

## Research Article

# D.A.R.E. Drug Prevention during the Pandemic: Response to COVID-19

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## Abstract

**Background:** The COVID-19 pandemic resulted in dramatic public health measures including school closures nationwide. This resulted in notable gaps in the delivery of evidence-based drug prevention as part of formal educational curriculum. The goal of the current study was to document police officers' responses to curtailed activities surrounding delivery of D.A.R.E.'s elementary, middle and high school drug prevention programs.

**Method:** Respondents were 584 officers who completed an online survey between June 2020 and August 2020.

**Results:** Of those scheduled to teach during the spring semester, the largest share of officers (56.6%) were able to teach a portion of the lessons, a third (33.5%) were not able to teach any of the lessons, and nearly one in ten (9.9%) were able to teach all of the required lessons. Officers reported numerous strategies to circumvent the cessation of in-person instruction. Methods included teaching online, providing students with links to videos, and providing students with handouts.

**Conclusion:** Despite the interference in teaching posed by the COVID-19 pandemic, many officers were resourceful and found alternatives to continue delivery of the intervention.

**Keywords:** D.A.R.E., Pandemic, Alternative teaching methods, Drug prevention, Education

The SARS-CoV-2 coronavirus and the associated COVID-19 disease have disrupted many walks of life, contributing to a tremendous toll in human suffering. Although much attention has focused on the increased morbidity and mortality associated with health effects of the virus [1], and its overwhelming economic burden to our nation's healthcare system [2-4], there were other more subtle effects. One of the more profound changes to our nation's institutions was widespread school closure [5]. This was instituted to meet public health mandates for social distancing, sheltering in place, and mandated lockdowns. These decisions were made based on the airborne nature of the virus and the noted favorable effects of school closure during other H1N1 influenza outbreaks [6-8]. One consequence of school closure during the COVID-19 pandemic in the US was a contributing factor in the decreased mortality among younger school-age children [9,10]. The national lockdown and suspension of face-to-face instruction that occurred during the COVID pandemic was in response to CDC guidance and mitigation measures. School closures produced a new set of educational challenges including reliance on distance learning [11-13]. With online learning, teachers relied on synchronous meetings to hold live lectures using video and audio-conferencing platforms such as Zoom or Google Classroom [14]. Teachers also used asynchronous forms of communication with students relying on cloud-based storage (e.g., Google Drive), emails, and discussion boards so that

students could readily access class materials (e.g., handouts, tests, and supplementary lesson materials) and upload homework assignments. In addition to their academic instructional role, schools are also a primary source of distributing various supplemental prevention and intervention services that affect the health and well-being of children [15]. In many cases, these programs were considerably curtailed if not completely reduced.

Beginning in March 2020 when stay-at-home orders were initiated nationwide, the implementation of drug prevention programs like D.A.R.E.'s *keepin' it REAL* were cut back as police officers that teach this program had limited access to schools. This provided a rare opportunity to document and examines the impact of COVID-19 on officers' delivery of the program. Such a focus falls in line with other efforts to examine the effects of the pandemic disruption on educational practices and the detrimental effects of a national lockdown on student academic performance [16,17] and mental health [18-20].

## Concerns about the Disruption of In-class Instruction

There is a general consensus that school closure would have some adverse effect on students, particularly those who have specific definable needs. This might include students who are economically

disadvantaged or reside in under resourced neighborhoods [21]. Schools often provide students with access to healthcare, federally subsidized lunches to offset food insecurity, and other forms of nonacademic support (i.e., mental health and emotional support through school counselors). Schools also provide prevention and intervention services including treating behavioral disorders, detecting at-risk students, and providing screening for learning problems. Long hiatuses from schools limit student access to important services and may contribute to the proverbial “summer slide,” a phenomenon associated with loss of academic proficiency during the summer when many students do not attend classes [22-24]. This effect is particularly noticeable with economically disadvantaged students who may lack social capital, have less access to physical resources (e.g., library books), be less engaged in school, and experience less parental support [25,26]. The absence from in-person instruction due to stay-at-home public health mandates and the increased reliance on distance education is expected to mimic setbacks in academic proficiency experienced during the summer months [27]. Recent research found learning attitudes of middle school students predicts academic performance [28]. Students who performed well prior to the pandemic continued to do well only when they had positive attitudes toward online learning. Students whose attitudes favored in-class education fared less well.

