who are severely agitated....having dealt with people who have died as a result of stuff like this.....the more information you have enables you to make a better risk assessment and I think we're coming to an age now where saying "no, don't do it" doesn't workpeople will do it anyway and if you ask me not knowing creates a much bigger risk' (Paramedic)

'It was at another event, and it [drug checking] was being done there and it was amazing [emphasis in the original] the stuff that they found there ... being missed in these drugs....didn't stop them taking the things, but it gave them an idea of "this is what you're taking". The good thing about it is they're [KYSNZ] not going to say "good for you taking drugs" people will just go ...we all know it's illegal, but if the people taking them feel comfortable to say "hey look, what is it I'm taking" to get picture of what it is without having major consequences then I think that's really good' (Events Medic)

'I think the single thing is awareness about what you're dealing with and if these young kids...there's just so much out there, its readily available and they can be educated on the matter.....it's gotta [sic] be a plus plus' (Events Medic)

Others were more general in their support for drug checking as a harm reduction service ,

'Honestly I really do [support drug checking services] because.... Just say you're with a group of friends and you're taking ... you know you have the odd smoke whatever... have drugs and then all of a sudden someone gives you something and says "oh its harmless, it only does

this"...now if they're smart enough, they can turn around and get a test and say "yep, you know...don't touch that" you know what I mean? People have another option instead of justnot knowing what you're taking' (First Aider)

As well as noting that the current system of prohibiting some drugs actually increases harm,

'The thing is by not supporting it and just making it illegal they're gonna [sic] do it anyway and more people get hurt, so I think the best way to do it is just to make it safe. You take away the black market if you make it safe' (EMT)

Other medical staff noted the non-judgemental attitude of those carrying out drug checking was really important,

'I think one of the best things about it [drug checking] is that the requirement is not to judge people but to help people. That's what we're all here for, we're here to keep people safe. So, when someone comes in they're like "cool, come in we're gonna check it for you". And so, they know what they're taking and that its safe¹⁶ and if it's not they don't take it' (Event medic, visited the KYSNZ tent at the festival)

Medical staff also acknowledged the grey area that drug checking sat within,

'It such a grey area isn't it? Like you don't want to be seen to be supporting the activities [illegal drug taking] but at the same token you've got to be there to mitigate that risks and the aftermath....but let's keep up the checks of bags and stuff coming in to try and keep it out [emphasis in the original] because it is an illegal activity, but if it does get in let's manage that' (Paramedic)

At one festival in particular the 'chill out' zone was also seen to be a very effective harm reduction initiative,

'That's one thing I've been surprised at here is the chillout zone...there's a really responsible feel because in the past all these people would be fielded straight to us and we'd have them

¹⁶ It should be noted that KYSNZ do not tell people who use their service that it is safe to take illegal substances, they tell people what their testing has picked up and give harm reduction advice if required.

lined up in beds being monitored and it's like now....quite often they just need that safe, comfortable, not a clinical environment, just somewhere quite nice that they can chill out, have a drink, have people looking after them. I thought that was a fantastic idea, if that could happen at every festival I worked at ...wow. Such a good idea and I guess the drug checking is a pretty good idea as well' (Paramedic)

The main issue for the medical staff at festivals and events was the lack of information about what people had taken. Festival goers often presented with unusual symptoms that were difficult to treat. Drug checking was seen as a harm reduction intervention that could, at best, prevent these situations from happening, and at worst, medical staff would be more likely to know what substances had been taken and be able to treat people more effectively.

5.2 Festival organisers¹⁷

All nine festival organisers that were interviewed supported a change in the law to allow drug checking legal status. This was because they recognised the value of having drug checking at their events as a harm reduction measure. All of the festival organisers had harm reduction measures in place around safety, festival etiquette, sexual violence and alcohol use and took appropriate measures to make their events safe and pleasurable places to be,

'We promote very heavily a sense of community around an event and admission is, we poster and we post on social media regularly and put in our terms and conditions on entry our set of rules for party goers that they are to look after each other, and that's unique posters we get produced by local graphic designers and that's throughout our marketing campaigns and that generally works extremely well'

'I mean, really, it's just about, you have a strong Police presence that are looking out for people dealing drugs on site. We have paramedics, trained first aid on site, we have detox tents, we have another crew called the 'Red Frogs'¹⁸ who are sort of a safety team really, there's probably 20 of those that are wandering around the crowd with hydration packs just keeping an eye out for anyone that's in distress. If there is, they have a little sort of chill space where they bring people back to, and you know, nurse them back to good health'

¹⁷ No identifying information is included after the quotes in this section because of concerns about confidentiality, due to the legal status of drug checking.

¹⁸ 'Red frogs' are a faith based organisation that offer harm reduction support at festivals and events-at Electric Avenue, one of the research data sites they had water, and lollies for people who needed them.

'We've got Know Your Stuff clearly for testing drugs. We've got paramedics onsite throughout the duration of the festival. We have a safe zone... and anybody that's having any sort of bad experience or uncomfortable experience, or they're just feeling overwhelmed for whatever reason, whether that be drug-induced or it's a consent issue, or they're just having a mental health moment. You know, for whatever reason, it's somewhere for people to go, it's advertised, we have signage up around the place saying that it's there'

They also all agreed that the legal grey area that drug checking currently operates in meant that it was often too risky for them to have KYSNZ at their events, which hampered their harm reduction efforts and ability to have drug checking services at their events,

'We are reluctant to do so [have KYSNZ at their events] because we don't want to expose ourselves to the risk of the police arresting any of our patrons on site... and we don't want to put our event's reputation at risk or the patrons at risk of that happening, and we know that the legislation is such that it is illegal to carry drugs, or to have drugs on your person, or to use drugs, the drugs that are commonly tested, and we do not feel comfortable having KYSNZ present at our festivals until there is clear legislation to say that it's a health issue and it's okay for individuals to test personal use'

'For us it's really the legal thing, I don't see any moral, like I said I'm pro-information and harm reduction, I've been to enough festivals to know that prohibition has not worked, and so really for us the only barrier is the letter of the law'

'Well the main barrier or problem is that, and I can't remember the actual phrase in the law, but I know it as we're not allowed to acknowledge that there's drug tests on our festival site, and we're on the wrong side of the law. So that is frightening, and you know this is our business'

'A harder thing in our position is that it doesn't matter whether we agree or disagree with it [drug checking], it's what the law says'

'But I would like to be able to educate.....from an educational point of view, anything we push out through our brand is likely to be heard or received quite well. So, it pisses me off that I

can't do that, because again, you know, we could really be helping people out. Barriers to having testing onsite, really, the fact that it's illegal is the main one'

Despite these fears some festival organisers decided to risk having KYSNZ at their events because they felt that they had a responsibility, as well as a desire, to reduce harm at their events,

'I do a lot of research abroad and the greatest fear as an organizer is that something would happen to one of our participants and having seen the research coming from overseas it just felt like the most responsible course of action was to, that when a harm reduction information and testing service did present itself to us it felt like the most responsible thing we could do as an event organizer, despite the legal implications at the time'

'It's about harm reduction at the end of the day, like you're kidding yourself if you think that people aren't gonna [sic] be taking drugs at a festival and if you can't you know stop it from happening then the next best thing to do is to make sure that it happens safely'

'So, the reason why [we have KYSNZ at our festival], is because it's the right thing to do. Because it is right, and at the end of the day, they tell us that it's illegal for us to do so, but health and safety laws tell us that it's illegal for us not to do so. It's a no-brainer. People die, people are dying'

However, even for those who took the legal risk and had KYSNZ at their events they were unable to publicly advertise or have clear signage about the drug checking service, so it was very low key and festival attendees had to find it for themselves over the course of the event. Again, this was seen as hampering their efforts to reduce harm at their events. This was also noted as a waste of a valuable resource and as something that festival organisers would like to see changed,

'yeah I mean at the end of the day there's not much point in having a service there if people don't know that it exists, so in terms of really making the most of such a valuable resource it would be good if they could be open about it 'cos [sic] then they can you know tell people that it's happening'

'In my mind, if we're going to be doing testing, we need to be communicating the fact that we're doing testing otherwise we're wasting our time'

'But at the end of the day, that comes down to trying to get as many people to test their drugs as possible. If we're not able to communicate that there's drug testing facilities available, then it's kind of, it's kind of like what's the point?'

'I mean clearly we don't label it as a drug testing tent, it has a smiley face on the front and that's it, so it's not being obvious what it is. So that's a barrier, it would be really nice to be able to you know, say what it is'

'I would like the service to be made available for us to be able to publicly communicate it through our media channels leading up to the event and potentially also have it available so people come to the site the day before and test them before they even get to the event, because if something dodgy was found the day before, we've got all the time in the world up our sleeves to really get that messaging out'

While festival and event organisers noted the benefits of having KYSNZ at their events in general, an important finding was that drug checking was identified as being about *more than* just the test itself.

'the operation is very professional, there's a lot of you know, apart from that checking of substances there is a lot of on-site support and information being offered and so people were able to access that information, anything from pamphlets to sort of conduct instructions you know for people who may not even have things tested who could just, information, it was harm reduction information being shared openly by the organization'

'I think the most obvious one is peoples' safety you know, it's not just peoples' safety but also their education around, one, what they've got, but also what is out there and what those different substances can do, 'cos [sic] often if somebody finds that they've got something that they didn't realize that they have then that starts to spark conversations around what it is, and so I think it really helps educate people not just about their drugs and the drugs at the festival, but about drugs within their community and within that space in the country'

It was also noted that KYSNZ, although non-judgmental about illegal drug use, were clear that drug use can cause harm, and that people using the service were not told that there was no risk in using unregulated drugs such as MDMA,

'and just what comes with the testing, I think the refresher, all the information that you're being given at that point whether it's specifically regarding what you've got in front of you or whether it's just in general, I think it's really great'

'and there's no green light so to speak, everything is treated as potentially harmful, and people are reminded of that at every step, it's what I really appreciated when I looked at KnowYourStuff's process, I thought that's really great, that it's always dangerous no matter what you're told'

The benefits of KYSNZ sharing information with medical professionals at events were also noted,

'We hooked them up with the first response team, the first aid team, on-site, who were immediately very receptive and very grateful for the information, and when the 'Know Your Stuff' team, if and when the 'Know your Stuff' team identified anything that was particularly harmful or could be particularly harmful they were sharing that information openly with the first aid team who were able to then add that information to their database of things that could be presenting themselves, which they were really grateful for.....to have the knowledge to know what potentially could be posing a threat and they would be able to diagnose more accurately'

Festival organisers who did have KYSNZ on site noted the reduction in serious incidents once they started having drug checking at their events – although KYSNZ were part of a whole package of harm reduction initiatives such as safe/chill out spaces,

'in the times where we have had 'Know Your Stuff' on site we haven't actually had any major incidences'

'since we've had 'Know Your Stuff' onsite, to be fair, we've also had a safe space onsite too, we have had less incidences, or less serious incidences you know, those first two years – the first year that guy got choppered [out of the festival to hospital], and the second year you know [names person] got taken to hospital and we had three kids [referring to young adults not children] displaying the same symptoms. We haven't had anything that intense since then'

With some festival organisers also of the opinion that drug checking would have a regulatory effect on the illegal drugs market as well as reducing harm for the festival goers,

'well I'm aware that the synthetic drugs, some of the synthetic drugs around are cardiac-aggressive and if Know your Stuff was able to identify those drugs and advise the owners of those drugs who have purchased them that there is real risk to their life if they take a large quantity of these then that's gonna [sic] be a huge benefit...it will be a form of regulation because certain products will start to drop out of the marketplace, the black market, because consumers will steer clear of them and they will demand that their dealers have a certain standard'

'I think as well now the more common testing becomes the more likely it is that the quality and the safety of the drugs will get better'

'if people are buying their drugs off somebody and then they're getting them tested and seeing that those drugs contain harmful substances that they weren't aware of, they're going to tell their friends that that person sold them those. And that person is going to lose business. So, it's also going to keep drug dealers honest. If you're not going to regulate the drugs, at least let us as people regulate the drugs in our own way, and that's what testing onsite does. All of a sudden, drug dealers become a lot more honest'

Festival and event organisers unanimously supported a change in the law to allow drug checking legal status,

'I'm definitely pro that kind of change [to allow drug checking legal status], I think that you know the approach that we've been using in the past obviously isn't effective, so yeah I am definitely pro change'

'I don't know in exact detail [what the law says], but if it meant that what KnowYourStuff do could happen legally and we were able to promote it and obviously as event organizers we would promote it responsibly, as in we would not be promoting the use of drugs, we would be promoting the harm reduction efforts, then yes I do support that'

'this is just another safety precaution, like I said we are responsible event organizers and we want to do everything we possibly can, and I think harm reduction and testing is that's part of that it should be in our health and safety plan and part of our safety protocol'

