Changing Criterion Design to Increase Prayer Time

Syed Rizvi

University of Houston

Target Behavior

The target behavior is increasing prayer length. At various times throughout the day, ranging from sunrise to sunset, a Muslim engages in the spiritual practice of prayer. Akin to mindful meditation, this is supposed to serve as a structured way to put aside the trivialities and daily hassles one is going through and engage with God. This serves to promote a high functioning or adaptive behavior as spirituality and mindfulness have been implicated in better well-being and life satisfaction.

The prayer begins with ablution (*wudu* in Arabic) where a person must wash individual parts of their body before beginning the prayer. The order of this is washing of one's hands, rinsing ones mouths three times, cleansing of the nose, washing of the entire face two full times, washing both arms from below the elbow to the wrist, cleaning the top of ones scalp by wiping the top of the skull with water and finally washing the tops of both feet. This serves as a literal and metaphorical cleansing of the body, where one is 'washing away' their sins and preconceived notions before engaging with God. The prayer then begins with recitation of the *adhaan* (call to God), according to the time of the day; various *rakaats* (process of standing, bowing and prostrating) are then performed.

Morning prayer: 2 rakaats before sunrise.

Afternoon prayer: 4 and 4 rakaats (can be performed together or at two different points *before* sunset).

Night prayers: 3 and 4 rakaats (also can be performed together or at two different points *before* 12:00 am).

Due to there being such a rigid, clearly defined boundary of what a prayer entails; this will help the operational definition as I can use a Task Analysis to identify the specific behaviors

which are required from me to satisfy the prayer conditions. So the sequence would begin with the washing of the hands and conclude with the final prostration on a prayer rug. Using a frequency measure, I can keep tallies on every time throughout the week on my memo app that I complete the behavior in its entirety.

Prayer can be performed in a variety of natural settings (the mosque, at home, at school, etc.); if I perform the behavior from the start point to the end without any interruptions, it will be tallied as completion of the behavior. This may take some fine-tuning as the weeks unfold however, as it may be the case that due to setting conditions, I do not follow-through with the prayer in some settings as opposed to others. For example, it is much higher in probability that I will perform a prayer in a mosque as that is the norm for that setting, then I will at home where I have many distractions.

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The 'function' of the behavior is an amalgamation of automatic reinforcement, social attention and escape/avoidance. Islamic prayer comes from the *Qur'an* which provides a guideline for how one should conduct their life; prayer is supposed to draw someone to closer to their community (social attention), be spiritually and emotionally nourishing (automatic reinforcement), and keep a believer from 'straying' off the path of God which may lead to sinful behaviors and choices (escape/avoidance from punishment in an eternal sense).

Having that ideological context in place, there are many hypotheses which can be supported as to why people engage in prayer: fulfilment of one's religious identity, spiritual/mindful practice, avoiding the consequences of an 'all-powerful' God, or even following the norm of the people you surround yourself with. If I was living in an Islamic

country, it may be that I would pray more simply because the percentage of Muslims around me praying would provide a strong antecedent to do so. Personally, I would like to engage in healthier mindful practices including mindful meditation, body scans and vipassana (silent meditation). I believe that Islamic prayer falls under that category as it is theoretically supposed to help a person engage themselves more humbly, graciously and respectfully in all manners of their life.

'Becoming more pleasant or gracious' may be a subjective measure to try and test, but it can be done. There are many studies conducted which correlate positive spirituality and religiosity with less depression, anxiety, stress and conversely better well-being and life satisfaction. The all-encompassing power of religion is intimidating at times, but I believe if done with a spiritual component which tells an individual to better themselves (self-regulation) and engage in healthy practices (better eating, better social skills, better family communication, etc.), then there will be a positive correlation with life satisfaction. The ideas behind why people engage in prayer, especially in the Muslim community, is an area of research which needs to be more developed for these hypotheses to be concretely answered.

Being that the increase in prayer length must go all the way to 35 (5 prayers in a 7 day cycle) times per week; it is logical to use a changing criterion intervention to incrementally adjust prayer length on a continual basis. I will be using a positive reinforcer every week for the goal that I hit.