### Challenges with Teaching during the Pandemic

Numerous studies have examined various challenges to teaching during the pandemic. Among the more salient concerns, teachers reported struggling with getting students to complete assignments, maintaining student engagement in coursework, familiarity with technology, inadequate resources, and finding alternative pedagogical strategies suitable for distance learning [29,30]. The latter issue is particularly relevant for teaching classes that include music, physical education, and visual arts where group participation or hands-on instruction are required [31,32]. Studies of a global nature have reported that at least initially both teachers and students were dissatisfied with online learning and teaching [33]. Bergdahl and Nouri surveyed Swedish teachers about their preparedness to deliver online distance education [34]. They examined school and teacher preparedness, strategies teachers used when shifting to distance education, learning activities teachers employed for distance education, and teachers’ positive experiences and challenges. While teachers provided reassurance of technical ability, they also reported they lacked pedagogical strategies needed to make online learning successful. Among the issues teachers noted was that despite using technologies that allowed classes to interact, students nonetheless felt a great deal of social isolation. Ironically, teachers also reported that students working from home often concentrated better on learning tasks than they did when in the classroom.

Bhat and Shiva tested a model of teachers’ willingness to adopt technology in education during the COVID-19 pandemic’s requirement for distance learning. They found that perceived ease of use and the perceived usefulness of online technologies predicted teachers’ attitudes toward use, their intentions to use technology and their actual use. For many teachers, distance education is relatively

new and, as a result, teachers may benefit from training and from being able to share with each other what they learn when new technologies are adopted [35].

### A Brief History of D.A.R.E.

As a brief overview, the D.A.R.E. program was initially developed during the early 1980s. Then Los Angeles Police Commissioner Daryl Gates held strongly that police could gain a better foothold and beneficial presence in the communities they served through delivery of youth-oriented educational programs targeting drug prevention. Working in concert with the Los Angeles Unified School District, D.A.R.E. was instituted as an elementary school drug prevention program and quickly became the most widely distributed drug prevention program in America [36]. The core curriculum of D.A.R.E. was strongly aligned with contemporary drug prevention programs that favored social-cognitive theory [37]. Instructional modalities reinforced social pressure resistance training (i.e., drug refusal skills) combined with normative education that corrected misperceptions regarding the social acceptability of drug use. Additional core components presented information about the consequences of drug use (i.e., harmful effects of misuse) and included material to boost children’s self-confidence. Indeed, the original conceptual framework for D.A.R.E. borrowed heavily from several social-psychological drug prevention programs being tested at the time [38-41] and that produced favorable findings supporting both skills and norms thought to be integral to drug prevention. Historically, D.A.R.E. has undergone several methodologically rigorous evaluations based on longitudinal prospective data [42-45]. Few of these studies were able to show favorable program effects on self-reported drug use, albeit some were able to show some positive effects on knowledge, attitudes, perceived peer norms, and in one case, media portrayal of drugs and assertiveness skills [46]. The lack of credible evidence for program efficacy coupled with meta-analysis findings [47,48] led to substantial changes in both program content and delivery.