'I think it's fantastic, I really hope it goes through, as a recreational user myself, I'm very keen for the quality [of drugs] to improve and know that I can get the product that I'm buying tested. I think it's primarily a health issue, drug use, and support any moves to provide information for users about drugs so they can make better decisions'

'Oh of course I do [support the law change]. Anything that we can do to keep people safe has to be a priority, so we totally support it'

'You know, it would make people think twice about what they're taking, or perhaps lower the dose of what they're about to take. I genuinely think it would result in a lot less harm'

'The no-brainer term comes up again. I think that it's, well I'm 100% in support [of the law change]. I think it's imperative. I think that continuing along this line of the war on drugs and thinking that you know, the argument that having drug testing onsite is going to encourage young people to do drugs is naïve. Young people are doing drugs.....but it's going to save lives'

If the MODA 1975 was changed to allow drug checking legal status all of the festival and event organisers interviewed agreed that having KYSNZ at their events would be a positive harm reduction initiative that they would be keen to support. They all believed that drug checking reduces drug-related harm, and were clear that festivals were places where people used illegal drugs, as well as alcohol, but that ignoring the issue of illegal drug use caused more harm,

'because drugs are gonna [sic] be there whether we want them to or not, whether we pretend they're there or not, drugs will be thereby not acknowledging it, by brushing it under the carpet, doesn't make it go away and actually can lead and does lead to more dangerous behaviours'

5.3 KYSNZ volunteers¹⁹

The thirteen KYSNZ volunteers interviewed ranged in age from 23-42 years of age (two interviews did not collect age and ethnicity data). Eight were under 30, two were under 40 and one was over 40. Five KYSNZ volunteers identified as New Zealand European, three as Pākehā, one as Chinese/New Zealander, one as European/Canadian and one as European/Jewish. Four were or had been recreational drug users themselves. Perhaps unsurprisingly all thirteen of the KYSNZ volunteers supported changing the MODA 1975 to give drug checking legal status, mainly because it would enable them to operate more openly and reach a wider section of the people who consumed illegal drugs,

'But it would be nice to have it, like, explicitly kind of written down that it's okay to provide the service and they canI'd prefer it more in the sense that it would help us to expand our scope and have legitimacy so we can do more. Yeah. It's not that I'm worried about it [the legal status of drug checking]. I'd just like to be able to operate more'

'I think there's only good that can come of legitimising what in essence is a health service'

'On top of that it would allow us to be far more public and open about the events that we are at. I mean, at the moment, often when we're at events, we have to be quite subtle about it. We don't get to advertise much at the events'

Similar to the interviews with medical staff and festival organisers, some of the KYSNZ volunteers noted the wider context of current drug laws and stated that this approach based in prohibition was not working to prevent people from taking drugs or to reduce harm,

'Prohibition doesn't work in these circumstances. People are going to take whatever they're going to take. So it's like, if we can make things a bit safer for them in ... and really, focus on the harm reduction, people don't kind of understand the value of that. So I think, if there was some more legality around it, you can actually promote, you know, a lot more of the benefits of the service'

'I think it's, I'm quite clear at this point that the war on drugs isn't working, and it's one part of an important step in changing that culture I suppose. I certainly would prefer that we help people to be safe, and be educated about things, because we're so, you know, we're so lacking

¹⁹ No identifying information is included after the quotes to protect participants' confidentiality.

in drug education growing up, so yes, the law change would help us at least to have more frank and honest educational conversations, which is going to be probably the best form of harm reduction we have'

KYSNZ volunteers also noted that if the law was changed to allow drug checking festivals and events would be able to invite them more openly,

'One is to allow festival organisers to hold the events that they want to have, you know, where they can actually say that they're doing everything they can to keep people safe, and the other is so that we can say where we're going to be. That really is the main thing. If we can remove that barrier [the law], I think it would be huge for us in terms of access'

'We know that there are a lot of events and festivals where we're not invited because the organisers just don't want to bring that down on themselves as a potential risk for police intervention'

'One thing that I think would change a lot would be the openness with which we could operate and a key factor of that being the types of places, people, and events that would invite us to be there'

'For example, I guess the most obvious one is that we wouldn't have the sort of legal barriers that we do at the moment. We could show up at events. Like, there's a lot of events who want to have us there, but fear legal or financial retribution, either from the police or, like, the insurance companies are the common thing. They don't want to risk legal implications of allowing us on site, and so it would just open up our ability to go to many more events'

In terms of why those interviewed got involved with KYSNZ several respondents cited similar reasons, mainly revolving around reducing harm and making sure people were as informed as possible about their consumption of drugs. For some it was about giving important harm reduction information,

'if you could save that life, we're not there to make a moral decision for them, but if we've got any way that we could support or help them make the right choice, then we should be putting our hand up and going "hey look, this is what we think is, I don't think you should take it" and

maybe that changes somebody's mind. Maybe they don't end up seriously harming themselves and they make a right decision, and they change their course'

'the main kind of risk that's taken with regards to festivals is people that choose to take substances, and kind of engaging with that is inherently risky, but it doesn't have to be as risky. And when there is the potential for small mistakes or, you know, relatively small mistakes to cause hospitalisations and deaths, like, the more you can do to mitigate that and get people the right information, it's not that much effort, and it's not that much of a stretch to get people's harm or the potential harm of an activity reduced substantially'

For others it was more personal and tied up with their own use of psychoactive substances,

'I personally began experimenting with psychoactive substances as a teenager. I realised quite quickly that there were many ways to take substances and some of them were more beneficial and, somewhat separately from that, but definitely related, some of them were much more or less harmful. And that really the difference between people taking substances safely or less safely was having information. Well, information that was accessible to that particular person'

Some participants had also had negative experiences themselves which led to their decision to volunteer at KYSNZ as the person below explains,

'I started testing substances myself, as I bought a little reagent kit off of eBay and started testing them for myself. And the reason I did that was that I had some negative experiences myself, some really challenging drug experiences. And realised that part of the cause behind those was that I didn't really know much about the substances themselves and the chemical effects, or whether or not I was actually taking what I thought I was. So it came from a very personal place [volunteering with KYSNZ] and wanting to educate myself on that and realising that I could do all the education I wanted about substance use, but if I didn't actually know for sure that the thing was what I assumed it to be, then that information was pointless'

Others said that they could see the difference that they made as people decided not to take substances after testing. They felt that in volunteering for KYSNZ they were doing something positive and reducing harm,

'I suppose just making sure that, you know, people can take things safely, you know, more safely than just popping in an unknown pill. BecauseI think it's a valuable service becauseif they didn't have the service they would probably just take it anyway, but if they found out that it had something in it that they weren't expecting then that might give them pause to, you know, to reconsider'

'when I was doing the testing, pretty much all of them were what people thought they were. There was one that had just seemed like a very low purity, like they don't test for purity, but it just seemed like it was the ... the ID wasn't a fantastic match. So and then we were also talking to that person about ... because I think she was on a new SSRI²⁰ or something like that... so we were talking about potential interactions with that, and she was definitely going to reconsider whether she was going to take what she had or not. So you can actually see that it does it does actually have an impact'

'It does cause people to think, and I think the fact that people are using the service shows that they actually are interested in, you know, being safer about it'

'I support it [the proposed law change] because it's [drug checking] safe behaviour in and of itself which actually improves drug harm outcomes for people every single time it operates'

KYSNZ was seen to reduce harm in a number of ways through the harm reduction advice that was given. The volunteers said that shifting peoples' behaviours and raising issues that people may not have thought about reduced the harms related to illegal drug use,

²⁰ Selective serotonin reuptake inhibitors (SSRIs) are a widely used type of antidepressants. It's thought that SSRIs work by increasing serotonin levels in the brain. Serotonin is a neurotransmitter (a messenger chemical that carries signals between nerve cells in the brain). It's thought to have a good influence on mood, emotion and sleep (<https://www.nhs.uk/conditions/ssri-antidepressants/>). Consuming drug such as MDMA or cocaine when using SSRIs is not recommended. These drugs also produce high levels of serotonin in people's system and *can* lead to serotonin syndrome – with MDMA in particular combining these two types of drugs can lead to seizures and overdose (<https://www.aspenridgerecoverycenters.com/recovery-blog/4-drugs-that-dont-mix-with-antidepressants/>)

'I know that the sort of information I gained and the kind of agency I got from testing substances and knowing what they were hugely increased my ability to use substances safely, or at least in an informed way. And I have had very, very direct feedback from a lot of people – friends who, you know, I've helped inform and test things for, and just our clients I don't know on a personal level at events etcetera, who have talked about how it has affected their drug taking and their kind of sense of safety. I think it's most effective with people who don't have a significant history of drug use'

'I definitely know that I have had impact on people who, you know, are really experienced drug users and have learned something new from what we are able to give them, and have chosen to shift their habits and behaviours. Which is huge. Like that is amazing, I think'

KYSNZ test drugs using reagent testing and a FT-IR (fourier transform infra-red) spectrometer - this uses infra-red light to generate a characteristic absorption spectrum for each sample, allowing the detection of drugs and adulterants. Reagent testing is where a liquid is dropped onto a small sample of a drug - a reaction will occur and any colour change will give an indication of what the drug is. The FT-IR spectrometer is used in addition to reagent testing, and although it takes a bit longer to get the result, it is more accurate than reagent testing.²¹ KYSNZ volunteers also discuss things like dosing, interactions with other drugs legal or illegal, as well as keeping hydrated and other general harm reduction advice. The following quotes from KYSNZ volunteers give a more detailed picture of how they interact with people who use drug checking services,

'For our result overall, I would say we can give you a good indication of what it contains. And we might be able to tell you if it contains multiple different chemicals in one sample. We're unlikely to be able to give you an accurate value of its purity. So, even if it says that it can only find MDMA inside the sample, then we don't assume that that means it's a hundred percent pure'

²¹ The testing done by KYSNZ can detect up to five different compounds within a single sample. However, the protocol is to start with asking the FT-IR spectrometer for three compounds in a mix analysis because that is more likely to give an accurate result. It would be unusual to ask the FT-IR spectrometer for five compounds because there would not usually be that many in a sample.

'We could never give the impression that anything they're taking is safe²². Like the first message is none of this is safe, but there are certain things we can do to make it not terribly dangerous'

'That's one thing we always said. it's like we can indicate that it's likely to be this. But you cannot guarantee a hundred percent that it is, definitively that's what it is'

'It's kind of communicating risk and uncertainty and also trying to give people enough information that they are able to make decisions. We use language such as this substance is consistent with MDMA, or consistent with LSD. We aren't able to tell you exactly what it is...so you can just be very up front about that. But to say that, given what we think it is, are you intending on taking it? And they'll usually indicate if they are or are not. At which point, if they're intending on taking it and you know, we can offer some advice about the safest way to do so'

This group of interviewees also highlighted that one of the most important aspects of their service was the conversation or brief harm reduction intervention that happened as a result of the drug checking results. Harm reduction information about the way drugs were used, the amount people were planning to use, and which other substances might also be used alongside drugs such as MDMA, were seen as crucial conversations that helped consumers to reduce their risks,

'The testing is, in my opinion, five to ten percent of the importance of the work. It's what gets people in the door, and, especially recently where, you know, the last couple summers our biggest worry has been too much MDMA.....a lot of the time we kind of know what the test result's going to be. But, people might not know, and a lot of people really don't know the differences between different consumption methods. So it really is about having those discussions'

²² KYSNZ do not tell people that the drugs they are getting checked are safe to use – risks may be reduced through drug checking and drug use may be safer, but this does not mean they guarantee that substances tested are 100% safe. As the KYSNZ website notes 'Before testing, all clients are told that "Drug checking does not provide a guarantee of safety. All drug use is risky and the only way to be completely safe is to not use drugs. Individuals respond differently to drugs, and drug checking does not provide information about how I personally will respond." All drug use has risks. Our evidence shows that if you give people information about what they have, they make safer choices, but safer is not the same as 100% safe.'
(<https://knowyourstuff.nz/about-us/faq/>)

'And that's when questions about people's experience with a substance come up. So, you know, have they taken MDMA before? We talk about dosage. We talk about general harm reduction ... general harm reduction and also substance-specific harm reduction sort of things. And, again, that gives us a better chance to go through, especially if we get a dodgy test result'

'But I think it's one of the more important parts of what we do and I've tried my best to maintain that conversation even if someone says, "oh, I already know", of course without patronising them, because that's not what I'm here for, but to just remind them and say, "well of course you know that, but let's just go over it one more time to be sure"'

'it's only one part of the equation actually knowing what your substance is, and one of the things I like most about KnowYourStuff is not just the positive identification of substances but the point of contact it creates, and being able to then deliver all kinds of other advice. And so you miss out on that with an at-home test'

