

Behavioral
modification for
punctuality
psychology essay



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Literature pertaining to behavioral modification of late-coming behavior is scarce. As such, the purpose of this study is to evaluate the efficacy of implementing punishment to curb persistent late-coming behavior. The current research on behavioral modification indicates that punishment of target behavior and reinforcement of alternative behavior increases efficacy of behavioral modification. Therefore, it was hypothesized that concurrent application of punishment on late-coming behavior with reinforcement on punctuality will lessen the possibility of late-coming behavior in the future. This research involved a female psychology undergraduate with a history of unpunctuality. The results of this study supported the hypothesis and some plausible explanations for the success of this treatment include the intensity and immediacy of the punishment.

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Punctuality: A Behavioral Modification Case Study

Punctuality, defined as the ability to exchange some words and coordinate on time, is part of the ethnics of everyday life, an indication of manners and consideration for others (Shaw, 1994). Failure to keep 'good time' is typically viewed a matter of personal character, unless there is a sensible reason, and has impact on many social interaction including friendship or job. For this reason, unpunctuality may be deemed as an undesirable behaviour which requires changing.

A popular method used to modify behaviour is Operant Conditioning (OC; Skinner, 1953). Based on the assumption that past experiences serves as a reference for which similar actions produces the same type consequences,

the consequences of the actions in OC determine whether a response will be made. Reinforcers increase the response rate of the behaviour while punishers decrease the response rate of behaviour. . As such, reinforcements appear suitable for introducing new behaviour or/and increasing frequency of existing behaviours while punishments seem appropriate for the suppression of existing behaviour needed to be curb.

Studies have shown that punishment is relatively more effective than reinforcement in decreasing the likelihood of target behaviour (Thompson, Iwata, Conners & Roscoe, 1999).

This might be because punishment is typically able to compete successfully with reinforcement contingencies that maintain the problem behaviour. However, using punishment to target undesirable behaviour concurrently with the reinforcement of alternative behaviour has also been found to produce better effects than each one used individually (Thompson et al., 1999). The alternative behavior usually refers to the opposite of the target behavior. For example, the alternative behavior of smoking is not smoking. This addition of the reinforcement of alternative behavior then serves as an alternate form of stimulation that furtherdecreases the likelihood of performing the undesired behaviour. Another possible explanation on how reinforcement of the alternative behaviour may enhance the effects of punishment is the increased cost that is now associated with performing the target behaviour. The consequence of performing the undesired target behavior is the delivery of punishment. This punishment becomes a cost towards performing the target behaviour because it is an aversive

consequence. Since one cannot perform the target behavior and alternative
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behavior at the same time, the delivery of punishment also means there will be no reinforcement of alternative behaviour. Hence, this absence of reinforcement of the alternative behaviour then adds to the cost of performing of the target behaviour.

One well-known explanation of the mechanisms behind OC is the Law of Effect, in which satisfying or annoying consequences serve to either strengthens or weaken the association between the behaviour and the stimuli respectively (Thorndike, 1911). Specifically, positive law of effect states that greater satisfaction derived from performing the behaviour strengthens this association to increase the future probability of that behaviour. In contrast, negative law of effect suggests punishment to reduce the sensitivity of the behaviour to reinforcement to decrease the future probability of that behaviour and biased performance towards any unpunished alternative behaviours (Rasmussen & Newland, 2008).

Other than reinforcement of the alternative behaviour, the various aspects of the punishment including immediacy of the punishment, the magnitude of the punishment and the way punishment is being introduced have also been found to affect the efficacy of implementing punishment. Specifically, more immediate punishment decreases the likelihood of target behavior in the future (Camp, Raymond & Church, 1967) and hence, increases efficacy of punishment. Similarly, effectiveness of the intervention is increased when greater the intensity of the punishment reduces the plausibility of target behavior being performed in the future (Azrin, 1960). Additionally, sudden exposure to highly aversive stimulus is more likely to decrease performance of target behavior in the future in comparison to gradual increments of

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averseness (Azrin, Holz & Hake, 1963). However, other factors such as the presence of social reinforcer and the participant's personal level of motivation also add towards the efficacy of the punishment in decreasing the likelihood of the target behaviour. Particularly, having the social approval for the alternative behavior and strong personal desire to change target behaviour both increases the possibility of the alternative behaviour (Harlow, 1959; Miller & Rollnick, 2012).