Weeks	Prayer times	Positive Reinforcer
1	5	Small bag of chips
2	8	Larger bag of chips and a soda

3	11	Bag of chips, soda and a Hershey's candy bar
4	15	Bag of chips, soda, candy bar and I get to watch a film at the end of the week.
5	20	Restaurant of my choice with anything I want.
6	25	Restaurant of my choice, and a movie at home.
7	30	Restaurant, and a trip to the movie theater.
8	35	Bag of chips (for generalization)

Although most of these are incorporating food as a primary enforcer, I believe that social feedback will help throughout the weeks in reaching a higher level of prayer length. My parents have wanted me to begin praying again since I was in junior college; when they see the effort I am putting in to succeed, I believe their verbal praises and encouragement will serve as an additional reinforcer as well.

I will be using an intermittent reinforcement agenda as it makes the most logistical sense and it will help in response generalization. Treating myself to a bag of chips and a soda 10 separate times for 10 prayers isn't really healthy, and I believe it will discourage me from engaging in it. But if I wait until the end of the week (this is how I usually treat myself when I finish my studies and work) for that treat, it will make it more likely. That 'challenge' of waiting until the end of the week and seeing my frequency scores is a system I already use for myself when I work out, so administering it in a similar manner for prayer makes the most sense. Also, when this intervention is over I want to continue the 35 prayer times for the week which is why having an intermittent schedule which promotes patience will help in generalizing the effects of the intervention, past the immediate reinforcers.

'Fading contingencies' according to Kazdin (2011) can also help in maintenance of a behavior as using an intermittent schedule which rewards some positive behaviors and not others makes the long-lasting nature of the behavior less vulnerable to extinction. Expanding stimulus control is another systematic way I want to continue prayer after the intervention ceases; stimulus generalization in which giving myself several different reinforcers may help to generalize prayer in the long run. Instead of relying on a singular reinforcer to maintain my prayer behavior, I want to give myself a variety of changing reinforcers to increase my motivation in prayer as the timings increase in length. In theory, after my intervention is not in place, I can still use these reinforcers to 'jump start' my prayer behavior if it begins waning.

Self-monitoring and self-reinforcement are both part of the intervention; self-monitoring in the case of keeping a frequency count on my memo app every time I complete a prayer in its entirety. Self-reinforcement, in that I am keeping myself liable for *only* giving myself the positive reinforcer of the week if I complete that weeks prayer time. Specifically, this is a self-administered reinforcement as I am not relying on an outside source to hold me accountable for the changing criterion.

Changing-Criterion Design

Due to the slowly, steady increase I must maintain over the course of several weeks for a single behavior; a changing criterion design is suitable. This will begin with a one-week baseline phase in which I identify possible antecedents and consequences in the natural contexts and cues of my life which may help or hinder my prayer behavior. This one-week baseline will also give me an indication as to how many prayers I am currently engaging in. After this, we will begin with the first phase of the intervention (b1) in which I will try to engage in at least 5 prayer times

throughout the week; this can range from 5 prayers in a single day to 5 separately through the course of 7 days, as long as I meet the criteria. I will then give myself the positive reinforcer at the end of the week and move on to the second phase of the design (b2) in which the criterion will change to a higher frequency with a more rewardable consequence. I must meet each weeks criteria to move on to the next phases (b3, b4, b5, etc.), if not I must remain in the previous weeks criterion schedule until I meet the designated frequency. For example; if I am supposed to engage in 10 prayer times for the week but only reach 9, then I deprive myself of the positive consequence and remain on that sub-phase for the following week(s) until I reach 10.

Strengths and Limitations

The biggest strength for using a changing criterion design is that it is very applicable to the behavior I am trying to engage in; Kazdin (2011) remarks 'the design is very well suited to many applications in applied settings where progress is likely to be gradual' (p. 175). Having to 'jump' to 35 prayers a week after only praying a handful the previous week is a very lofty, yet unrealistic expectation. A changing criterion design uses a methodic, systematic way to increase a behavior in a slow, manageable pace so it generalizes and maintains once the behavior ceases. Another strength is that it allows me to use different reinforcers varying in how much I desire them to keep up with the increasing pace of the behavior. For example, it would not make sense to treat myself to the same positive enforcer for engaging in 5 prayers as opposed to 25 prayers, this may halt my progress as my motivation may not sustain itself. Rather, having a criterion which uses more salient, highly desirable enforcers for the upcoming weeks to keep up engagement in the behavior makes it more likely that the individual will maintain the behavior through the intervention. The largest weakness is the self-administered criterion portion of the