'But I certainly see at least that the bigger value is in just having an honest conversation with them and about drugs, you know, that it doesn't have to be something under the table. That seems to be the biggest value a lot of people derive from it'

Several of the KYSNZ volunteers stated that they had observed people disposing of their drugs – mainly when the test results showed the drugs were not what they thought they were,

'the vast majority of people do [dispose of their drugs if they are not what they thought]. Which makes sense, you know. It's not a good time when you're on too much of the wrong thing. It's not a pleasant experience. And that's why people, you know, generally pursue drugs is because they want a pleasant experience'

'We don't exist to either encourage or discourage people's use, although we do lean more towards discouraging if it's not as presumed, but practically all of the time people reach that conclusion themselves'

'The majority respond really positively. I find that if people are choosing to come and check their stuff, they are already sort of in the group of people who take drugs and are sensible about it, I guess? You know, like people who come and use our service, I really find that they

very much are, you know, people who are willing to learn, people who are willing to hear about what's going on with their stuff. And that means that when it does come up as something, they're like, "oh, that's a bit odd". Nine times out of ten, they're like, "I don't want to take that"

A related theme around behaviour change was that people often changed their behaviours and enacted harm reduction practices *even if they decided to take their drugs anyway/if the drugs were what they thought they were*. Therefore the 'success' of drug checking should not be seen within narrow parameters and measured simply in terms of drug disposals only,

'that is a good service because it's, if we find something that is not, that could be potentially dangerous, then, as far as my experience goes, people will not take it, or will change their behaviours around, maybe they'll still take it, but they'll be more cautious around their dosing, or something like that. But if people have what they think they have, I think we still change their behaviours. Even if it's subtle things like take a clean straw if you're really adamant you're going to snort it, because that's better than a dirty note. Or talking to people about doses I think is a major thing'

'I really do feel like the most impact from our work comes from the conversations we have around testing. The test itself and the result of that definitely has an impact, but far more and far more difficult to quantify and measure is the impact of, you know, having that conversation about drug use and being able to talk about, even just asking that question of like, you know, just because this thing is safe, are you using it safely? That is absolutely huge getting to question, like open that conversation with people about, why are you using this substance?'

'And it's particularly the larger mainstream festivals such as [names festivals] where the intervention is most important. Because these smaller festivals that don't have a problem with getting KnowYourStuff on their site to do testing are usually communities of more mature ravers who actually have pretty good harm reduction vocabulary and practices already, so they sort of self-police and all of that. Whereas the larger ones, are people who've just turned 18, who've been given a bag of pills, and they don't really know what they're doing. Yeah, and various horror stories from university students who have just gone days back to back to back having MDMA and other drugs and then wondering why they were depressed for the next six months. And this is totally avoidable'

Even though all KYSNZ volunteers were in favour of a law change they recognised that this would put pressure on the service to increase capacity, and that extra funding would be needed to achieve this,

'I think that the demand would definitely increase. I think there would be definitely be some questioning of who do we prioritise in terms of We only have three spectrometers ... Where do we go? The grassroots festivals who've supported us since we started, or the bigger festivals where we can do more? So, I think that would be the main change, that, as an organisation we'd have to sort of find a way to increase capacity to make sure that we could cover all bases and help people as much as possible'

'It would probably be overly demanded and we'd probably need a lot of resources to be able to expand to meet demand. I think it's already a thing that's already highly demanded and in high demand in general'

'I think it would mean we would have a lot more work on. We would have a much greater presence at more events I guess. And I guess there would, we would no longer have to be like, there's an element of, we don't hide ourselves, but we're not so front centre as we could be. I think with the legislation change we would have better media coverage. We would not be sort of chucked around the corner discreetly, we could be more open about the service and we'd probably reach more people'

5.4 General public/community recruited via the survey²³

All of the 34 people in this set of interviews supported the idea of drug checking, thought that it reduced drug-related harms, and wanted to see the law changed to give drug checking legal status. Some of the participants were illegal drug users themselves although only five out of 34 had used the drug checking services provided by KYSNZ. This sample was quite diverse with ages ranging from 18-75. Those interviewed also included participants who were experienced regular drug users, those who used recreational drugs like MDMA infrequently, as well as those who did not use any illegal drugs. Others recruited through the revised general public/community survey had teenage children and supported drug checking so their children could be safer when going out and taking illegal drugs. Parents who were interviewed thought it was inevitable that their teenagers would experiment with drugs, whether they liked it or not, and wanted them to be as safe as possible while doing so,

²³ No identifying information is included after the quotes to protect participants' confidentiality.

'One of my sons does (takes recreational drugs] he is the person who has told me that that's [drug checking] now available at music festivals and I have to say... I don't know the extent to which its available, but I have to say that's a load off my mind. I felt safer knowing that if he was going to take something at a music festival that he did have that as a kind of process to checking'

'Absolutely [support the proposed law change]. I think to me it's an absolute no brainer, and I think KnowYourStuff are doing a great job and it's been very brave of them to become a lot more visible and promote their services a bit more. I think they're taking the responsibility where actually it should be a public sector responsibility I think... it's an absolutely necessary service and I've got friends who disagree who have a zero tolerance approach but I don't think that's realistic. They've got their head in the fans, and pretending that the problem doesn't exist won't make it go away. Nothing I say to my young son will stop him doing what he wants to do'

'I can teach them about safety in terms of having a friend with them who's not taking the drugs, and looking after people, I can do all of that, but if the drugs they're taking are not good drugs, they're screwed'

'I don't actually take drugs myself but my support for organizations like Know Your Stuff and drug-testing is to make it safer for young people... or for any drug-taker, but I have a 20 year old son and I think it's really important that if any of his peers or friends are choosing to take drugs that they do it as safely as possible'

'It's very obvious to us that this is necessary because young people are not going to stop taking this stuff because parents or anyone else tells them not to... and in fact my son commented to me earlier this year, he said "you know mum, you forget that it's not legal because it's just everywhere". It's [drug taking] normalized, it's absolutely normalized'

Apart from those who were parents a wide range of those from this section of the sample supported drug checking in general as a harm reduction intervention,

'I'm in full support of it [drug checking], I think it's great for safety, it's great to empower knowledge that way and I think... I'd like to see KnowYourStuff at every festival I go to'

'I'm in full support of a law change that basically puts through more drug-checking or legally requires drug-checking'

'Absolutely, that [changing the law to allow drug checking] seems a no brainer to me'

'I haven't used it myself or even know anyone who's done it, but it just seems like a no-brainer to me when I think about it. Even if you're against drugs it would be silly to be against drug checking'

'I mean... young people... I speak from the wrong side of 68, but they're gonna [sic] have a go out of curiosity or whatever..... they all take risks, young people take risks. It's part of growing up, and if there's things that help them make better informed risks well that's gotta [sic] be a good thing surely'

'if we're trying to keep people safe and the laws in this country are all about that, then it would seem stupid not to allow the testing of drugs at festivals. It's just ridiculous'

For others drug use was seen as a health issue and, as the respondent below argues, moral and legal objections should be put aside in favour of a harm reduction approach,

'for me there are certain issues in society that the legal and moral arguments need to be second and third and the health argument needs to be first, and this is one of those cases where I think we're talking about harm minimization and risk minimization and I think that we're taking those approaches in a whole heap of other issues in NZ, and I think it's time we started to take it more seriously in the drug sphere as well'

Similar to the other groups interviewed participants from the wider public acknowledged that young people are going to use drugs, despite their illegality, as noted by the respondent below,

'people are gonna [sic] do drugs, young people are gonna do drugs like whether it's legal or it's not legal, it's never gonna change. You can't make that not a thing that's gonna happen and if that's gonna be the way it is, then there needs to be a system where people can make

these choices to do these drugs, to do it safely. I 100% think it [drug checking] makes a difference'

The law was also argued not to be working in terms of deterring people from taking drugs so other ways of keeping people as safe as possible, such as drug checking, were seen as necessary,

'the law has not worked in terms of stopping young people or older people from taking drugs. So, if the law is not going to work, then we need to make it as safe as possible... and I think that... it's like syringe exchanges... ideally there wouldn't be people using syringes and shooting up drugs that are not good for them, but the reality is how do we make this as safe as possible?'

'I think that if it [drug checking] was a community wide thing that would be great, but I think at festivals it should be mandatory, it should be like a first aid station or a requirement. It's not like by not having it, people aren't going to take drugs, people will take drugs anyway'

The underground market itself was also seen as problematic in that it was unregulated, making drug checking necessary so people knew what they had bought and what they were taking,

'Well it's not a regulated market or anything is it? And you know if people are using things, they should have some method of checking that they are safe and that they're what they think they are'

The idea that drug checking encourages drug use was also criticized by interviewees from the wider public. As one respondent noted *'We need to live in the real world. People take drugs'*. Others pointed out that,

'I think the fact that the negatives against it like 'well it's illegal and they shouldn't be doing it'... I just think it is a naïve and dangerous opinion. It's like young people having sex, it's like 'okay in theory maybe they shouldn't be doing it, but they are so let's make it as safe as possible'

'I think the argument for not making it legal is that they think it's encouraging drug behaviour, but I think that ship's sort of sailed'

Alongside festival organisers and KYSNZ volunteers, interviewees from this section of the sample pointed out that the value of drug checking services like KYSNZ was not just about the test itself - information and empowering drug users to make more informed decisions were seen as essential parts of the service,

'it might just empower you to make decisions around that particular pill for example. Like maybe I'll take it and I'll wait longer before I have any alcohol or only take one. It would give you a bit of caution maybe if your usual modus operandi is to kind of go for gold, which mine always was that's just chuck it and have another! It would put that slight edge of caution around how you took the night and that would be a good thing'

'for me drug checking is a really solid way to give agency to people to be able to enact their responsibilities to themselves and their own body by way of giving an informed consent because whatever the nay-sayers say, drug use and introductions of new people to drugs and new drugs to people is happening and will continue to happen so as a society the most responsible thing to do is to be able to help people enact their own responsibilities to themselves by making drug checking available to us'.

Several respondents from this group of interviews also agreed that drug checking services reduced drug related harm. As one respondent noted *'it just makes it a lot more dangerous that we don't actually know what we're taking'*, and several other interviewees agreed that harm reduction was a crucial aspect of drug checking services,

'Yes absolutely. I think that [drug checking reduces harm]. Otherwise the regular person has no way to know whether the drugs they're about to take are safe. It's not like when you get prescription drugs... there's just no way to know that if you're going to take drugs from another source and so if there's a mechanism to check them and make sure that they are safe, why wouldn't you use that? That's obviously going to reduce harm'

'Yes. I think it [referring to drug checking reducing drug related harm] does yeah. I think it's definitely good for education anyway so I think it's good if people have the choice to know what they're taking and then can make an informed choice from that rather than not knowing ... but I think if it was widely available then my friends would get their pills and things tested

and yeah I don't think anybody would take... there's no way my current friends would take anything that was risky'

'Because I think a lot of people are taking things and they don't realize what's in it so they're taking something that's not what they've been told it is, or they don't know the strength of it. Because it's all illegal and underground. You know I remember my first couple of times taking things, you just have no clue so of course it's [drug checking] going to save people'

'And I know that it's the case [that drug checking reduces harm] that if you have access to a service that allows you to check that it's safer and if you don't you could have a very bad time and sometimes put yourself at risk'

There were only five people who had used the drug checking service offered by KYSNZ. Overall, they were happy with the service that they received and found it helpful in assessing whether to take particular substances or not, and ensuring (as far as possible) that their experience was a pleasant one,

'I found the experience to be very reassuring....because it allows you to... with a bit more certainty to... do a risk assessment of drug taking'

'Yeah just having people that know their stuff and can tell you with confidence information regarding dosing and how maybe... drug strength in and of itself is not necessarily a good thing when you're taking said drug so just having... a reliable source of good information tied to the drug made the experience a lot better'

Other users of KYSNZ appreciated the information and advice that was offered if a substance was what they thought it was, as well as that information made it easier to avoid substances that they did not want to take,

'on one hand, it's tied to consent when you buy drugs in the illegal marketplaces, because of the illegality of it, you are not completely sure if the substance you are buying is what you think you are buying. Or when you are told in effect... XYZ is XYZ you can be safer in your consumption. On the other hand, when it is not what you're expecting it to be, it makes it way more easier [sic] to avoid things that you might not be willing to try or just... that's not what I wanted today so I'm not having it'

'Really good, really professional... I think it's a very necessary thing at festivals in particular. We had something of my son's tested which was MDMA'

'For me it was like stepping into the 21st century, it's what I imagine we should have had forever really. It's been the next best thing to actually taking away the prohibition, to allow people to test the substances they've had to buy on the black market'

A couple of the participants who had used KYSNZ to check their drugs stated unequivocally that they would not take a drug if it was not what they thought it was, and recognized testing as an important intervention that reduced harm,

'Definitely, of course [drug checking reduces harm]. That's like a simple answer to that. You've got people that have got no idea what they're taking, and someone is offering you the possibility to double check first, so of course it is. If I'm buying something and a test result comes back negative, I will not take it'

'I was fortunate. There's times I've used their services, the substances have been what I thought they were so I haven't had to face the decision to destroy or not to consume counterfeits... but had I been told that I had bought a counterfeit I would have decided not to take it straight away. So as far as I'm concerned, they're a vital service and it should be something that is available as public health control.'