In 2008, D.A.R.E. America adopted (and adapted) the middle school version of *Keepin’ it REAL (kiR)* for its use in community-based policing efforts [49] and followed this in 2012 by adapting the elementary school curriculum [50], the latter incorporating social-emotional learning theory [51]. The elementary school program was recently tested and found to have positive effects for past 30-day alcohol use, drunkenness, and vaping [52]. The 10-session *kiR* middle school program blends the principles of cultural grounding [53] and narrative communication theory [54] with a skills-based approach to drug prevention. The program incorporates effective messaging that reflects the experiences of the target audience, which, in its earliest stages of program development, captured the linguistic and cultural experiences of southwestern Mexican and Mexican/American youth [55]. The narrative component involves building a repository of examples provided by youths when they encounter drug offers and decisive situations that require the application of social communication, problem-solving, and decision-making skills. The building blocks of communication competence theory include knowledge, resistance skills and decision-making skills, and the promotion of conventional injunctive and descriptive normative

beliefs. The intervention teaches four resistance skills: *Refusing* (saying “no”), *Explaining* (answering “no” with an explanation), *Avoidance* (not attending an event where alcohol or drugs might be available or being in a situation conducive to drug use), and *Leaving* (removing oneself from a situation where alcohol or drugs are being used), giving the program the moniker *keepin’ it REAL* [56].

As of 2020, more than 6,000 law enforcement agencies had officers trained to deliver D.A.R.E. programs to more than 1.2 million students who reside in more than 10,000 communities throughout the United States. In 2022 alone, D.A.R.E. launched the program in a record 212 new sites throughout 39 states and Canada. A total of 900 new law enforcement officers were trained and certified to deliver the *kiR* drug prevention program, with new modules addressing teen suicide prevention, vaping, internet and social media safety, and opioid drug abuse prevention. It has long been known that effective interventions include delivering evidence-based intervention programs with fidelity, embedding practices that support student engagement and motivation, and providing adequate intervention dosage [57]. It is particularly important to ensure instructors can facilitate class discussions, elicit students’ active thinking, and maintain norms about discipline and engagement.

## The Current Study

The goal of the current study was to document D.A.R.E. officers’ responses to having schools closed down because of the COVID-19 pandemic. The goal was to learn how many of the officers were able to fully implement the drug prevention curriculum and what kinds of alternatives (if any) they pursued as schools transitioned to remote learning.

## Method

### Participants

Survey respondents were 584 D.A.R.E. officers. Respondents included 438 (75.0%) male and 146 (25.0%) female officers. Most, 505 (86.5%) were White, 36 (6.2%) were Black, 13 (2.2%) identified as being from multiple races, 10 (1.7%) were Asian, and 9 (1.5%) were Native American. The remainder 11 (1.9%) identified as “other.” In the sample, 52 (8.9%) identified as Hispanic (a non-exclusive ethnic category). Self-reported ages included 48 (8.2%) who were between 20 and 29 years old, 175 (30.0%) who were between 30 and 39, 201 (34.4%) who were between 40 and 49, and 160 (27.4%) who were 50 years old or older. Almost half (266; 45.5%) of the officers were from rural communities. Slightly more than a quarter (172; 29.5%) were from suburban communities. Smaller numbers of officers came from small urban communities (107; 18.3%) or large urban communities (39; 6.7%). Most of the respondents (403; 69.0%) reported being in law enforcement for 10 or more years. About a quarter (138; 23.6%) had been in law enforcement between five and 10 years. The remainder (43; 7.4%) had been in law enforcement fewer than five years. Involvement in delivering D.A.R.E. varied among the group with the largest group (255; 43.7%) having been involved from two to four years, about a quarter (134; 22.9%) involved for more than 10 years, 99 (17.0%) involved for one year or less, and 96 (16.4%) had been involved between five and 10 years.

A majority of the officers taught only elementary school (388; 66.4%). Fewer taught D.A.R.E. in elementary and middle school (122; 20.9%) or only in middle (55; 9.4%). Fewer still taught D.A.R.E. in high school (19; 3.3%). D.A.R.E. includes enhancement lessons that provide additional instruction about bullying, cyber security, a supplemental marijuana lesson, family talks, and opioid information about prescription drug abuse. A number of officers (84; 14.4%) also indicated they taught enhancement lessons. About half of the officers (284; 48.6%) reported that they were also School Resource Officers (SROs) assigned to a particular school on a long-term basis to help ensure order.