intervention; I am having to hold myself accountable for the intervention which puts pressure on me to not 'cheat' or delineate from the operational definition of the behavior. I can easily say "oh I at least tried to pray today (even though I did not follow through from starting point to finish point), so I will tally that as one prayer for the week", even though I will try to refrain from doing so, there is a likelihood to change my definition and criterion as it is self-administered.

Although a weakness may be that the interventions direct effect may not be helping to increase the prayer behavior; this level of response maintenance is what I want to achieve throughout the intervention. I would like to have other factors besides the positive consequence at the end of the week help me to engage more in my prayer. For example, as the weeks go along, motivation and encouragement from my family may prove to be a more potent reinforcer then going to my favorite restaurant. Although the direct effects of the intervention may not be working at this point, the fact that the natural contingencies of my daily life are shifting to help maintain the prayer are better-suited for when the intervention ceases.

Success and Impact of Intervention

Although the intervention has not ceased as of this date (11/26/2017), the upward trends of the slope from the preceding 4 weeks and baseline indicate that the changing criterion design is a success. I have managed to reach my goal and positive reinforcer for 3 of the 4 weeks. Although it may be that I do reach my target goal for the current week; the structure of the changing criterion allows the interventionist to keep at their own pace due. Comparing my 4th week with the baseline, shows an accelerating slope during the intervention phase indicating a success.