KYSNZ due to limited funding and resources have traditionally operated at festivals and events in recognition of the fact that festivals and large events are spaces of intoxication – people attend to have fun and to use alcohol and other drugs. However, several participants noted that wider use of drug checking outside of festivals would be beneficial and wondered if this would be possible in the future,²⁴

²⁴ Participants were clear that this was not a criticism of KYSNZ and that they understood the limits of their service due in part to the grey area of the law that they operated within. KYSNZ also operate static clinics in Wellington and Auckland as well as holding static clinics to coincide with large events that are unable to openly have drug checking available. For example, over the weekend that 'Electric Avenue' was on in Christchurch there was a static clinic at a city centre location. A handful of people who were approached to fill in a survey at 'Electric Avenue' said they had used this static clinic to get their drugs tested before the event.

'whereas if there was [sic] things set up in town then it would encourage people to wait until they got there [to test their drugs] and then if the situation isn't right, it's not too late. You haven't started yet'

'I don't know if most of my youth was in that [festival] setting. So, I guess, on a personal perspective I'd find testing functions more useful if they were generally available, not specifically available at events'

'I guess it's interesting the way KYS has been positioned to be targeting that festival group and I can see why that is, but I wonder if then they're going to miss a lot of people who would like to have their drugs tested to potentially make sure that they're safe too? And so, is it really becoming synonymous with young people and festivals or what about the people who don't belong in those communities?'

'I'd be very interested and keen to use them, but I've just never found them to be accessible enough and at the right time, right place'.

One of the interesting themes that came out of the festival organiser and KYSNZ volunteer interviews was that drug testing could potentially impact on the illegal market to improve the quality of drugs sold. The interviewees from the wider public sample also noted these issues,

'I feel like it definitely reduces that risk and I feel like it just... knowing that there is drug checking available, I feel in the dealer communities acts as harm reduction just because dealers are aware that customers are taking their powders to Know Your Stuff makes them more reluctant to cut things'.

'Yeah there's an awareness of harm reduction in those communities and an awareness of Know Your Stuff and.... if there was somebody that someone took a certain dealers' stuff to Know Your Stuff and it was found to have something dangerous then they would be kicked out from that community and probably kicked out of other online communities as well... they would potentially lose a lot of their customer base so there's a system of accountability that drug... proper drug checking really helps with'.

'And it [drug checking] would help regulate it a little bit so if you were to buy drugs off someone and they're shit, you're not going to buy them off that person again. Maybe it would make them become less adulterated or less rubbish'.

'I think that also it [drug checking] has a kind of flow on effect..... if testing services are established then I think the market is less exposed to..... and I think that sellers will be less likely to supply wrongfully identified drugs if people know what they're like and have the option of testing... or you know people who do sell falsely identified drugs kind of get drowned out by people who then test them and find out that that's what they are'

5.5 Interviews: Discussion

All 66 people who were interviewed thought drug checking was a good idea, that it reduced harm and supported a change in the law to give drug checking legal status. For medical personnel the key problem they encountered was festival patrons presenting with unusual symptoms related to unknown substances. All of the medical personnel interviewed supported drug checking, in part, to address these kinds of issues and to give them a better idea of how to treat those who ended up in the first aid area. They also recognised that taking a prohibition focused approach to illegal drug use was not helpful, that it did not stop young people taking drugs, and stated that whilst it may be preferable, in their opinion, for young people not to take illegal drugs, brushing the issue under the carpet would only increase harm.

Festival organisers were keen to have KYSNZ at their events as part of a whole package of harm reduction measures to make their events as safe as possible for all attendees. The key barrier was the legal status of drug checking and the fact that they could be prosecuted under s12 of the MODA 1975. If this barrier was removed then all the festival organisers stated that they would have KYSNZ at their events. For organisers that did risk having KYSNZ at their events, the legal status meant that they had to be low key about their presence and were unable to have clear signage or to advertise, which some saw as another barrier to their harm reduction efforts. Some of the festival organisers interviewed said that they would support having drug checking onsite the day before the event if the law was changed, so attendees could use drug checking beforehand. This would mean that any dangerous substances found could be quickly and clearly communicated before the events started. Given the experiences of DIMS in the Netherlands, such warnings are effective at reducing drug related harms and fatalities (Brunt, 2017). A recent innovation in the New Zealand context is the Drug Information and Alert New Zealand (DIANZ, see <https://www.highalert.org.nz/about-us/>) that started operating

in 2020, facilitating information sharing between groups involved in harm reduction and drug checking like KYSNZ. Festival organisers also cited other benefits of having KYSNZ at their events such as sharing information with medical personnel and noted that they had fewer serious incidents when they included KYSNZ in their harm reduction approach.

For KYSNZ volunteers their involvement in drug checking was motivated by a number of factors. For some it was personal and related to their own use of psychoactive substances, for others it was related to academic interests such as the chemistry of the testing process. Across this diverse group of volunteers was the clear opinion that drug checking reduced drug related harm, with several interviewees from this group noting that they had witnessed people disposing of drugs that were not what they thought at the time of purchase, or that had come back as including an unwanted or potentially dangerous substance. All KYSNZ volunteers were motivated by a belief in harm reduction approaches and a key finding was that drug checking was noted as being about *more than* just the test itself. The brief face-to-face intervention was cited by some as the most important thing about the drug checking service, and that the conversation around dosage, drug interactions and other harm reduction advice was crucial in reducing the harms from drug use. In light of the KYSNZ data that demonstrates most substances tested were as thought, harm reduction in this setting has a broader function – to ensure that those who take substances after testing because they were what they thought, receive harm reduction information about how to make use of that substance safer. Therefore the ‘success’ of drug checking needs to be viewed within broader parameters than drug disposals only.

The general public interviewees raised a number of key issues. For several their status as parents of teenage children led to their support of drug checking services. They recognised that their children would inevitably be offered or experiment with drugs and wanted to ensure that they were as safe as possible while doing so. That is not to say they encouraged or necessarily condoned their teenager’s use of illegal drugs, but they were realistic in their approach and acknowledged that use of illegal drugs like MDMA were normalised in their children’s friendship groups. This group of interviewees were also unanimous in the view that drug checking reduced drug related harm. They supported the dissemination of harm reduction information alongside the testing and liked the idea that those using drug checking services were given information to enable them to make an informed choice about drugs in their possession. For other interviewees who were embedded in the cultures of intoxication within the NTE and festival scene, drug checking was seen as a valuable tool to enable a pleasurable experience, and to minimise the harms related to their use of illegal drugs. While only a handful of

participants in this sample had used KYSNZ's drug checking services they were all really happy with the way that the service was run, the friendly and approachable volunteers as well as the level of knowledge volunteers had around the test results, but also appreciated the advice around dosing, drug interactions and harm reduction in general. For these drug consumers drug checking was also about more than just the test itself.

As well as the key findings discussed above, there were some common findings across all four groups of interviewees. Two themes emerged related to the underground or illegal market and the current system of prohibition. All four groups stated that drug checking would have an effect on drug quality within the existing underground market. Participants noted that drug dealers would not be able to sell poor quality substances as their customers would have access to drug checking and choose another supplier if below par drugs were consistently found through checking. This finding is supported in the academic literature about drug checking, with research noting that drugs in countries with extensive drug checking services are more often what consumers thought at time of purchase compared to countries who do not have drug checking systems, and that drug dealers are deterred from selling hazardous substances through the presence of drug checking (Spruit, 2001; Kriener et al., 2001; Parrott, 2004). Interviewees across all four groups also expressed the opinion that the current system of prohibition was ineffective in stopping people from using illegal drugs. There was agreement amongst all interviewees that people would use illegal drugs anyway, and that the law was not working to prevent use. Most importantly the current approach to some drugs rooted in prohibition was seen to exacerbate the harms related to substance use, due to the potential of the underground market to produce adulterated, unregulated substances – several of those interviewed commented that this was one reason why drug checking services were necessary.

A further issue to note from the interviews is that several participants expressed an interest in wider availability of drug checking services. It was acknowledged, particularly by the KYSNZ volunteer sample, that KYSNZ often only reached a relatively wealthy, middle class, Pākehā population, and that it would be beneficial to offer drug checking services to a more diverse range of people who used drugs. Others said that as they were not festival goers themselves availability of drug checking services was problematic for them and that they would welcome drug checking services being available in the wider NTE. The introduction of the monthly static testing clinics at the NZ Drug Foundation offices in Wellington and more recently in Auckland may partly address these issues, which are also undoubtedly related to funding and equipment constraints.

Finally, it is of note that the language used in the interviews by some participants around drug checking was infused with the word 'safe'. It is unclear whether this was just a function of the interview process, but it is important to acknowledge that drug checking services do not indicate, nor do KYSNZ volunteers tell their clients, that it is safe to use the drugs tested. The language used is cautionary, as noted by some of the KYSNZ volunteers, so this may be a misconception by some interviewees that needs to be addressed – drug checking can lower the level of risk involved in using a substance and make it *safer*, but they cannot (and do not) guarantee that using a particular substance is safe (see also Olsen et al., 2019).

6 KYSNZ self-reported data²⁵

KYSNZ have been carrying out drug checking at festivals (and more recently at static clinics in Wellington and Auckland) for approximately five years. The result of every test is recorded and each year KYSNZ collate their results across the event season, analysing:

- what people thought they had,
- what they actually had, and
- what decisions they made about taking the substances

Both the number of samples tested and the number of events attended by KYSNZ have increased. As their website notes, in the 2019 to 2020 festival season KYSNZ was at 22 events during this period and tested a total of 1368 samples. This is a 70% increase on the number of samples KYSNZ tested in 2018-19, and their workload has grown significantly over the last four years;

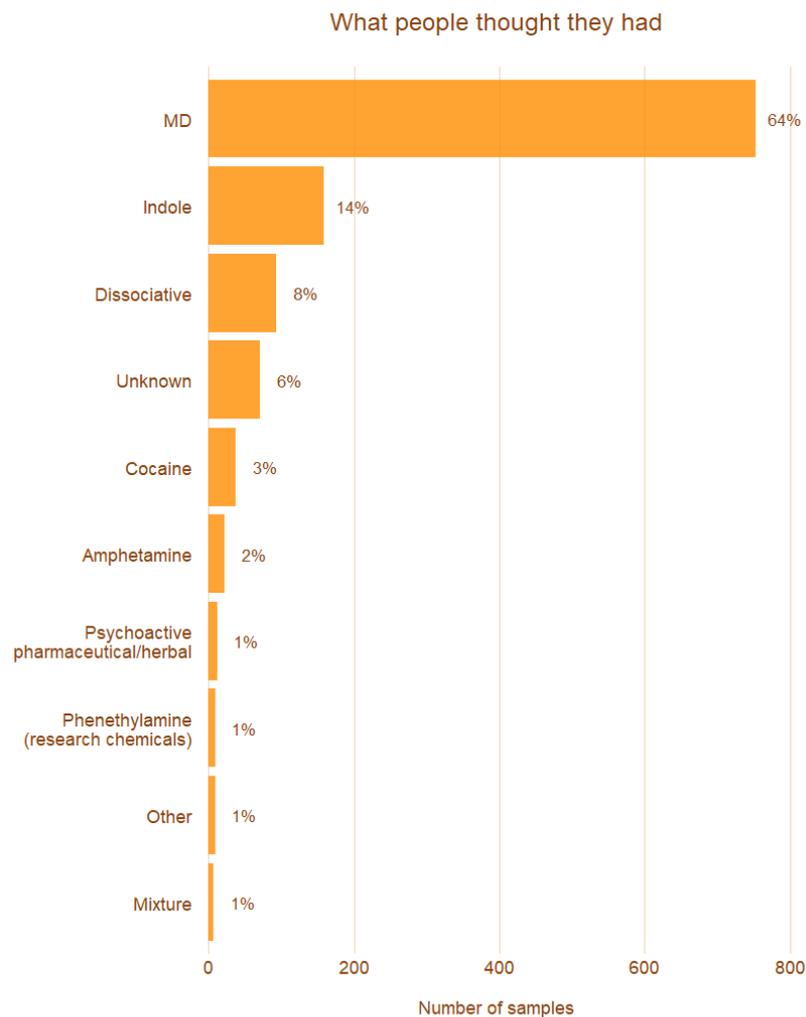
- In 2016-17 330 samples tested at 9 events
- In 2017-18 445 samples tested at 7 events
- In 2018-19 805 tested samples at 13 events
- In 2019-20 1,368 samples tested at 22 events

²⁵ All data in this section is taken directly from the KYSNZ website (<https://knowyourstuff.nz/our-results-2/testing-results/testing-reports/2019-2020-testing-report/>) who share their testing results publicly after each season. The wording and some of the discussion around the results may be slightly different due to the analysis for this report emphasising particular issues.