Behavioural modification has been extensively studied and also used as a form of therapy (Behavioural therapy) or incorporated into treatments (E. g. Cognitive Behavioral Therapy). Yet, despite the ubiquitous nature of punctuality or unpunctuality in life, studies regarding behavioural modification appear scarce. As such, in hopes of expanding the current literature on behavioural modification for late-coming, the aim in the present study was to evaluate the efficacy of intervention implemented to curb persistent late-coming behavior. This study hypothesized that the concurrent application of punishment on late-coming behavior with reinforcement on punctuality will reduce the frequency of late-coming behavior.

Method

Participant

A 21 year old Chinese female undergraduate student studying Psychology, the subject was undertaking a behavioural learning module at the time of the study. The late-coming behavior has been evident since she was a teenager. At the time of the study, this behavior became a concern as her school has recently implemented a biometric system that required students to log in

their attendance no later than 15 minutes of the commencement of class and thus, affected her school attendance. Outside of school, although family and friends have been condoning the behavior, this issue of late-coming has been brought up multiple times.

A functional assessment analysis of the subject's late-coming reveals antecedents such as waking up late and the desire to complete whatever is on hand with the consequences of getting to sleep in and satisfaction from finishing the task-at-hand. In other words, the late-coming behaviour is said to be reinforced and likely continue due to the ability to sleep-in later and the satisfaction derived from completion of tasks.

Materials

The materials consisted of a smartphone for the recording of arranged time and time of arrival at the appointment venue, a package of celery and bubble tea for the punishment and reinforcement respectively.

Design and Procedure

Measurement of lateness was measured by finding the difference between the supposed meeting time of the appointment (Arranged Time) and the actual time of arrival at the appointment's venue (Arrived Time). Self - recording of the supposed meeting time of the appointment and actual time of arrival at the appointment venue into the smartphone was conducted immediately upon arrival at the appointment venue.

The study was a single subject A-B design experiment, consisting of one baseline phase and one intervention phase each lasting for a period of two
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weeks. During the baseline phase, extent of lateness was measured as per the measurement procedure described above and there was no intervention consequence for late-coming. In the intervention phase, extent of lateness was measured as per the measurement procedure described above as well. However, for each time the subject was late for an appointment, she was punished to eat one-third of a stalk of celery. When the subject was no longer late for three consecutive appointments, she was reinforced with a cup of bubble tea. The number of consecutive time the subject was no longer late for appointment was reset following each reward of bubble tea. It should, however, be noted that during the course of the intervention phase, there was a delay in the delivery of punishment upon the first occurrence of late-arrival until the next day when the celery was purchased.

Results

Baseline

Intervention

The results indicated that decreased occurrences of late-coming behavior as well as smaller time differences between Arranged Time and Arrived Time during intervention in comparison to baseline phases (see Figure 1). On average, the subject arrived 25 minutes late for her appointment during baseline phase and 2.6 minutes earlier for her appointment during intervention phase. Specifically, during the intervention phase, there were two occurrences of late-coming behaviour. The first involved the subject arriving 7 minutes late for the appointment while the second occurrence involved the subject arriving late for 15 minutes. However, superficial

comparison reveals the extent of lateness of each of this occurrence still lower than baseline average.

Figure 1. A record of time difference between the arranged time of appointment and the actual arrived time of the subject during baseline and treatment phase.

Discussion

The behavioural modification intervention effectively eliminated the late-coming behavior of a female undergraduate student. In other words, this supported the hypothesis that the concurrent application of punishment on late-coming behavior with reinforcement on punctuality reduced the frequency of late-coming behavior and promoted the desired alternative behavior of arriving punctually.

This has been found to be consistent with the findings of Thompson and colleagues (1999) which found that concurrently pairing punishment on self-injuring behavior together with reinforcement on alternative behaviour helped reduce the frequency of self-injuring behavior and increase frequency of the alternative behavior. By the negative law of effect, punishment reduces the sensitivity of the behavior to the reinforcement that has been previously maintaining the behavior and promotes a response bias towards the unpunished alternative behavior (Rasmussen & Newland, 2008). This reduction in sensitivity of target behavior to the reinforcement(s) maintaining the behavior was demonstrated by the suppression of late-coming behavior after punishment was applied. Concurrently, an increment in frequency of the alternative behavior was observed. As such, using of

punishment and reinforcement to the alternative behavior may have contributed to the efficacy of this intervention.