## Procedure

Participants were recruited through an open invitation to participate in a web-based survey promoted by national and regional D.A.R.E. America staff. Surveys were administered via a Google forms survey and completed between June 26, 2020 and August 24, 2020. These dates coincide with the time frame when the World Health Organization first declared an official pandemic.

## Results

### Impact of the Pandemic

All but three officers (99.5% of officers scheduled to teach during the school year) reported that the schools in which they served were closed during the spring semester of 2020. Not all officers were scheduled to teach during the spring semester; 114; 19.5% were not scheduled to teach. Among those who did teach, 47 (10.0%) were able to teach all of the lessons, 269 (57.2%) were able to teach some lessons before their school was closed, and 159 (33.8%) were not able to teach any lessons. The use of a distance teaching/learning application was rarely used; reported by only 5 (1.1%) of those who taught all lessons and 36 (7.7%) of those who were able to teach some lessons, respectively. Only one officer reported using D.A.R.E. Mobile, a smartphone app that can be used for program delivery [58].

There was a statistically significant difference,  $\chi^2=21.922$ ,  $df=2$ ,  $p<0.001$  between officers that were able to teach none, some, or all of the lessons and their willingness to send materials home, (17; 3.6% vs. 77; 16.4% vs. 16; 3.4%, for none, some, or all, respectively). Likewise, among the 470 officers assigned to teach, they differed significantly in their ability to maintain contact with students,  $\chi^2=5.617$ ,  $df=2$ ,  $p=0.060$ , [57 (12.1%), 126 (26.8%), and 22 (4.7%), for officers not able to teach, those who taught some of the D.A.R.E. lessons, and those able to completed teaching, respectively]. Officers who taught both elementary and middle school versions of D.A.R.E. were significantly more likely to send Family Talks and other lesson materials home (29.5%) compared to those who only taught elementary school (20.9%) or only middle school (7.3%),  $\chi^2=11.351$ ,  $df=2$ ,  $p=0.003$ . Dual grade officers were just slightly more likely to teach using an online meeting room such as Zoom (13.1%) than were officers who only taught elementary (9.0%) or only middle school (3.6%;  $\chi^2=4.195$ ,  $df=2$ ,  $p=n.s.$ ). Grade of instruction (elementary, middle school, or both) did not affect how much of the program was delivered (some vs. all;  $\chi^2=0.423$ ,  $df=2$ ,  $n.s.$ ).

## Dual Roles: D.A.R.E. Instructor and SRO

D.A.R.E. officers often also serve as SROs in the schools in which they are assigned to teach. Older officers were significantly more likely to play the dual role of SRO and D.A.R.E. instructor,  $\chi^2=4.395$ ,  $df=1$ ,  $p=0.036$  [50 years old or older (55.0%) vs. <50 years old (45.2%)]. There was also a significant difference in length of time teaching D.A.R.E. and what capacity officers played in the school (SRO),  $\chi^2=11.359$ ,  $df=3$ ,  $p=0.009$ , with officers teaching for one year or less more likely to be an SRO (62.63%) compared to those who had taught for 2 to 4 years (42.8%), 5 to 10 years (47.9%) or more than 10 years (47.0%). Dual role officers were significantly more likely to be from rural or small urban communities,  $\chi^2=28.442$ ,  $df=3$ ,  $p<0.0001$  (57.5% vs. 52.3%, respectively) than from large urban (28.2%) or suburban communities (34.8%). D.A.R.E. officers indicating their ethnicity as Hispanic were significantly less likely than non-Hispanic officers to serve as SROs,  $\chi^2=4.064$ ,  $df=1$ ,  $p=0.043$  (34.6% vs. 49.3%; 3.6%). There were no racial differences in the rate of participating as SROs for Black and non-Black and White and non-White officers. There was a significant difference between SRO and non-SRO officers in the amount of the program they could teach. Among those who attempted to teach during the spring semester, most (85.0%) taught only part of the program. However, whereas 42.5% of officers who were not SROs were able to teach all of the program, 57.5% those who performed the dual D.A.R.E. officer and SRO roles were able to do so,  $\chi^2=3.256$ ,  $df=1$ ,  $p=0.071$ .