6.1 KYSNZ data: what people thought they had bought/what people actually had/consistency with presumed content

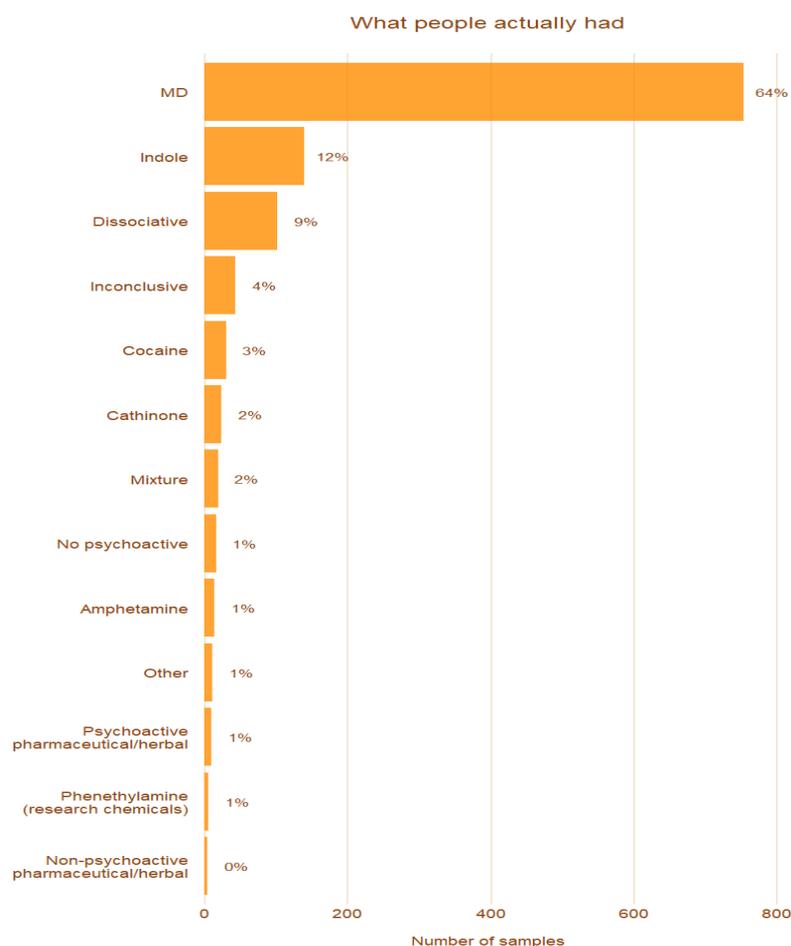
Figures 24 details what substances clients of KYSNZ thought they had bought with figure 25 noting what the testing actually showed i.e. what the substances actually were.

Figure 24: KYSNZ data: what people thought they had bought (2019-20)



Drug family	Number of specific drugs (what people thought they had)
MD	738 MDMA, 13 MDA, 1 5-APB, 1 bkMDMA
Indole	132 LSD, 14 DMT, 8 psilocybin (mushrooms), 2 5-MeO-DMT, 1 ALD-52, 1 4-HO-MET, 1 ETH-LAD
Dissociative	91 ketamine, 1 deschloroketamine, 1 DXM
Unknown	70 unknown, 1 MDMA or amphetamine
Cocaine	38 cocaine
Amphetamine	17 amphetamine, 5 methamphetamine
Psychoactive pharmaceutical/herbal	4 alprazolam, 3 diazepam, 1 methylphenidate, 1 benzodiazepine, 1 suboxone, 1 melatonin, 1 phenibut
Other	2 GHB, 2 mephedrone, 2 noopept, 1 GBL, 1 methedrone, 1 amfonelic acid
Phenethylamine (research chemicals)	4 2C-B, 4 mescaline, 1 2C-E
Mixture	2 MDMA + amphetamine, 2 MDMA + ketamine, 2 MDMA + MDA, 1 cocaine + ketamine

Figure 25: KYSNZ data: what people actually had (2019 -20)



Drug family	Number of specific drugs (what people actually had)
MD	754 MDMA
Indole	121 LSD, 10 DMT, 5 psilocybin (mushrooms), 1 ALD-52, 1 4-AcO-DMT, 1 5-MeO-DMT, 1 ETH-LAD
Dissociative	101 ketamine, 1 DXM
Inconclusive	43 testing inconclusive
Cocaine	30 cocaine
Cathinone	6 n-ethylpentylone, 6 mephedrone, 6 eutylone, 5 cathinone - unknown type, 1 methylone
Mixture	4 cocaine + caffeine, 3 MDMA + caffeine, 3 MDMA + n-ethylpentylone, 2 MDMA + cocaine, 1 MDMA + MDA, 1 MDMA + ketamine, 1 cocaine + ketamine, 1 DXM + caffeine, 1 ketamine + PCP analogue, 1 MDMA + GBL, 1 MDMA + mephedrone
No psychoactive	4 parexyl toothpaste, 2 glucose, 2 lactose, 1 sucrose, 1 cherry oil, 1 coffee creamer, 1 perfume oil, 1 scented resin, 1 sulphate chromic, 1 tetrahydrofurfuryl oleate, 1 valerian root oil
Amphetamine	7 amphetamine, 4 methamphetamine, 2 ephedrine, 1 methylamphetamine
Other	5 caffeine, 2 GBL, 1 BZP, 1 TFMPP, 1 2(3-indolyl)-N-Methylethylamine, 1 5F-MDMB-PINACA
Psychoactive pharmaceutical/herbal	3 quetiapine, 1 diazepam, 1 methylphenidate, 1 phenibut, 1 5-HTP, 1 melatonin, 1 paroxetine, 1 temazepam
Phenethylamine (research chemicals)	4 2C-B, 2 mescaline
Non-psychoactive pharmaceutical/herbal	1 paracetamol, 1 cacchou, 1 dimethyl sulfone, 1 glucosamine

As figures 24 and 25 above show there was not a large difference in what clients thought they had and what substances actually tested as. Figure 26 below notes that 86% of the substances tested consistently with what clients thought they were, a similar result to 2018/2019 and an increase on previous years 2016/2017, 2017/2018 (see figure 27). Only 8% of samples gave results that were not consistent with what clients thought they had. The increase in consistency with presumed content over time is a positive trend and supports the assertion by some of the interviewees that drug checking

may have an effect on the quality of drugs sold in the illegal market. The international literature also notes this trend, that the quality of drugs in countries that have drug checking is higher than the quality of drugs in countries that do not have drug checking (see for example, Brunt, 2017).

Figure 26: KYSNZ data: consistency with presumed content (2019-20)

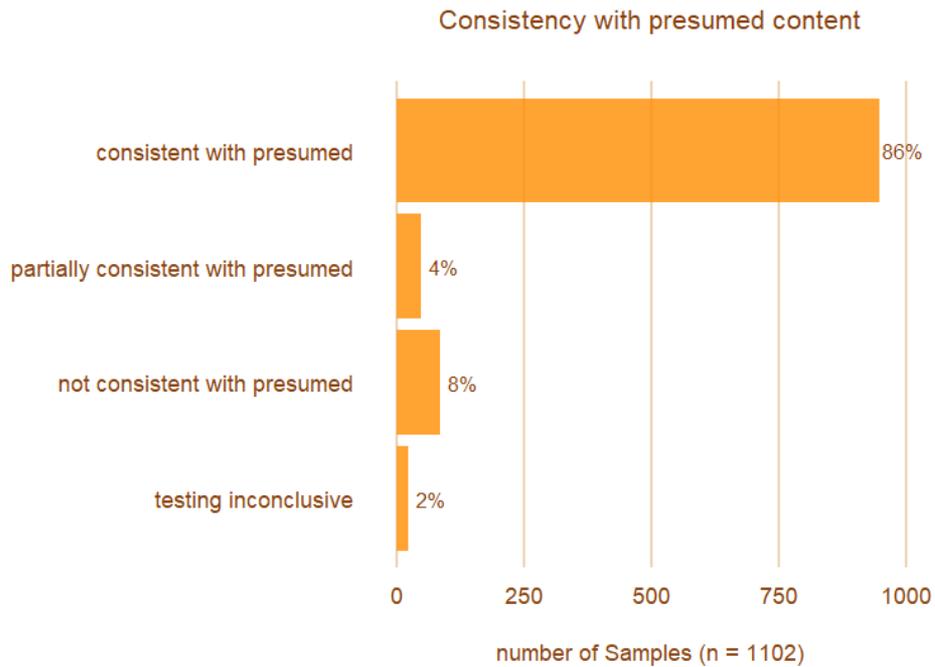
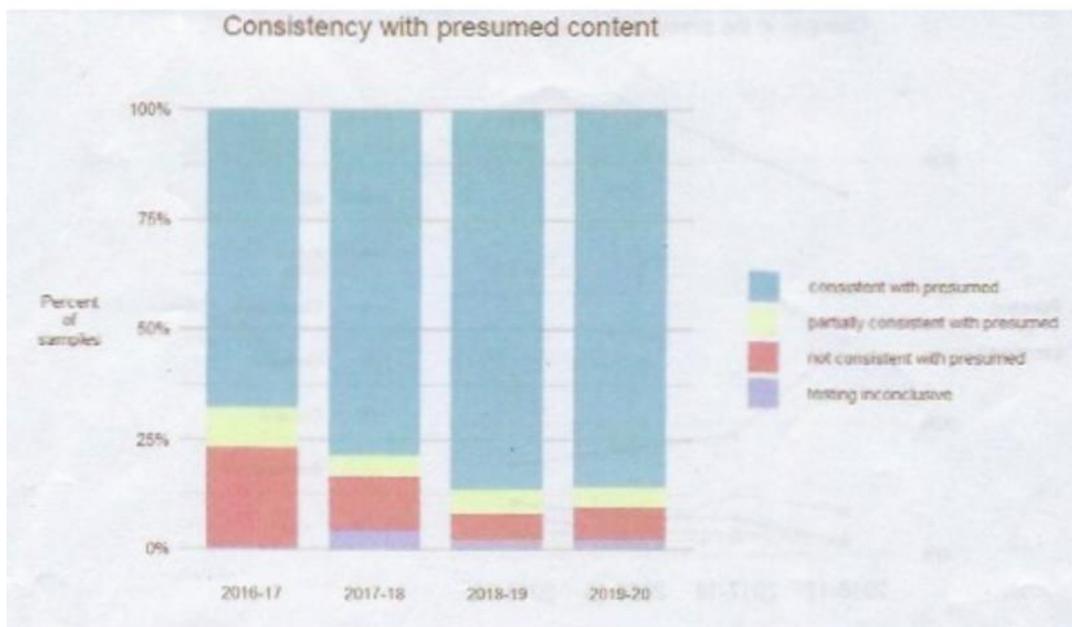


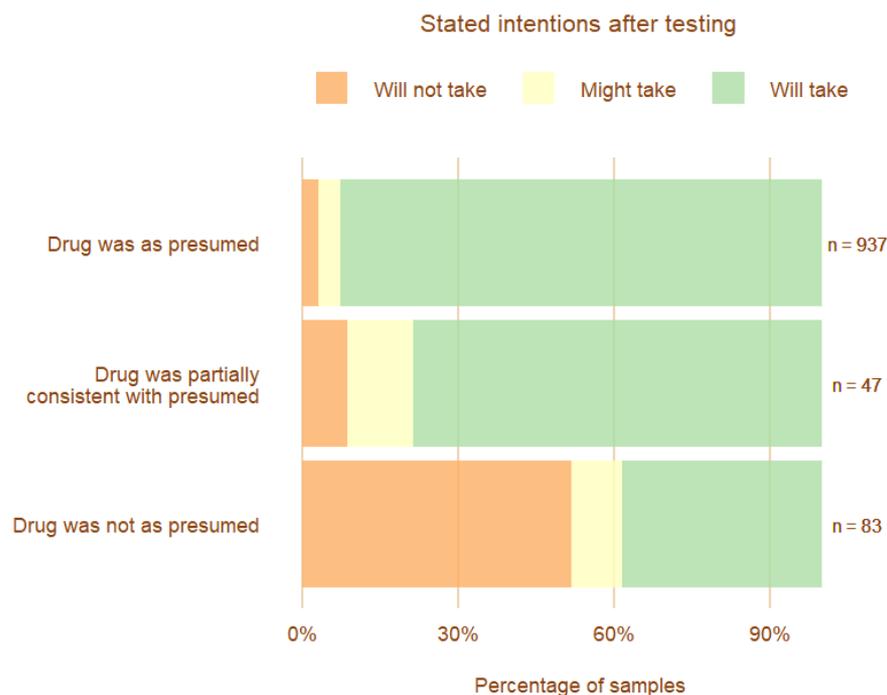
Figure 27: KYSNZ data: Consistent with presumed content over time



6.2 KYSNZ data: intentions after testing

In relation to the test results, 52% of people stated that they would not take substances if they were not as presumed (see figure 28). In conjunction with the survey results that showed 68% of participants changed their behaviour after drug checking (noting that these changes were not necessarily drug disposals), it is evident that clients using KYSNZ drug checking services take the results seriously as well as the harm reduction advice that is given.

