



CASE STUDY: IMPACT OF SUBSTANCE ABUSE ON CONSTRUCTION WORKERS

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1 PROJECT OVERVIEW

Fifty willing construction workers at 15 different construction sites were asked to participate in the survey regarding substance abuse. The construction sites were picked based on location proximity, and upon arrival at the site, the workers were asked to participate in an anonymous survey. Those willing were provided with the survey questionnaire and allowed 10 minutes for completing it. The majority of the construction sites were in Richmond Hill and Thornhill, with a few sites in North York. The survey consisted of two portions: questions regarding the demographics of the study participants and questions regarding their substance use habits. The demographics were aimed at understanding whether certain factors such as age, level of education and marital status influence the tendency for substance use. The questions regarding substance use habits were designed in a way to understand certain concepts such as most commonly used substances, frequency of use, reasons for the use of substances and how substance use helps the construction workers in their work environment. The data from all the 50 construction workers were compiled and analyzed using Microsoft Excel. By comparing the responses of different construction workers, the relative use of different substances was identified and the factors contributing to substance abuse were noted. Furthermore, the relative frequency, duration, and perceived impacts of substance use were observed.

2 RESULTS

The survey questionnaire was distributed to 50 construction workers across the Greater Toronto Area, more specifically in the Richmond Hill, Thornhill and North York areas. The details regarding the demographics of the surveyed population are shown in Table 1. The majority of the sampled population were male with an age in the range of 26-35 years. Furthermore, the majority were single and with high school being their highest level of education. Amongst the 50 participants, 66% admitted to using drugs or alcohol on a regular basis. The most commonly used substance was marijuana. Of the participants who admitted to the regular use of a substance, 68% selected marijuana as their substance of use. The second and third most popular substances used were prescription opiates and alcohol, with a usage rate of 46% and 30%, respectively. The details are shown in Figure 1. Among the 50 study participants, 90% admitted to using substance(s) at least once per day, with 76% using substances multiple times per day; the distribution of answers is shown in Figure 2. When asked about the reason for the use of substances, the most commonly chosen reasons were fatigue and peer pressure. The details regarding different reasons of substance use are shown in Figure 3. Among the surveyed population, 70% admitted to using substances for periods of longer than 24 months. Only 8% indicated that they started substance use in the past 12 months. The duration of substance use amongst the survey participants is highlighted in detail in Figure 4. When inquired about

how substance use helps the participants in performing their work, 73% and 62% of them indicated that it helps with increasing productivity and decreasing fatigue, respectively, as shown in Figure 5.

Table 1: Demographic characteristics of the survey participants

Characteristics	No. of participants	Characteristics	No. of participants
Gender:		Highest education level:	
Male	47 (94%)	Less than high school	15 (30%)
Female	3 (6%)	High school	25 (50%)
Do not wish to disclose	0 (0%)	College	7 (14%)
		University	3 (6%)
Age range in years:		Marital status:	
16-25	10 (20%)	Single	25 (50%)
26-35	29 (58%)	Married	18 (36%)
36-45	9 (18%)	Divorced	7 (14%)
46+	2 (4%)	Widowed	0 (0%)
		Other	0 (0%)

