



## **Evaluation of the outcomes of an intervention to reduce the use of drugs and alcohol in the workplace in Israel Navy Shipyards, the Israel Electric Company, and Israel Railways**

### **Executive Summary**

**Background:** The Israeli Anti-Drug Authority developed a pilot program which was implemented in three workplaces: Israel Navy Shipyards, the Israel Electric Company, and Israel Railways. The program was tailored for workplaces, and based on previous programs which were implemented in Israel and across the world which were found to be effective at decreasing and preventing the use of drugs and alcohol among the workforce. Those who operated the project came from a range of professional backgrounds, and have experience in implementing interventions to reduce or cease the use of alcohol and drugs.

**Elements of the intervention program:** The elements of the program were planned to be identical across all intervention sites, although in practice the precise mix of activities varied across the sites due to differences in the characteristics of the workplaces and varying levels of participation and cooperation on the part of the workforces.

**Navy Shipyards:** An introductory lecture on the program and its purposes was conducted for all of the managers, as well as 15 lectures to give information and knowledge to 630 workers. In addition, 3 lectures were given to the managers where 70 managers participated. A health allies course was implemented, with 20 workers participating. At the conclusion of the course, which included 3 weekly meetings, monthly meetings on different topics took place. All in all, 14 meetings took place on topics such as: interpersonal communication

skills, enrichment for identifying distress signs in use of dangerous substances, the role of health allies, analyzing events and issues in the workplace, a meeting with a recovering addict, a tour at the treatment community “the way,” and more. In order to provide specific tools to address issues relating to adolescence and the use of psychoactive substances among children and youth, two parents’ workshops were developed, and 30 workers took part. Personal counseling meetings were set up for five workers. In addition, a letter was sent to the workers and their families from the dock commander in the framework of the program.

**At the Israel Electric Company:** At the beginning of the program, a large day conference was organized in which all of the health allies in the northern district (about 100 workers) took part. After the conference, a steering committee was assembled and included the head of human resources for the northern district, managers of the company’s worksites in the northern district, the company’s social welfare manager, and staff of the Israel Anti-Drug Authority. The steering committee decided that the program would be implemented at three sites: the Haifa power plant, the electric trains division, and the secondary power plants division. Later, a group for health allies was established in which about 15 workers alternately took part in. In the framework of the allies’ activities, a course for health allies as well as monthly refresher courses took place throughout the year. The activities relating to the health allies were met with many difficulties, and at one point, only about seven workers were involved in these activities.

The program included an introductory lecture for all managers (about 60 managers took part). Later, three lectures for managers with the rank of work manager higher were given (about 55 managers took part). These were in addition to lectures designed to deliver information and knowledge to the workers (about 250 workers total attended), and two continuing lectures (about 100 workers were in attendance). One parents’ workshop took place in which about 14 workers participated, and three workers were referred for personal consultations.

At **Israel Railways**, three introductory lectures on the program and its purposes were conducted for all of the managers (70 managers took part) and 18 lectures for the workers (480 workers took part). In addition, three workshops for middle managers took place (50 managers took part). The process evaluation (the results of which are in a separate report, published by the Prevention and Education Division of the Israeli Anti-Drugs Authority) showed serious difficulties in meeting the needs of the middle managers - these were needs connected to the workplace, not the intervention program itself, and are outlined later in this

summary. Additionally, there was a course for health allies, in which 17 workers took part. The course included four meetings, followed by monthly activities for the duration of the year of the program. The course included a range of topics such as: interpersonal communication skills, enrichment for identifying distress signs in use of dangerous substances, the role of health allies, analyzing events and issues in the workplace, and more. Lastly, five parents' workshops were held, and personal consultations were provided to four workers.

### **Purposes of the Evaluation:**

**General purpose:** evaluating a workplace intervention designed to reduce the use of drugs and alcohol.

### **Specific purposes:**

- 1) To determine changes in attitudes in terms of drug and alcohol use following participation in the program;
- 2) To determine the change in self-reported usage of alcohol following participation in the program;
- 3) To determine whether the intervention program lead to changes in terms of treatment and assistance for workers in terms of the usage of drugs and alcohol.

### **Research Methods:**

The present study was a quantitative cross-sectional study, carried out at two points in time: before the intervention (pre-test) and after it (post test), in each of the workplaces. Additionally, a qualitative investigation was carried out within the framework of the present study which included in-depth interviews with program participants. The interviews were carried out only after the conclusion of the program.

In the Navy Shipyards, data were collected from 175 workers and 81 managers, while post-test measures were collected from 94 workers and 57 managers who participated in the intervention program.

In the Israel Electric Company, data were collected from 167 workers and 57 managers, while post-test measures were collected from 105 workers and 60 managers who participated in the intervention program.

At Israeli Railways, pre-tests measures were collected from 283 workers and 75 managers, and post-test measures were collected from 219 workers and 41 managers who participated in the intervention program.