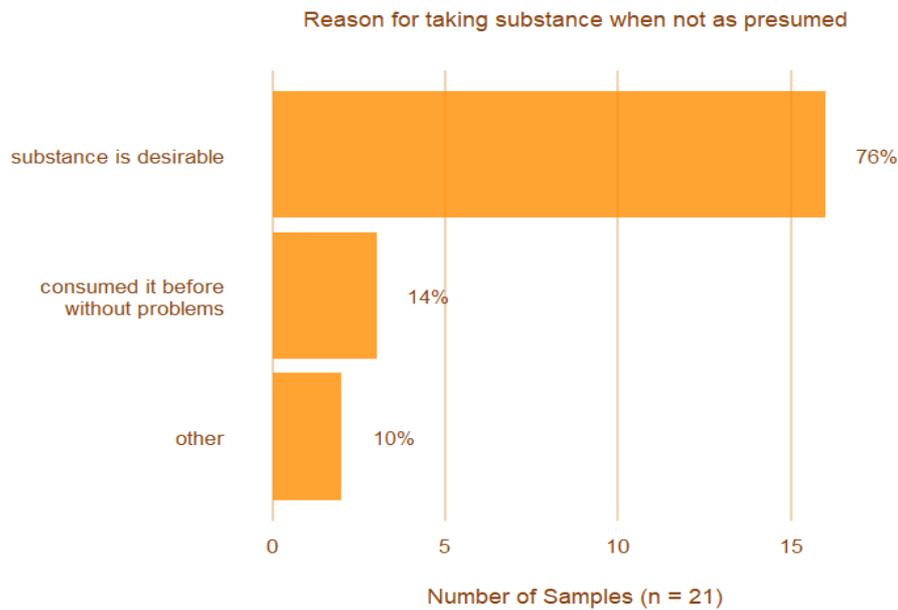
Figure 28: KYSNZ data: stated intentions after testing (2019-20)



However, people's behaviour around drug checking results is impacted by multiple, interrelated factors some of which are presented in figure 29²⁶. The main reason why clients of KYSNZ still decide to take substances, even though they are not what they thought they were, is because the substance is still desirable. For example, if a substance was presumed to be MDMA but turned out to be cocaine it may still be desirable from the client's perspective to take it. The key issue here is that they are at least informed as to what the substance actually is. Therefore decisions about whether to take a particular substance or not are affected by what drugs the test results show, when the drug is not as presumed.

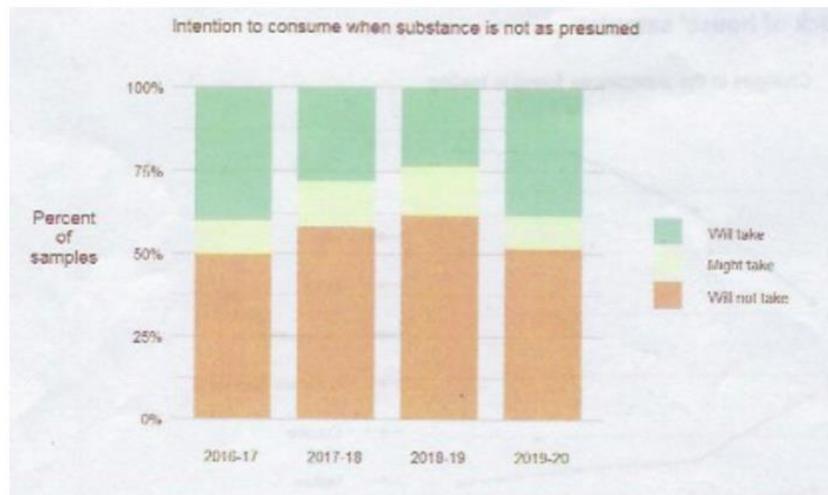
²⁶ The small sample in this figure means that the findings are indicative only.

Figure 29: KYSNZ data: reason for taking substance when not as presumed



There are also fluctuations in peoples' intent to consume when a substance is not as presumed over time (see figure 30). The number of KYSNZ clients who stated that they would not take a substance after testing if it was not as presumed rose from 2016-2019, but dipped slightly in the 2019-2020 festival season. Given the small numbers in figure 30 (2016-17 = 70, 2017-2018 = 50, 2018 -2019 =47 & 2019-2020 = 83) this could be due to random fluctuations in the results, but it could also be related to changes in the substances brought in for testing that were not as presumed. Substances that are tested and are not what clients of KYSNZ thought they were may either be hazardous or still desirable (see figure 29). Therefore fluctuations in these test results could affect the intention to consume over time noted in figure 30. Further research into these nuances of client's decision making is recommended.

Figure 30: KYSNZ data: intention to consume when substance is not as presumed over time



6.3 KYSNZ self-reported data discussion

KYSNZ data demonstrate some positive trends in relation to the quality of substances checked. In the main, the substances that clients brought for testing were what they had presumed and been sold as. The proportion of tests where the actual content was found to be consistent with presumed content increased over time from 2016 - 2020 and these findings may indicate that having drug checking services like KYSNZ are impacting the illegal market, as has been noted in other jurisdictions (See Brunt, 2017). This also supports what some of the interviewees noted, that drug checking ‘*keeps dealers honest*’ and that those selling low quality drugs would be pushed out of the market if testing consistently showed poor quality products. However, more research is needed in this area to say with certainty that this is the case as for example, external factors, related to the make-up of the illegal drug market may also impact these figures. The stated intentions after using reported by the KYSNZ data are also encouraging with a relatively high number of people stating that they would not take a substance if it was not as presumed. However, the data gathered by KYSNZ also shows that decisions around whether to take a substance or not, even if it is not what was presumed, are affected by multiple factors and that the nuances around these decisions are important to consider. This is also the case when looking at fluctuations in intentions to consume when the substance is not as presumed over time. Possible complexities that the data has not accounted for may influence these fluctuations and further research into these areas would be beneficial.

That KYSNZ make their data publicly available demonstrates the openness and transparency in the organisation about their drug checking service and their results. It should also be noted that the

method used to test substances using the FT-IR spectrometer in addition to reagent testing are considered to be of a high standard that is internationally recognised.

7 Conclusion and Recommendations

As with all research there are some limitations to the methods used gather data. The sample was purposive with specific events targeted for data collection. The primary aim being to survey those most likely to be familiar with, and impacted by, drug checking services like KYSNZ. However, to try and reach a wider more diverse section of the population a revised version of the survey for the general public was developed. The initial plan was to do more in-person data gathering at events other than festivals, but this had to be shelved due to the disruption from COVID-19 lockdown. For example, 'Homegrown' the large one day event in Wellington was a planned data collection site, but the event was cancelled just before COVID-19 Alert Levels came into force in New Zealand. The proposed positioning of the data gathering stall at 'Homegrown' would have reached a diverse sample of the population who were at the Wellington waterfront area that day, as well as people attending the 'Homegrown' event. Additionally, a family orientated festival was approached as a data gathering site with the idea that there would be a more diverse range of views, but no response was received after several attempts to contact the festival organisers. To try and access those attending this festival a data gathering stall was planned in the shopping area of the town hosting the event. While the city council were supportive and encouraging, as well as granting permission to carry out the research, there were not enough of the research team available to cover two research sites (one of the other festivals was on the same weekend), so this plan had to be abandoned.

However, the survey sample was reasonably large at 891 participants and with the additional data from a variety of groups who were interviewed a range of experiences and opinions have been gathered throughout 2019/2020. It is significant all of those interviewed from a diverse range of groups (n=66) supported drug checking services and the amendment to the MODA 1975. In conjunction with the survey results there is a high level of support for drug checking services like 'KnowYourStuff' in New Zealand, as well as for a law change to make drug checking services legal. There is a clear mandate for policymakers to go forward and to amend the MODA 1975 to allow drug checking services legal status in New Zealand. Based on the results obtained this report recommends that the amendment to s12 of the MODA 1975 is enacted as soon as possible.

The international literature also supports this course of action as there is no evidence that drug checking increases drug use or encourages those who do not use illegal drugs to begin using them.

Objections to drug checking appear to be based on moral assertions about the use of illegal drugs and are not supported by the research evidence. The international research so far demonstrates the effectiveness of drug checking services to reduce harm in terms of drug disposals and other kinds of behaviour change. The mounting body of international literature on drug checking indicates that in countries where drug-checking has been introduced, it has been effective at reducing drug-related harms, and the New Zealand specific data gathered for this research produces similar results, as do the data gathered by KYSNZ.

The research demonstrates that when a test result comes back as not what the participant thought they were purchasing, or showed a result of an undetected adulterant, this had the potential to change the drug taking practices of the user whereby they either disposed of the substance or took less. The research findings reported here, that drug checking is about *more than* the test itself, are also supported in the literature discussed in this report. The value of face-to-face brief interventions alongside testing of substances was a key finding of this project which is also mirrored in international research in this area. These kinds of harm reduction interventions are particularly valuable for those whose drugs were what they thought once checked and who intend to consume them, by offering harm reduction information about dosing, drug interactions, method of consumption and general harm reduction information about hydration and alcohol use. The high levels of improvement in harm reduction knowledge reported in the survey results are an important measure of success of drug checking services. Therefore, behaviour change and 'success' should not only be measured in terms of drug disposals – these are important, but the wrap around discussion that occurs alongside testing is of crucial harm reduction value. These findings resonate with larger debates about intoxication and the acceptability of substance use to alter states of consciousness at festivals and within the wider NTE. Substance use is embedded in contemporary cultures of intoxication, despite the illegal status of drug use such as MDMA, LSD and cannabis (Hutton, 2020). This needs to be accepted as a normalised reality if avoidable harms from substance use are to be reduced.

Several avenues for further research have also been identified throughout this report. For example, the KYSNZ data highlights the complexities of people's decision making around illegal substances after testing, and further research around these decisions would be useful to inform policy and service development going forward. In addition, those who *did not* change their drug taking behaviour are an important group to consider, and research exploring in more detail the reasons why people *do not* change their behaviour after using drug checking services would add to the evidence base around drug checking as a harm reduction intervention. The wider development of drug checking services was

noted by participants as something that they would find helpful in their efforts to reduce harm. The feasibility of expanding KYSNZ's drug checking services needs to be considered, as this has the potential to reach a more diverse range of people who use drugs. It would also be useful to explore culturally appropriate options for drug checking services for Māori and other groups in the New Zealand context, as it cannot be assumed that all groups in culturally diverse and settler societies have the same needs. As has been noted in previous research (see Measham, 2020; Laing, Tupper & Fairburn, 2018) those who use opioids and people who inject drugs are a group that could benefit from drug checking, although this may be more urgent in countries like the US and Canada that have suffered from a large increase in opioid related deaths in recent years.

Recommendations

1. Amend s.12 of the Misuse of Drugs Act 1975 (MODA 1975) to allow drug checking and make services like KYSNZ legal.
2. Support the expansion of drug checking services and a harm reduction approach to illegal drugs in principle.
3. Develop a long term plan for drug checking and harm reduction in New Zealand.
4. Support further research about and evaluation of drug checking in the New Zealand context, with a focus on why people do or do not change their behaviour after receiving drug checking results, and the effects of drug checking on the underground 'black' market.
5. Consider a range of harm reduction initiatives and policy options both at festivals, other settings, and the wider community, as part of an ongoing commitment to consideration of drug law reform.