On top of that, immediacy in the delivery of punishment could also have added to the efficacy of the intervention. The lack of celerity at the time of the first occurrence delayed the implementation of punishment. This was met with a second consecutive incident of late-coming at an even higher extent of lateness. In contrast, the immediate implementation of punishment to the subject at the second occurrence of late-coming effectively suppressed late-coming behavior for the remaining intervention phase. Hence, this illustrated the importance of immediate punishment in implementation of the punishment. Azrin (1960) proposed more immediate consequences for stronger association between the behavior and its consequences to bring about higher effectiveness in interventions. This might have arisen on the basis that human's behavior are more heavily influenced by immediate consequences than delayed consequences (Logue, 1998). Therefore, immediate punishment of a target behavior will be deemed to possess a higher cost in comparison to delayed punishment when performing the target behavior.

Another possible contributor to the success of the intervention might have been the intensity of the highly aversive punishment. Highly aversive stimulus is capable of suppressing the undesired behavior for a short period of time (Azrin, 1960). This trend was observed in the subject after the first punishment was applied because following that, suppression of late-coming behavior was maintained for the remaining intervention phase. This could be

a result of increased salient cost associated with the performance of the target behavior.

In comparison to gradually increasing punishment from low intensity to high intensity, sudden introduction of high intensity punishment has been associated with longer suppression of response rate (Azrin, Holz & Hake, 1963). As such, when the delayed punishment for the first late-arrival coincided with the punishment for the second occurrence in the study, the combined intensity of receiving the punishment for both occurrences at a go was very high. Instead of gradual increment in intensity which allows subjects to become immune to the impacts of more severe punishment, this increased in magnitude could have shocked the subject and strengthened the operant conditioning between the behavior and the intensively aversive consequence. Consequently, this strong association increases the cost of performing the target behavior which subsequently decreases the likelihood of performing the behavior.

However, other factors could also have contributed to the success of this intervention plan. Specifically, the presence of social reinforcers (Harlow, 1969) such as encouragements and praises from the subject's family and friends could have been prompted the subject to become relatively highly motivated in changing the late-coming behavior. This was especially since punctuality has social consequences and the alternative behavior was being reinforced by her social environment. Additionally, high intrinsic motivation for change has been suggested to be a key contributor towards the efficacy in therapies (Miller & Rollnick, 2012). Thus, with the subject possessing very high level of personal motivation for change, this could have been one of the

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main contributors towards success in the intervention instead of the intervention itself.

Limitations of this study included the single subject A-B experimental design and the short intervention phase. In future, enhancing the current experiment into an A-B-A-B experimental design with a longer intervention phase may be more indicative of the maintenance of the effect of the behavioral modification. This information may be crucial in estimating the true efficacy of the intervention since maintenance of the modified behavior is the ultimate goal for most behavioral modification programmes such as smoking.

Future research direction might also want to include an examination on the ability to do generalization of these findings across settings and across people. For the former, it was noted that this intervention took place during the school term with only one non-academic appointment taking place during the intervention phase. Yet, it has also already been widely recommended in the field that for behavior change to go beyond the clinical setting, treatment be done in different contexts. This is also to prevent stimulus discrimination such that the environment merely becomes an indicator for the emission of the modified behavior. Additionally, for this finding to be generalized across people, replications of this intervention plan to other individuals with late-coming behavior are required. This is particularly because the intensity of celery and bubble tea as punishment and reinforcement will differ across people according to personal preference.

None the less, the findings of this study are valuable in the evaluation of efficacy of the concurrent application of punishment and reinforcement in <https://assignbuster.com/behavioral-modification-for-punctuality-psychology-essay/>

alternative behavior as a behavior modification intervention. As such, this study may pave the way for future studies on this topic of modifying late-coming behavior as long as the stimulus used in the intervention is tailored to the individual.