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## Recommendations for positive psychology interventions in school settings

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### ABSTRACT

As positive psychologists learn more about what makes people feel happier, more productive, and more connected, it is natural to wonder how these lessons can be applied to our younger citizens. In this paper, we use data from a series of intervention studies to highlight several challenges of testing positive interventions in educational contexts, such as validity threats related to school events. Strategies for addressing these issues include having a control group, measuring proximal outcomes, and measuring or manipulating contextual factors. This work could help researchers more effectively test methods of promoting well-being among youth.

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School intervention; positive psychology intervention; gratitude; purpose; education

The pursuit of happiness emerged as a topic for serious scientific inquiry in the early 1990s (Seligman & Csikszentmihalyi, 2000). As research on human flourishing accumulates, there is a growing interest in applying this knowledge to promote well-being. Discrete strategies – called positive interventions – are designed to promote a particular aspect of flourishing such as meaning or life satisfaction (Bolier et al., 2013; Seligman et al., 2009). These strategies range from writing exercises to meditative reflections to more active behaviors, such as performing acts of kindness (Sin & Lyubomirsky, 2009).

Given the widespread interest in supporting youth, many positive interventions are designed for educational settings (Waters, 2011). Positive interventions have been validated with youth from ages 5–19 in coeducational and single-gender school settings, in both public and private schools, and with both more heterogeneous and homogeneous ethnic populations (Waters, 2011). Although schools are a viable context for implementing positive interventions, conducting this research can be challenging; it requires the consideration of a variety of classroom and school-level factors such as class schedules (Alibali & Nathan, 2010).

The purpose of this paper is to highlight issues that can hinder the success of intervention studies and to present recommendations for addressing these issues. To discuss these points, we present findings from multiple rounds of studies conducted in the Adolescent Moral Development Lab at Claremont Graduate University between 2014 and 2018. All samples were recruited from either middle or high schools, with students ranging in age from 12–18. Sample sizes for each study ranged from 66 to 105 students, encompassing

approximately 623 students total. Schools included private and public schools, and most were based on Southern California. Interventions included activities designed to foster gratitude and purpose (for full activity descriptions, see Baumsteiger, Mangan, Bronk & Bono, *in press*; Bronk et al., *in press*). The implementation of activities varied by study: there were 3–9 activity sessions which were completed in-class or online. Each session lasted approximately 15–50 minutes. The resulting recommendations are expected to be most useful for researchers interested in testing positive interventions in educational settings.

### Recommendation 1: include a control group

Applied research often involves balancing methodological issues (e.g. internal validity) with practical concerns such as school schedules. Although the inclusion of control groups is generally recommended, researchers may be tempted to omit them due to scheduling challenges or difficulty finding teachers willing to participate. In this section, we discuss several validity threats that are especially prevalent in school settings and explain why a control group is necessary for addressing those threats.

First, when evaluating intervention results, it is important to account for extraneous variables. Specifically, it is important to consider whether there are any events within the school (e.g. death of a student) or outside of the school (e.g. a presidential election) that could influence the intervention or its target outcomes. For example, in one study, students completed a pretest in September and a posttest right before their December

holiday break. In what appears to be a common pattern in school intervention studies, quantitative data indicated that students did not experience changes in outcomes such as gratitude and purpose. In fact, negative affect tended to increase from the pretest to the posttest. In qualitative responses, many students reported that it was their finals period which resulted in high levels of stress, and that they were burnt-out going into the holidays. In response to what students would change about the gratitude and purpose curriculum, many students commented on the timing of the activity, saying ‘The timing is the only real problem. A fair amount of the program was before and during finals. If the program were moved up or delayed, subjects might be more enthusiastic.’ These results illustrate how events unrelated to an intervention can significantly influence how students respond to it.

Second, although often unpublished, we find in conversations with academic peers that, across studies of positive interventions, experimental groups often exhibit no change in positive outcomes (e.g. gratitude, purpose, social support) while control groups exhibit significant decreases in those outcomes. For example, in the 2017–2018 school year, we tested a 6-lesson curriculum designed to foster gratitude in 92 public high school students. The gratitude condition exhibited no significant increases in gratitude whereas the control group exhibited significant decreases. Given that both teachers and students in the gratitude condition made favorable comments about the success of the program, and that this pattern emerged across studies, we hypothesize that it may reflect a more general trend. It is not clear why students would decrease in positive outcomes such as gratitude throughout the school year; this may be due to testing effects or maturation. Regardless, the possibility that some interventions ‘stop the drop’ that would have otherwise occurred would not be evident unless there was a control group. Based on this issue, as well as the importance of accounting for history and maturation effects, it is critical that researchers include a control group.