8 References

- Bardwell, G., Boyd, J., Arredondo, J., McNeil, R., & Kerr, T. (2019). Trusting the Source: The Potential Role of Drug Dealers in Reducing Drug-related Harms via Drug Checking. *Drug and Alcohol Dependence*, 198, 1–6. <https://doi.org.10.1016/j.drugalcep.2019.01.035>
- Barratt, M.J., Bruno, R., Ezard, N., & Ritter, A. (2018). Pill Testing or Drug Checking in Australia: Acceptability of Service Design Features. *Drug and Alcohol Review*, 37, 226 – 236. <https://doi.org.10.111/dar.12576>
- Barratt, M.J, M Kowalski, L.J Maier, and A Ritter. 2018. *Global review of drug checking services operating in 2017*. In Drug Policy Modelling Program Bulletin No. 24. Sydney, Australia.
- Barton, A. (2020). Intoxication and harm reduction in Hutton, F. (2020) (Ed.). *Cultures of Intoxication: Key Issues and debates*, Palgrave MacMillan, London, UK.
- Benschop, Rabes, and Korf, D.J. (2002). Pill Testing-MDMA & Prevention. Pill testing, MDMA and prevention: a scientific evaluation in three European cities. In. Amsterdam: Rozenberg Publishers.
- Brunt, T. (2017). Drug checking as a harm reduction tool for recreational drug users: opportunities and challenges, European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), Lisbon. https://www.emcdda.europa.eu/system/files/attachments/6339/EuropeanResponsesGuide2017_BackgroundPaper-Drug-checking-harm-reduction_0.pdf
- Day, N., Criss, J., Griffiths, B., Gurjal, S.K., John-Leader, F., Johnston, J., & Pit, S. (2018). Music Festival Attendees' Illicit Drug Use, Knowledge and Practises Regarding Drug Content and Purity: A Cross-Sectional Survey. *Harm Reduction Journal*, 15(1). <https://doi.org.10.1186/s12954-017-0205-7>
- European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) .(2020). *Trans-European Drug Information project (TEDI) activity report*, EMCDDA Lisbon (available at, https://www.emcdda.europa.eu/attachements.cfm/att_231074_EN_INT15_NEWIP_Drug%20checking_standards-final_20.12-A4.pdf)

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). (2016). *European Drug Report 2016: Trends and Developments*, Publications Office of the European Union, Luxembourg (available at <http://www.emcdda.europa.eu/system/files/publications/2637/TDAT16001ENN.pdf>).

Fisher, H., Measham, F. (2018). *Night Lives*, APPG, Durham University, The Loop and Volteface. <http://volteface.me/app/uploads/2018/07/Night-Lives-PDF.pdf>.

Garius, L., Ward, B., Teague, K., & Tseloni, A. (2020). Evaluating Harm-Reduction Initiatives in a Night-Time Economy and Music Festival Context. *International Journal of Comparative and Applied Criminal Justice*. <https://doi.org/10.1080/01924036.2020.1719530>

Groves, A. (2018). 'Worth The Test?' Pragmatism, Pill Testing and Drug Policy in Australia. *Harm Reduction Journal*, 15(1). <https://dx.doi.org/10.1186/s12954-018-0216-z>

Hakkarainen, P., O’Gorman, A., Lamy, F., & Kataja, K. (2019). (Re)Conceptualizing “Polydrug Use”: Capturing the Complexity of Combining Substances. *Contemporary Drug Problems*, 46(4), 400 – 417.

Hill, A. (2015), 'Fourth death linked to potentially fatal “Superman” MDMA batch', *The Guardian* (available at <https://www.theguardian.com/society/2015/jan/02/fourth-death-linked-superman-MDMA>).

Hollett, R.C., & Gately, N. (2019). Risk intentions following pill test scenarios are predicted by MDMA use history and sensation seeking: A quantitative field study at an Australian music festival. *Drug and Alcohol Review*, 38, 473 – 481. <https://doi.org/10.1111/dar.12936>

Hungerbuehler, I., Buecheli, A., & Schaub, M. (2011). Drug Checking: A Prevention Measure for a Heterogeneous Group with High Consumption Frequency and Polydrug Use – Evaluation of Zurich’s Drug Checking Services. *Harm Reduction Journal*, 8(16). <https://doi.org.10.1186/1477-7517-8-16>

Henderson, S. (1996). E types and Dance Divas in Rhodes. T., and Hartnoll, R. (1996) (Eds), *AIDS, Dugs and Prevention: Perspectives on individual and community action*, London, Routledge, p. 66-85.

Hutton. F. (2020). *Cultures of Intoxication: Key Issues and debates*, Palgrave MacMillan, London, UK.

Hutton, F. (2010). Kiwis, Clubs and Drugs: Club Cultures in Wellington, New Zealand, *Australian and New Zealand Journal of Criminology*, 43 (1): 91-111.

Hutton, F. (2006). *Risky pleasures? Club cultures and feminine identities*, Aldershot, Ashgate.

Johnston, J., Barratt, M.J., Fry, C.L., Kinner, S., Stooove, M., Degenhart, L., George, J., Jenkinson, R., Dunn, M., & Bruno, R. (2006). A Survey of Regular MDMA Users' Knowledge and Practises Around Determining Pill Content and Purity: Implications for Policy and Practises. *The International Journal of Drug Policy*, 17, 464 – 472. <https://doi.org/10.1016/j.drugpo.2006.03.008>

Kerr, T., and Tupper, K. (2017). *Drug Checking as a harm reduction intervention: evidence review report*. British Columbia Centre on Substance Use. (Available at, <https://www.bccsu.ca/wp-content/uploads/2017/12/Drug-Checking-Evidence-Review-Report.pdf>)

Kriener, H. Billeth, R. Gollner, C. Lachout, S. Neubauer, P. Schmid, R. (2001), *An inventory of on-site pill-testing interventions in the EU*, EMCDDA, Lisbon (available at http://www.emcdda.europa.eu/attachements.cfm/att_2878_EN_pill_testing_report.pdf).

Laing, M.K., Tupper, K.W., & Fairburn, N. (2018). Drug Checking as a Potential Strategic Response in the Fentanyl Era. *International Journal of Drug Policy*, 62, 59 – 66. <https://doi.org/10.1016/j.drugpo.2018.10.001>

Makkai, T., Macleod, M., Vumbaca, G., Hill, P., Caldicott, D., Noffs, M., Tzanetis, S., Hansen, F. (2018). *Report on Canberra GTM Harm Reduction Service*, Harm Reduction Australia.

Malins, P. (2019). Drug dog affects: Accounting for the broad social, emotional and health impacts of general drug detection dog operations in Australia. *International Journal of Drug Policy*. May; 67:63-71. doi: 10.1016/j.drugpo.2019.03.004.

McRae, K., Tobias, S., Tupper, K., Arredondo, J., Henry, B., Mema, S., Wood, E., & Ti, L. (2019). Drug Checking Services at Music Festivals and Events in a Canadian Setting. *Drug and Alcohol Dependence*, 205, 107589. <https://doi.org/10.1016/j.drugalcdep.2019.107589>

Measham, F.C. (2020). City Checking: Piloting the UK's First Community-Based Drug Safety Testing (Drug Checking) Service in 2 City Centres. *British Journal Clinical Pharmacology*, 86, 420 – 428. <https://doi.org/10.1111/bcp.14231>

Measham, F.C. (2019). Drug Safety Testing, Disposals and Dealing in an English field: Exploring the Operational and Behavioural Outcomes of the UK's First Onsite 'Drug Checking' Service. *International Journal of Drug Policy*, 67, 102 – 107. <https://doi.org/10.1016/j.drugspo.2018.11.001>

Olsen A., Wong G., McDonald D. (2019). *ACT Pill Testing Trial 2019: Program Evaluation*. Australian National University: Canberra ACT.

Parrott, A. C. (2004), 'Is MDMA MDMA? A review of the proportion of MDMA tablets containing MDMA, their dosage levels, and the changing perceptions of purity', *Psychopharmacology* 173, pp. 234-241 (<https://doi.org/10.1007/s00213-003-1712-7>).

Peacock, A, D Gibbs, M Barratt, R Bruno, R Sutherland, R Page, J Uporova, C Salom, P Hill, P Dietze, S Lenton, L Degenhardt, and N Ezard. (2019). *Engagement in drug checking ('pill testing') and behavioural responses by people who use drugs in Australia*. In Drug Trends Bulletin Series. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney.

Ritter, A. (2020). Making Drug Policy in Summer – Drug Checking in Australia as Providing More Heat than Light. *Drug and Alcohol Review*, 39, 12 – 20. <https://doi.org/10.1111/dar.13018>

Ritter, A., & Cameron, J. (2006). A review of the efficacy and effectiveness of harm reduction strategies for alcohol, tobacco and illicit drugs. *Drug and alcohol review*, 25(6), 611–624. <https://doi.org/10.1080/09595230600944529>

Saleemi, S., Pennybaker, S.J., Woolridge, M., & Johnson, M.W. (2017). Who is 'Molly'? MDMA adulterants by product name and the impact of harm reduction services at raves. *Journal of Psychopharmacology*, 31(8), 1056 – 1060. <https://doi.org/10.1177/0269881117715596>

Scott, I.A., & Scott, R.J. (2020). Pill Testing at Music Festivals: Is it evidence based harm reduction? *Internal Medicine Journal*, 50, 395 – 402. <https://doi.org/10.1111/imj.14742>

Siddique, H. (2015), 'Superman "MDMA" pill deaths are result of "illogical and punitive drugs policy"', *The Guardian*, (available at <https://www.theguardian.com/society/2015/jan/05/superman-MDMA-pill-death-result-uk-illogical-punitive-drugs-policy>)

Southey, M., Kathirgamalingam, A., Crawford, B., Kaul, R., McNamara, J., John-Leader, F., Heslop, J., & Winona Pit, S. (2020). Patterns of MDMA use amongst live music event attendees and their opinions on pill testing: a cross sectional study. *Substance Abuse Treatment, Prevention and Policy*, 15. <https://doi.org/10.1186/s13011-020-00295-1>

Spruit, I. P. (2001). 'Monitoring synthetic drug markets, trends, and public health', *Subst Use Misuse*, 36: 23- 47.

Valente, Helena, Daniel Martins, Helena Carvalho, Cristiana Vale Pires, Maria Carmo Carvalho, Marta Pinto, and Monica J. Barratt. (2019). Evaluation of a drug checking service at a large scale electronic music festival in Portugal, *International Journal of Drug Policy*, 73: 88-95.

Winstock, A. R., K. Wolff, and J. Ramsey. (2001). 'MDMA pill testing: harm minimization gone too far?', *Addiction*, 96: 1139-48.

9 Appendices

9.1 Appendix 1: drug checking questionnaire (FEST, FEST (Gen)) (this was produced in A5 booklet style to be more user friendly)



Drug Checking at New Zealand Festivals

Q1 Do you attend festivals or large events (e.g. Homegrown/Electric Avenue) in New Zealand?

- Yes
- No (please go to Q16)

Q2 How many festivals or large events have you ever attended?

- 1-2
- 3-4
- 5-6
- 7-8
- 9-10
- More than 10

Q3 Which festivals or large events have you attended in the last 12 months? (List below)

Q4 What is the attraction of festivals or large events for you?

(You can choose more than one option from the list below)

- Music
- Outdoors
- Hanging out with friends
- Doing something different
- Drug use
- Other: _____

Q5 Do you drink alcohol when you go to festivals or large events?

- Never
- Sometimes
- Often
- Always

Q6 If you do drink alcohol when you attend festivals or large events, how much will you drink each day?

(A 'drink' refers to a bottle of beer/glass of wine/shot of spirits/RTD e.g. vodka cruiser)

- none
- 1-4 drinks
- 5-8 drinks
- 9-12 drinks
- 13-16 drinks
- 17-20 drinks
- Over 20 drinks

Q7 Are you planning to use illegal drugs e.g. cannabis, LSD (acid), ecstasy, amphetamines ('speed') at this festival or large event?

- Definitely yes
- Probably yes
- Probably not
- Definitely not
- Undecided

Q8 If you are planning to use illegal drugs at this festival/event which ones will you use?
(You can choose more than one option from the list below)

- Cannabis
- LSD ('Acid')
- Magic Mushrooms
- Ecstasy
- Amphetamines ('Speed')
- Methamphetamine ('Ice', 'Crack')
- Cocaine
- Ketamine
- Other: _____

Q8 Is this the first time you will have used these drugs?

- Yes (please go to Q16)
- No

Q9 If you have used these illegal drugs before how often do you use them?

(Please put a tick or X to indicate your answers)

	Daily	Weekly	Monthly	Once every 3 months	Once every 6 months	Only on special occasions e.g. birthdays/new year
Cannabis						
LSD ('Acid')						
Magic Mushrooms						
Ecstasy						
Amphetamines e.g. 'speed'						
Methamphetamines e.g. 'ice', 'crack'						
Cocaine						
Ketamine						
Other/s (please state in box below)						

Q10 Are you aware of drug checking (also known as 'pill testing') services such as 'KnowYourStuffNZ' (KYSNZ)?