The data collected from the three workplaces were entered into an Excel spreadsheet and subsequently unified into one document containing all pre-test and post test measures. This master document containing all of the data was imported to SPSS 25, where all statistical analyses were carried out.

First, quality control of the data was carried out via testing variable distributions and checking for missing values. In order to describe the samples and conduct between-groups comparisons: in cases where the dependent variable was continuous an independent samples t-test was carried out; where the variables were categorical the Chi-Square test was used.

We will note here that due to objections of the workers and management, we were not able to pair the pre-test and post-test questionnaires, and therefore comparisons of group averages were carried out (comparing the pre and post test averages).

In order to build various index measures, category reversal for questions whose answers were reversed was carried out first (**for details see the attitudes questions**). Afterwards, internal reliability was checked using Cronbach's Alpha. Only in cases where the internal reliability measure was greater than 0.6 was the measure built based on the answers' averages for the relevant statements. In cases where the internal reliability was less than 0.6, the statements were checked individually and not included in an index measure.

Differences in attitudes and norms among the study participants before and after the intervention were examined using the independent samples t-test. Differences in alcohol consumption behaviors and organizational perceptions were tested using the Chi-Square test where the variable was categorical or dichotomous. A p-value of less than 0.05 was considered statistically significant.

**Summary of the results of the evaluation:** The purpose of the first evaluation was to examine changes in attitudes of the participants in terms of the use of drugs and alcohol. By comparing the changes in this measure across the three workplaces we found that while in the Navy Shipyards (both among workers and managers) attitudes towards alcohol became more negative after participating in the program (that is, after participation in the program, both workers and managers held stronger beliefs that drinking alcohol is harmful to health and has negative outcomes than they did before participation in the program); in the Israel

Electric Company and at Israel Railways, a partial change was seen. Analysis of the results from the Israel Electric Company shows that there was no change in workers' attitudes towards drinking alcohol, while the results from the managers show a significant change for the good in terms of attitudes towards alcohol consumption after participating in the program. An additional significant change observed among the managers was greater consensus as to the importance of discussing alcohol consumption with children as young as ages 11-12. The findings of the process evaluation (published by the Israel Anti-Drug Authority in a separate paper) reinforce this finding, and add that the program ran more smoothly among the managers at the Israel Electric Company, in comparison to the workers. Results of the qualitative research carried out in this workplace provide a possible explanation for these findings: according to the interviewees, the program did not cause a change in attitudes in terms of the use of drugs and alcohol, because from the start they were generally not in favor of wide use of these substances.

Analysis of the findings from Israel Railways shows a reverse trend from that at the Electric Company. After the program, the attitudes average among the workers went up, indicating an overall more negative attitude towards drinking alcohol, while among the managers no change in attitude. It is important to note that the pre-test attitudes average among the managers was very high, and that therefore it would have been very difficult to enact change.

Another purpose of the program evaluation was to assess whether the program led to changes in treatment for the workers using drugs and/or alcohol. Results of the evaluation in the Navy Shipyards show that after participation in the program, workers were more likely to believe that their superiors would address alcohol problems in the workplace rather than ignoring them. Among the managers a significant improvement was observed in terms of issues relating to management attitudes, and a significant rise was seen in the managerial attitudes measure in terms of alcohol consumption. The significance of this finding is that following the conclusion of the program, managers at the Navy Shipyards believed that their superiors were better equipped to handle drug and alcohol problems, because the workplace policies on drug and alcohol usage were updated and clear and because discussions and open conversation in the workplace on these subjects took place.

Further findings from the evaluation show that after the program a higher percentage of workers (48.9% versus 17.1% before the program) reported receiving counseling in the workplace for drugs and alcohol, and on receiving referrals for counseling and assistance on these subjects (60.6% compared to 6.3% before the program).

The results of the evaluation from the Israel Electric Company show that there was no change in these topics among the workers. However, the results do show the importance of the health allies. Training the health allies provided an accessible and reliable source for the treatment of problems that might arise relating to drugs and alcohol, and the health allies were seen by workers as a resource when dealing with problems relating to drugs and alcohol that might come up, able to provide solutions for the workers on these topics, and handle these issues discreetly. Among the managers at the Electric Company a significant change was observed: after the program, the managers felt that a workers in need of assistance with issues relating to drug and alcohol usage could receive this help in the workplace, and reported that there existed clear written policies relating to drugs and alcohol.

The results of the evaluation at Israel Railways show that after the program, workers believed that their superiors were trained in the identification of alcohol problems, and that they are equipped to deal with them. The results also show a significant decrease in the percentage of workers who reported that it is acceptable to drink alcoholic beverages at work events, from 46% before the program, to 35% after. Additionally, before the program, about half the workers (51%) reported that their workplace has official, written rules about alcohol consumption, after the program this figure rose to 70.4%. A rise in the percentage of workers who reported that they have the read the workplace laws relating to alcohol rose from 25.9% before the program to 38.6% after its conclusion. Similar changes were observed among the managers: before the program 46.3% reported that they knew of the official workplace laws compared to 62.5% after the program, as well as a rise in the numbers of managers who reported having read the laws relating to alcohol (41% after the program, compared with 26.7% before).