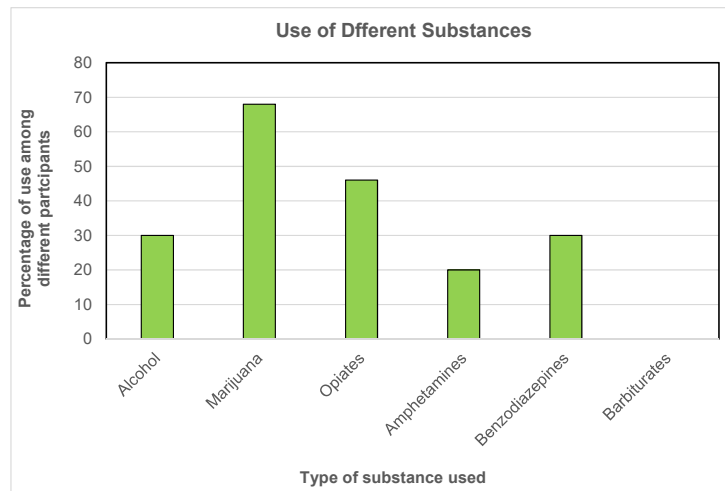


Figure 1: Relative use of different substances amongst construction workers

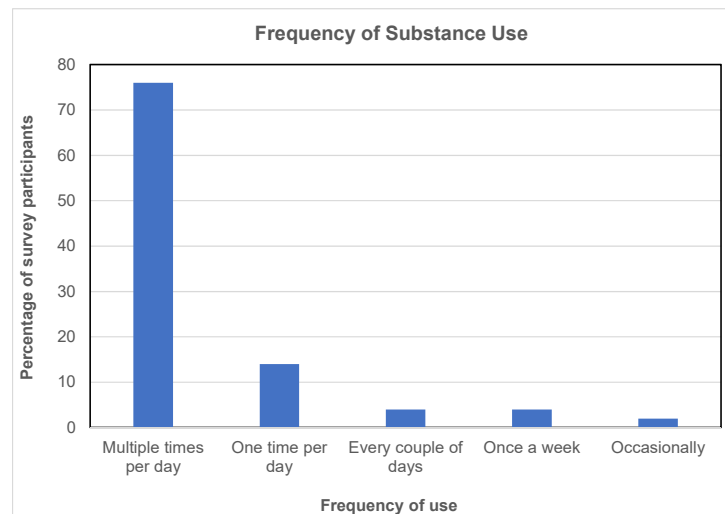


Figure 2: Relative frequency of use of different substances amongst construction workers

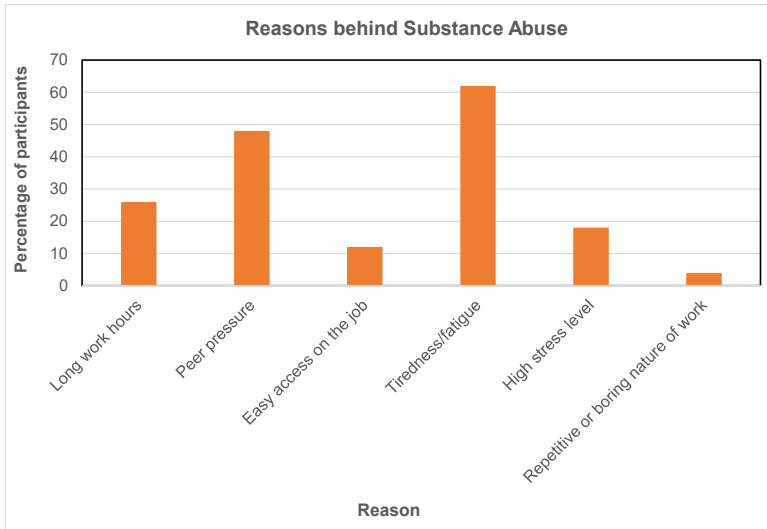


Figure 3: Relative frequency of reasons for substance use amongst construction workers