- Yes
- No (please go to Q16)

Q11 Have you used drug checking services such as 'KnowYourStuffNZ' (KYSNZ)?

- Yes
- No

Q12 Did you change your drug taking behaviour/practices after using drug checking services e.g. throw away your drugs or take less?

- Yes
- No

Q13 Please say how you changed your drug taking behaviour/practices (you can pick more than one from the list below)

- No change
- Threw away drugs and/or didn't take them
- Took less of the drugs I had tested
- Decided not to drink alcohol with the drugs I had tested
- Decided to take only the drug I had tested and not take it with any other illegal drugs
- Decided to use only alcohol
- Other (please state in the box below)

Q14 As a result of using drug checking services would you say your knowledge of harm reduction has

- Stayed the same
- Improved a little
- Improved a great deal
- Other: _____

Q15 How would you rate the drug checking service you received from 'KYSNZ'?

- Excellent
- Very Good
- Average
- Poor
- Very poor

Q16 Indicate the extent you agree or disagree with the statements below

(Please put a tick or X to indicate your choices)

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
'Drug checking services like 'KnowYourStuff' are a good idea'					
'Drug checking services like 'KnowYourStuff' reduce drug related harms'					
'The New Zealand 1975 Misuse of Drugs Act should be changed to make drug checking services like 'KnowYourStuff' legal'					

Q17 How old are you?

- Under 15
- 15-19
- 20-24
- 25-29
- 30-34
- 35-44
- 45 or older
- Prefer not to answer

Q18 How would you describe your ethnicity? (Open ended)

- NZ European/Pākehā
- Māori
- Samoan
- Cook Island Māori
- Tongan
- Niuean
- Chinese
- Indian
- Other: _____
- Prefer not to answer

Q19 How would you describe your gender identity?

- Man
- Woman
- Non-binary
- Gender fluid
- Other (please state in box below)
- Prefer not to answer

Q20 How would you describe your sexuality ?

- Heterosexual
- Homosexual
- Bisexual
- Pan-sexual
- Asexual
- Queer
- Takatāpui
- Other (please state in the box below)
- Prefer not to answer

Q21 If you live in the Wellington region e.g. Wellington CBD/Hutt Valley/Kapiti coast would you be prepared to take part in focus group or an individual interview about drug checking?

- Yes
- No

Please enter your contact details on the separate confidential list - thank you. It may take us a while to get round to everyone depending on how many responses we have but we'll contact you by the beginning of May 2020 ☺

Thanks for filling in our survey – we really appreciate your time! ☺

9.2 Appendix 2: research flyer for festivals (4 of these to an A4 sheet so they were a manageable size to hand out)

 VICTORIA UNIVERSITY OF
WELLINGTON
TE HERENGA WAKA

Drug Checking at NZ Festivals

Researchers from Victoria University of Wellington are carrying out research about drug checking at New Zealand music festivals/events

Fancy filling out a questionnaire to let us know what you think about drug checking? Come along to our stall (we'll be around the wellbeing area) have some water, fruit, top up on your sunscreen, and fill out one of our confidential surveys!

Scan the QR code to access the questionnaire, or head to bit.ly/drugtestingatNZfestivals



9.3 Appendix 3: Drug checking questionnaire (GEN) (this was only distributed online)



Drug Checking at New Zealand Festivals

If you have already filled in this survey at a festival or online, thank you, but please don't fill it in again 😊

- Q1 Which festival/event are you completing this survey at/which festival/event did you pick up the flyer about this survey/where did you see the link to this survey?
- Q2 Do you attend festivals or large events (*e.g. Homegrown/Electric Avenue*) in New Zealand?
- Yes
 - No (*please go to Q7*)
- Q2 How many festivals or large events have you ever attended?
- 1-2
 - 3-4
 - 5-6
 - 7-8
 - 9-10
 - More than 10
- Q3 Which festivals or large events have you attended in the last 12 months? (*List below*)
- Rhythm 'n' Vines
 - Rhythm 'n' Alps
 - Splore
 - Homegrown
 - Electric Avenue
 - Northern Bass
 - Highlife
 - Bay Dreams
 - Luminare
 - Soundsplash
 - Laneway
 - WOMAD
 - Shipwrecked
 - Dimension
 - Other/s (please state in the box provided)
-

Q4 What is the attraction of festivals or large events for you?

(You can choose more than one option from the list below)

- Music
- Outdoors
- Hanging out with friends
- Doing something different
- Drug use
- Other (please state in the box provided)

Q5 Do you drink alcohol when you go to festivals or large events?

- Never
- Sometimes
- Often
- Always

Q6 If you do drink alcohol when you attend festivals or large events, how much will you drink **each day**?

(A 'drink' refers to a bottle of beer/glass of wine/shot of spirits/RTD e.g. vodka cruiser)

- none
- 1-4 drinks
- 5-8 drinks
- 9-12 drinks
- 13-16 drinks
- 17-20 drinks
- Over 20 drinks

Q7 Do you use illegal drugs e.g. cannabis, LSD (acid), Ecstasy, amphetamines ('speed').

- yes
- No

Q8 If you are plan to use illegal drugs at festivals/events which ones do you commonly use?

(You can choose more than one option from the list below)

- Cannabis
- LSD ('Acid')
- Magic Mushrooms
- Ecstasy
- Amphetamines ('Speed')
- Methamphetamine ('Ice', 'Crack')
- Cocaine
- Ketamine
- Other – (Please state in the box provided)

Q9 If you have used these illegal drugs cannabis, LSD (acid), Ecstasy (MDMA/ MD/Molly), amphetamines ('speed') how often do you use them?

(Please choose from the drop down menu - this table is a drop down menu on the online version)

	Never	Daily	Weekly	Monthly	Once every 3 months	Once every 6 months	Only on special occasions e.g. birthdays/new year
Cannabis							
LSD ('Acid')							
Magic Mushrooms							
Ecstasy							
Amphetamines e.g. 'speed'							
Methamphetamines e.g. 'ice', 'crack'							
Cocaine							
Ketamine							
Other/s (please state in box below)							

Q10 Are you aware of drug checking (also known as 'pill testing') services such as 'KnowYourStuffNZ' (KYSNZ)?

- Yes
- No (please go to Q16)

Q11 Have you used drug checking services such as 'KnowYourStuffNZ' (KYSNZ)?

- Yes
- No

Q12 Did you change your drug taking behaviour/practices after using drug checking services e.g. throw away your drugs or take less?

- Yes
- No

Q13 Please say how you changed your drug taking behaviour/practices (you can pick more than one from the list below)

- No change
- No change because the drugs were what I thought when I bought them
- Threw away drugs and/or didn't take them
- Took less of the drugs I had tested
- Decided not to drink alcohol with the drugs I had tested

- Decided to take only the drug I had tested and not take it with any other illegal drugs
- Decided to use only alcohol
- Other (please state in the box below)

Q14 As a result of using drug checking services would you say your knowledge of harm reduction has

- Stayed the same
- Improved a little
- Improved a great deal
- Other (please state in the box provided)

Q15 How would you rate the drug checking service you received from 'KYSNZ'?

- Excellent
- Very Good
- Average
- Poor
- Very poor

Q16 Indicate the extent you agree or disagree with the statements below

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<p>'Drug checking services like 'KnowYourStuff' are a good idea'</p> <p><i>Drug checking' refers to testing a small amount of someone's drug e.g. ecstasy/MDMA to see if it is what they think it is, or whether it contains dangerous substances.</i></p>					
<p>'Drug checking services like 'KnowYourStuff' reduce drug related harms'</p>					
<p>'The New Zealand 1975 Misuse of Drugs Act should be changed to make drug checking services like 'KnowYourStuff' legal'</p> <p><i>The 1975 Misuse of Drugs Act, Section 12 states that it is illegal for anyone to allow their premises to be used for drug taking. Technically festival/event organizers could be prosecuted for allowing drug checking as they are admitting that drug use may happen at their events.</i></p>					

Q17 How old are you?

- Under 15
- 15-19
- 20-24
- 25-29

- 30-34
- 35-44
- 45 or older
- Prefer not to answer

Q18 How would you describe your ethnicity?

- NZ European/Pākehā
- Māori
- Samoan
- Cook Island Māori
- Tongan
- Niuean
- Chinese
- Indian
- Other (such as Dutch, Japanese, Tokelauan) (please state in the box provided):
- Prefer not to answer

Q19 How would you describe your gender identity?

- Man
- Woman
- Non-binary
- Gender fluid
- Other (please state in box provided)
- Prefer not to answer

Q20 How would you describe your sexuality ?

- Heterosexual
- Homosexual
- Bisexual
- Pan-sexual
- Asexual
- Queer
- Takatāpui
- Other (please state in the box provided)
- Prefer not to answer

Q21 If you live in the Wellington region e.g. Wellington CBD/Hutt Valley/Kapiti coast would you be prepared to take part in focus group or an individual interview about drug checking?

- Yes
- No

This information will be held separate to your survey answers. It may take us a while to get round to everyone depending on how many responses we have, so please bear with us 😊

9.4 Appendix 4: Full results: sexuality, gender and ethnicity

Sexuality	Do not attend festivals	Attend festivals	Total
Asexual		2	2
Bisexual	9	95	104
Heterosexual	69	570	639
Homosexual	2	11	13
Other (please state in the box below)	4	16	20
Pan-sexual	6	22	28
Prefer not to answer	10	55	65
Queer	5	14	19
Takatāpui		1	1
Total	105	786	891

Gender	Do not attend festivals	Attend festivals	Total
Gender fluid		5	5
Man	38	321	359
Non-binary	3	7	10
Other (please state in box below)		4	4
Prefer not to answer	9	43	52
Woman	55	406	461
Grand Total	105	786	891

Ethnicity	Do not attend festivals	Attend festivals	Total
Chinese	2	4	6
Cook Island Māori		5	5
Indian		3	3
Prefer not to answer	16	43	52
Samoan	1	3	4
Tongan		1	1
NZ European/Pākehā	70	565	635
Māori	3	44	47

Other	13	107	120
Grand Total	105	786	891

9.5 Appendix 5: interview/focus group questions



INTERVIEW QUESTIONS/GUIDE (Festival organisers)

initial questions will focus on how they got into organising festivals, how long have they been doing it etc. Questions will then focus on the following areas;

- Have they ever had any issues with illicit drugs e.g. overdoses/adverse reactions, at their events?
- If so how were these managed?
- Do they have KYSNZ at their events?
- Why/why not?
- How did that experience go?
- What is their opinion of drug checking services? Do they support it?
- Why/why not?
- What are some of the barriers/problems to having drug checking services at their events?
- What are the positives to having drug checking services at their events?
- What is their opinion of the proposed law change by government?
- What other harm reduction things so they have in place related to alcohol or illegal drugs?



FOCUS GROUP GUIDE/QUESTIONS

Areas covered in the focus groups will be as follows;

- What they think drug checking is
- Whether they have used KYSNZ drug checking services

- How did they find this experience?
- Did it affect their harm reduction practices and drug taking behaviour (if illegal drug users)?
- Do they think drug checking reduced drug-related harm?
- What are their opinions about drug checking services - do they think it's a good thing?
- What do they think of the proposed law change by the government?
- Would they use drug checking services in future? Why/why not?



INTERVIEW QUESTIONS (KYSNZ volunteers)

Questions for KYSNZ volunteers will focus on the following areas;

- Why did they get involved in drug checking with KYSNZ?
- How long have they been volunteering?
- What does this entail – to lead into discussion of drug checking procedures
- Does the legal situation bother them e.g. do they get anxious about it?
- What do they think about the proposed law change?
- If it goes through how do they envisage it will affect KYSNZ?
- What are their perceptions of HR at festivals – are the festival organisers engaged with this?
- What is their perception of people's behaviour after drug checking e.g. how does the KYSNZ harm reduction intervention affect them? E.g. behaviour change/ disposal of drugs?



St. John's ambulance/medical professionals (structured interview)

1. Job title:
2. What is your role?
3. Is this the first festival you have worked at in this capacity?
Yes/no
4. How many festivals have you worked at in this capacity?
5. What are the main issues you usually have to deal with?
6. What issues have you dealt with so far related to illegal drugs?

7. What issues have you dealt with so far related to alcohol?
8. What is the most serious issue you have dealt with in relation to illegal drugs?
9. What is the most serious issue you have dealt with in relation to alcohol?
10. Are you aware of drug checking services such as that carried out by KYSNZ?
11. Can you define drug checking?
12. Do you support this kind of service at festivals and similar events?
Yes/no
13. Why/why not?
14. How old are you?
15. How would you define your ethnicity?

Researcher only

Which festival?