## Anecdotal Outcomes

Officers were asked to provide written anecdotes about program adaptations they made. In addition to online instructions and handouts noted above, 13 reported that they uploaded videos for students to watch. Several (4) reported doubling the number of lessons taught during any given week when the threat of school closure became apparent. Four of the officers emailed lessons home. Three of the officers provided teachers with lesson plans and asked them to complete lessons once they began remote instruction. A few officers noted that they perceived their regular classroom teachers to be overly burdened with the responsibilities of dealing with remote instruction and felt it inappropriate to ask more of them.

## Discussion

D.A.R.E. continues to be among the most widely disseminated drug prevention programs. As a result, it provides an ideal case for studying the impact that school closures had on program delivery during the coronavirus pandemic. It should be noted that the national office and regional D.A.R.E. offices, much like the rest of American society and its educational institutions, had not anticipated school closure. As a result, it appeared that most officers were left to their own wits in order to seek creative alternatives for program delivery both individually and in collaboration with their host teachers. Officers that completed the survey indicated an almost complete shutdown of schools and cessation of in-person learning during the spring semester of 2020. At that point in time, there was tremendous variability in how officers handled the situation. A few were fortunate in that they had completed teaching prior to school closure. Slightly more than half

had completed some teaching but were not able to complete the entire 10 session program. About a third of the officers reported that they were unable to teach any lessons.

A sizable minority of officers actively sought alternatives to in-person teaching. Interestingly, only one officer used the D.A.R.E. mobile app. The mobile app was new and very few officers had been trained to use it. Had the app been fully released, it may have provided a means for reaching students during school closure. On the other hand, some officers took it upon themselves to find workarounds, including sending home written materials, preparing videos, teaching via online meeting rooms such as Zoom, and working with teachers to disseminate program content. Among the cadre of officers who were able to teach, and found ways to structure workaround given school closures, those that taught both elementary and middle school were more likely to be resourceful and send lesson materials home compared to officers that taught in only one environment. They were also more likely to use an online forum compared to officers teaching at only one educational site. Officers that move back and forth from elementary to middle school may be able to capitalize on available resources and apply them regardless of age group taught. This may point to possibilities of educating officers into the use of technology for teaching, in the same manner as teachers are introduced to novel technology that enhances learning. There were also some noted differences between officers that are strictly committed to law enforcement in the communities they serve and officers that are attached to a school in the capacity of SRO. The officers serving as SRO's are older, newer to D.A.R.E., from smaller communities, and were more likely to have greater coverage of the course content even when faced with restrictions during the pandemic. While these differences are not pronounced, they still point to the possibility that being an SRO carries with it certain responsibilities to maintain a safe environment in the school, but also to learn teaching strategies that benefit the students exposed to D.A.R.E. Here too, additional training may encourage non-SRO officers to blend in better and absorb teaching tactics that helps them to be more effective in program delivery.

It goes without question that the COVID-19 pandemic ushered in a new era in education. The lockdown ended up with massive school closures across the US, leading to dramatic if not radical changes in the way educational material is delivered. This created new opportunities as well as new challenges, for many teachers, let alone officers, were not skilled in the use of online meeting rooms like Zoom, Google Meet or Microsoft Teams. As a result, there was a learning curve to blend curricular demands with the novelty of delivering course content using digital technology. Officers teaching D.A.R.E. were no exception to this novelty and the pandemic forced them to face both new challenges as well as opportunities. The data we were able to gather from officers teaching the D.A.R.E. *keepin' it REAL* drug prevention program clearly indicate there is a need to both adapt to the situation and also take advantage of alternative strategies for deploying prevention efforts.

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