Finally, the program evaluation set the goal of evaluating whether norms relating to the consumption of alcohol drugs changed as a result of the program, as well as examining changes in self-reported consumption. The findings of the evaluation show that among both workers and managers of the Navy Shipyards there was a drastic decrease in the social acceptance of the consumption of alcohol in the social environment of the workplace. After the program, fewer workers and managers reported that “most of my work colleagues consume alcoholic beverages,” and that that it is acceptable to consume alcohol beverages at workplace events. In addition, among both workers and managers a dramatic decrease in those who reported consuming at least three drinks “in the last two weeks” was observed (from 18.4% to 4.4% among the workers and from 11.5% to 1.8% among the managers).

The findings of the qualitative study support the findings of the quantitative study, and show generally high levels of satisfaction from the program. The interviewees had largely positive responses to the program activities, which included emotional-experiential components such as personal stories or tours. However, the interviewees said that they would have preferred fewer lectures and information sessions in favor of more tours and personal stories

The findings of the evaluation of the Israel Electric Company also show that among both the workers and managers, there was an improvement in terms of the social acceptance of consuming alcoholic beverages at workplace events. Among both the workers and managers it was indicated that this acceptance of this behavior went down after participation in the program. There was also a change for the good in the percentage of workers who reported consuming three or more alcoholic within the last two weeks, which went down from 7.8% to 3.9% (the change is statistically significant). However there was no change observed among the managers in terms of their self-reported alcohol consumption.

The qualitative findings of the research conducted at the Israel Electric Company provide some explanation for the results of the qualitative study. The qualitative study showed that the program's target population was not appropriate for the content of the program, its characteristics, or its purposes (largely because the average age of the target population was high). Despite this, the interviewees said that the program counselors were extremely professional, and that the program itself was well-built and interesting (although, as was noted, not appropriate for the particular population). This site also reported the tours and personal stories as a positive aspect of the program.

The findings of the evaluation of the program at Israel Railways show that after the program there was a positive change among the workers in response to the statement "most of my work colleagues consume alcohol beverages" and that significant decrease in agreeing with this statement was seen. A decrease was also seen in terms of acceptance of the consumption of alcohol beverages at work events, although the statistical significance of this change is questionable ( $p=0.066$ ). Among the managers a significant decrease was seen both in terms of social acceptance of the consumption of alcohol beverages, and in terms of the consumption of alcohol beverages at work events. These findings indicate a positive change among the workers and managers at the railway, such that after the program it seems that there is less social-environmental pressure in the workplace to consume alcohol.

A positive change in terms of drinking behaviors was also seen among workers at Israel Railways- the findings of the evaluation show a decrease both in the percentage of workers reporting consuming 3 or more portions of alcohol over the past two weeks (from 9.3% to 7.4%) and in the percentage of workers reporting consuming five or more drinks in the past month (from 22.4% to 18.1%), and in the percentage of workers reported getting drunk in the past year (from 19.3% to 16.2%). Among the managers of Israel Railways a similar change was not observed.

Analysis of the interviews with managers at Israel Railways revealed complaints of how the program was carried out among them. The research shows that the managers were invited to activities in the middle of their workday, when they still needed to be available for questions and issues on their cell phones. Several of the interviewees said that this made it difficult for them to disconnect from their daily routine and to focus on the content of the program. This finding is supported by data from the process evaluation, according to which there was significant difficulty in answering the needs of the middle managers. This difficulty was expressed in constructing workshops for the middle managers, due to the fact that the middle managers were occupied with their workplace troubles, mainly with regards to the management training that they undergo from their workplace.

In order to evaluate the different elements of the program, analysis of the different activities in which the workers participated was carried out at Israel Railways. From this analysis we found that that the lowest attitudes average was measured among workers who did not participate in any of the activities, followed by workers who participated in only lectures, and then the workers who participated in lecture and parents' workshops, and the group of workers who participated in lectures and the health ally groups. These findings show the additional value of carrying out the program in its entirety, and not just adopting parts of it.

**Limitation of the present evaluation:** First of all, since it was not possible to pair the questionnaires which were filled out before and after implementation of the program, the evaluation could not examine changes across the participants themselves, but only report changes in the averages that were measured in each workplace at the points in time of data collection. However, since part of the goals of the program was to create change in the workplace itself, we can learn about the changes in the main research variables from these results, and this information is useful for evaluating the program despite this limitation.



In addition, compliance to answering the research surveys was very low at the end of the program, which lead to a decrease in sample size after the program, and to differences in characteristics of the research populations at the times of the measures.

**Despite these constraints, we believe that the results of the current evaluation provide an accurate snapshot of the workplaces at the times of the two measurements, which show that positive changes took place during the program.**