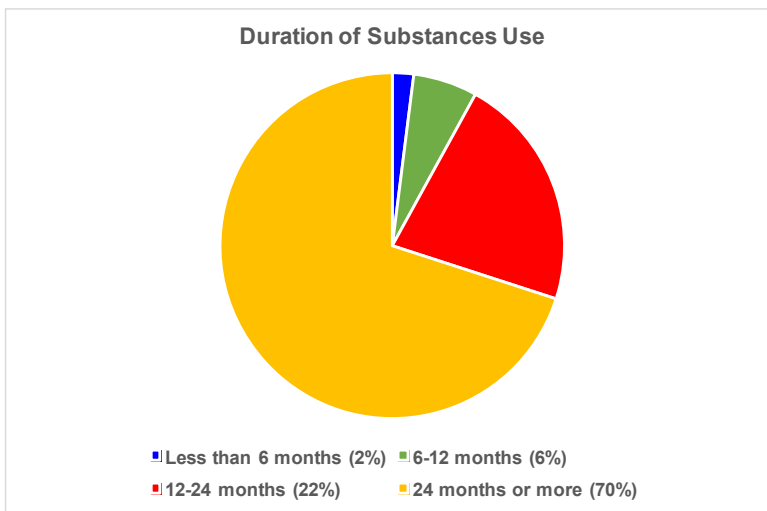


Figure 4: Relative duration of substance use amongst construction workers

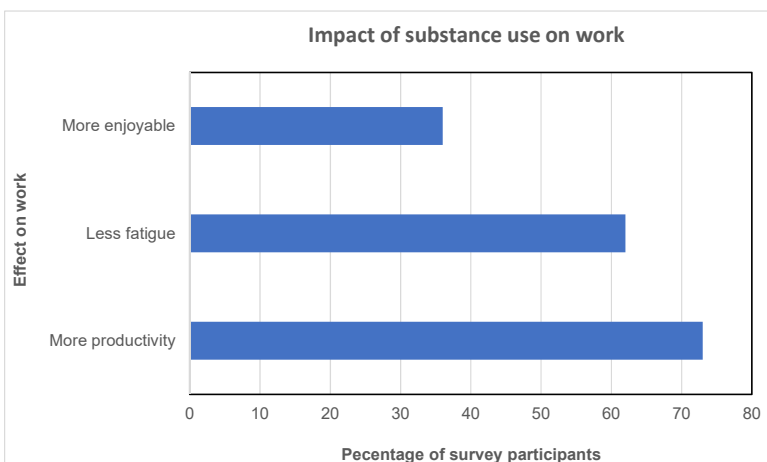


Figure 5: Relative perceived impacts of substance use on construction work

3 LESSONS LEARNED

Demographic characteristics such as the age of 35 years old or less, the education level of high school or less, and the living condition such as single/divorced marital status seem to be the contributing factors for the use of substances amongst construction workers (D'Souza and Menezes 2016, Pollack et al. 1998). Similar to the previous findings in other studies (Hersch et al. 2002, Roche et al. 2015), the rate of substance use amongst construction workers is very high; with more than half of the workers consuming some substances. The previous research had shown that alcohol is the most commonly used substance (Curadi et al. 2009, Mylona et al. 2017, Strickland et al. 2017). As anticipated, due to the easy access to marijuana and it's not so far in the future legalization, marijuana was identified as the most commonly used substance in this case study. The second most common substance abuse identified in this study was opiates. This was anticipated due to the current opioid crisis in Ontario. There is a vast increase in the availability of opioids either by prescription or on the black market; this in turn leads to the increased abuse of it.

The frequency of the use of substances was different to the secondary data gathered from previous research (Hersch et al. 2002, Strickland et al. 2017). Also, Mylona et al. (2017) showed that the construction workers mainly used substances once daily or every few days. The present study showed that 76% of the construction workers consumed the substance of abuse more than once daily. This correlated to the increased use of marijuana and opiates. Marijuana and opioids have a short duration of action, meaning they do not have a prolonged effect. Because of this, the users are obliged to consume more frequently for an increased duration of effect, enough to last them the long working shifts. Alcohol, on the other hand, has a longer half-life and its effects linger for a longer duration of time. Hence previously when alcohol was the most commonly used substance, it was also used mostly as once daily. With the change of the most preferred substance of abuse to marijuana and opioids, the frequency of use has also changed.

Contrary to the expected findings, the construction workers identified work fatigue and peer pressure as the main reasons for their substance use. The previous studies had identified long work hours as the main reason for the increased use of substances amongst workers (Roche et al. 2015; von Mayrhauser et al. 2001). In this case study, the surveyed construction workers acknowledged that the substance use helps them experiencing less fatigue and increasing their work productivity.

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