This intervention does have applied value and significance to the individual, and many others like myself. It is a common occurrence amongst many Muslims around the world to disengage in prayer due to the rigid schedule and lack of follow-through. This intervention will help myself and many others in a similar situation to practically apply behavioral therapy to increase their engagement with God and become more spiritually conscious. Other people can choose a vast range of positive reinforcers in a changing criterion fashion that is suited to who they are and what schedule they prefer to maintain, or increase the length that they pray or how much they pray. There is lots of variability and flexibility which can be practically suited to people's spirituality, even in a different context. It may be that a Buddhist wants to mediate more throughout the week but is having difficulty doing so, or a Christian wants to increase the length of time they visit the local church. A changing criterion design can be implemented, regardless of religious context, to help people become more mindful and spiritual. Numerous studies have shown a positive correlation between mental well-being, which can come from positive religiosity and spiritual practice and low levels of stress/anxiety/depression. A changing-criterion design which helps foster mindful practices can be a positive step towards that direction.
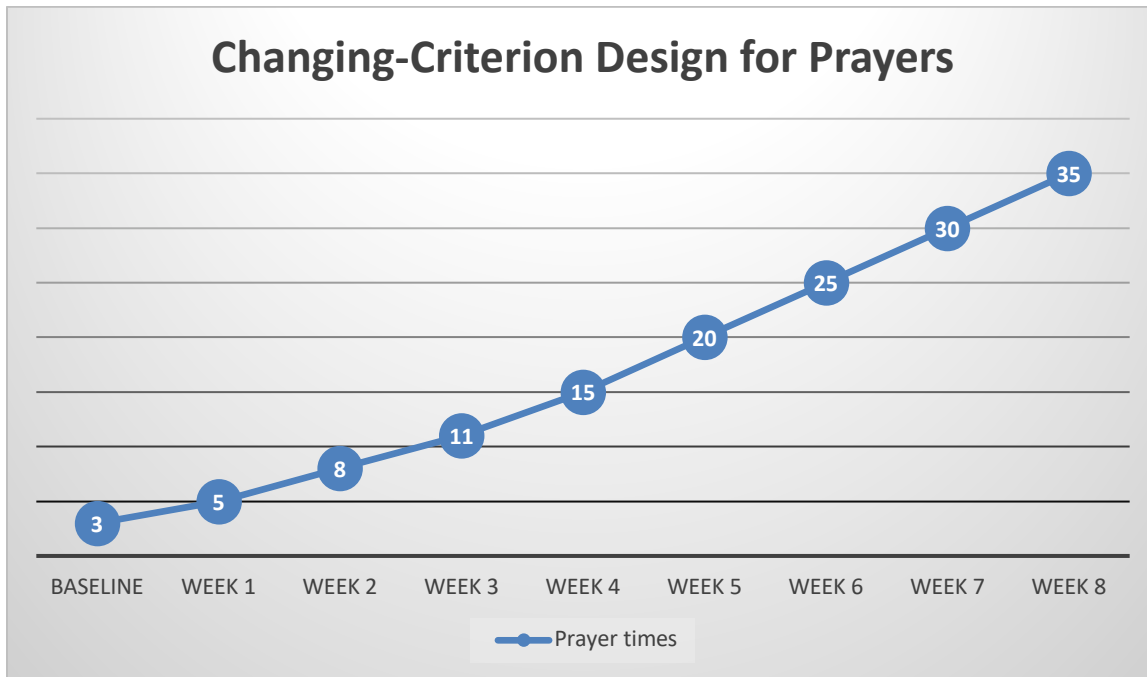
Figure 1: Intervention design for prayers. Changing-criterion design increases the target behavior at a gradual rate on a weekly basis.
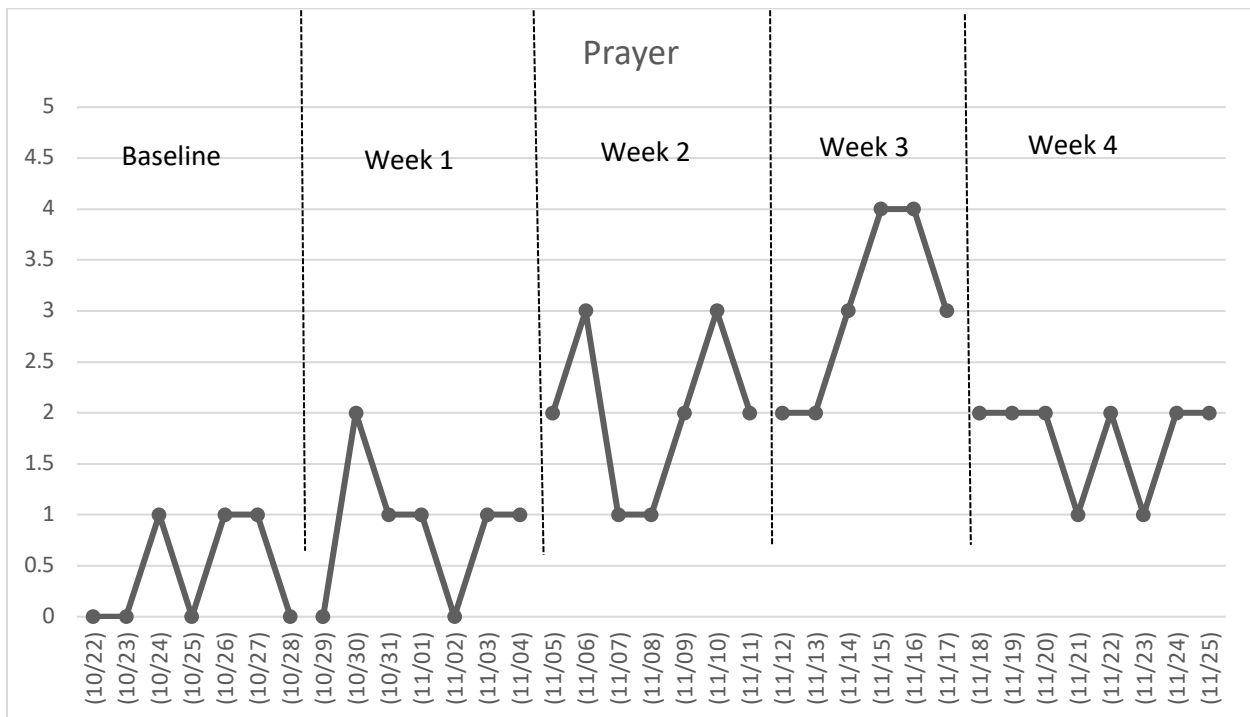
Figure 2: Intervention phase as it is currently happening. The upward trend from Baseline to Week 3 indicates a success.