



Short Communication

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Reinforcement as a Construct of Social Cognitive Theory and Its Relationship with COVID-19 Vaccination Incentives

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Commentary

Since the introduction of the COVID-19 vaccine, various incentives have been offered to individuals to encourage them to get vaccinated. These offers have included gift cards, lottery tickets for college, and discounts for customers of some businesses. Critiques of this type of reinforcement, argue that gifts offered to those who accept the ssCOVID-19 vaccine are coercive. There has not been any consensus as to what is considered the right type of reward for the COVID-19 vaccine. As far as public policy, the reward for the COVID-19 vaccine is a novel idea and different states have come up with different incentives [1]. The ethical basis of these rewards hinges on the need to reduce overall harm and protect highly vulnerable populations [2]. The Social Cognitive Theory (SCT) [3] is one of the behaviours change theories widely used in public health programs and health interventions. The theory is built on the premise that people learn from their own experiences and the experiences of others. *Rimer, et al.* [3] refer to five concepts that are integral parts of the SCT, which are reciprocal determinism, behavioral capacity, expectations, self-efficacy, observational learning, and reinforcements.

Reinforcement as a construct of Social Cognitive Theory is a response to a person's behavior that increases or decreases the likelihood of adverse outcomes. Reinforcement can be positive or negative. An example of positive reinforcement is when an adverse health outcome such as COVID-19 infection is averted because of engaging in positive health behavior such as vaccination. Recipients of the COVID-19 vaccine are less susceptible to the adverse effects of the virus. There is evidence that, among persons with previous SARS-CoV-2 infection, full vaccination provides additional protection against reinfection [4]. Hence, recipients of the COVID-19 vaccine experience a positive reinforcement of protection from the virus.

Offering incentives for the COVID-19 vaccine further reinforces the benefit of protection from the adverse effects of the virus.

The literature suggests that financial incentives could help promote the high levels of adherence to COVID-19 vaccines that experts recommend will be necessary for herd immunity [5]. One study examined the effect of money as an incentive for the participants to get vaccinated. Participants who were given cash rewards were more likely to get vaccinated compared with the effect of several behavioral interventions. Money as an incentive increased participation in vaccination by an estimated 4 percentage points but as earlier stated the ethical concern about basing incentives solely on money and the desire for vaccine adherence is still being studied [6]. Another recent study supports the argument that incentives for Covid-19 vaccination do not only have to be gifts of a tangible nature but could also be related to the perceived exemplary behavior of respected personalities in society in the field. The study assessed the effectiveness of prestige-based incentives (vaccination of an expert scientist/respected leader) in comparison to conformist incentives (vaccination of friends and family) and risk-based incentives (close experiences of the death or illness of a person from the disease) for increasing vaccinations in the community. Conclusions from the study showed that vaccinations of an expert scientist or respected leader were the most effective incentive that encouraged the participant to get vaccinated against the COVID-19 virus [7]. The results from the study could support the argument that people may be more trusting of incentives that are more personal than tangible in nature such as gifts or money.

COVID -19 vaccination rewards are ethically and theoretically appropriate. The construct of reinforcement of the social cognitive theory is critical in the prevention of COVID-19 and the reduction



of vaccination hesitancy. Programs that establish vaccines based on social norms and personal experiences may result in higher vaccination rates [8]. The public health community must design programs that promote vaccine uptake that is not only built around material reinforcements but also build trust for the incentives and the ethics of these rewards.

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