### **Recommendation 2: measure proximal outcomes**

In evaluating intervention efficacy, it is useful to consider and assess the expected process of change – how the intervention will influence participants as they are engaged in the intervention, immediately afterwards, and in the longer-term. For instance, we expected that participating in a purpose intervention would help students understand the definition of purpose (immediate effect), consider their purpose (short-term effect), and,

possibly, identify a sense of purpose (long-term effect). Based on this model, we measured purpose knowledge immediately after each activity by asking participants to answer questions such as ‘What are the three most important components of a purpose in life?’ We later measured the degree to which students reported searching for purpose and the degree to which they had identified a purpose. This enabled us to test how proximal outcomes (e.g. understanding the definition of purpose) influenced distal outcomes (e.g. identifying a purpose in life). Identifying and assessing both proximal and distal intervention effects could illuminate *how* interventions elicit change and help researchers identify whether each aspect of this process occurs as expected.

### **Recommendation 3: consider contextual factors**

There are numerous contextual factors that could influence the efficacy of an intervention. Our research indicated three highly relevant factors: teacher buy-in, student motivation, and implementation timing.

One reoccurring lesson from conducting research in educational contexts is that teacher enthusiasm is critical to intervention efficacy. Observations and teacher reports from our studies reveal that some teachers were particularly enthusiastic about the material. For example, one teacher provided personal examples for every concept she taught. In contrast, another teacher reported feeling so stressed about covering other classroom content that she rushed student to finish their purpose lessons in 15 minutes rather than the intended 50 minutes. Our studies showed that teacher enthusiasm not only varied across teachers, but also across activities. To maximize the success of an intervention, researchers should either select teachers who express interest in the material or attempt to foster this enthusiasm. This conclusion also underscores the importance of observing at least some implementation sessions.

A similar element that moderates intervention effects is student motivation; students who are intrinsically motivated to participate in an activity are more likely to experience the intended effects of the intervention, including greater gains in positive emotions and well-being (Sheldon & Lyubomirsky, 2006). These intrinsically-motivated students may be more likely to pay attention to lesson materials, be more interested in the intervention activities, and spend more time completing the assigned tasks. One implication of this finding is that researchers should strive to foster student motivation. Some steps for doing this, based on student feedback in our studies, include sharing scientific findings (e.g. empirical research on benefits of gratitude) and personal testimonials related to the activities

(e.g. a football player talking about his purpose). Therefore, Furthermore, researchers should assess student motivation and its relationship to intervention effects.

A third factor that significantly influenced intervention efficacy in our studies was implementation timing. In one study, students ( $N=66$ ) completed intervention activities during an 'advisory period.' Qualitative responses later revealed that this period was usually designated for eating lunch and taking a break. Students reported that, although they enjoyed the activities, they were upset that they were forced to complete them during their free period. For instance, one student commented, 'I would not have this session during a student's lunch time either, because we need energy for our classes' and another student responded 'Having the gratitude sessions during lunch, especially days with sugar and chocolate chip cookies, was a little irritating. I had to rush to eat the cookies and that made me, as well as my other classmates, cranky.' In other studies, students who completed activities during gym, health, English, and psychology classes did not report negative feelings about the timing of activities. Consulting with teachers and administrators can help researchers select the optimal timing for implementing an intervention. Researchers can also use qualitative strategies (e.g. observations, open-ended survey questions) to assess any unintended influences of implementation procedures.

### Limitations and future directions

In sum, our data suggest researchers who test positive interventions in school settings should include a control group, measure proximal outcomes, and either manipulate or measure contextual factors such as teacher motivation, student motivation, and intervention timing. These conclusions should be interpreted in light of the studies' limitations. Specifically, the current studies were designed to investigate the efficacy of gratitude and purpose interventions among middle and high school students. Interventions that target different outcomes or populations could have different challenges to consider. More research on a variety of positive interventions is important to learn more about the unique challenges of different positive interventions. Additionally, in each study, sample sizes were relatively small. As such, they did not have enough power to detect small effects. Furthermore, although we noted the importance of teacher engagement, our methodologies for measuring this were informal: some teachers completed debrief questionnaires, others were interviewed by phone, and there was not a standard measurement for engagement or

enthusiasm. Researchers should investigate the best ways to understand and assess teacher enthusiasm.

In addition to addressing limitations, there are several other promising directions for extending this research. First, it would be useful to develop systematic strategies for assessing the proximal outcomes of interventions. This would likely involve developing and validating new self-report measures and may also involve observational procedures. Second, researchers should continue to investigate factors that moderate intervention efficacy. Third, researchers should take care to develop and administer change-sensitive measures. Many measures of positive constructs generate high mean scores, and this can result in a ceiling effect that makes it nearly impossible to capture change over time (Bronk, Riches, & Mangan, 2018). Finally, a pressing issue is to examine whether the downward trend in positive outcomes (e.g. gratitude) that was observed in the current across studies also occurs in other settings and with different outcomes. If it does, then it is essential to explore why this trend exists. Pursuing this research could help researchers more successfully test the efficacy of positive interventions in educational settings

The purpose of this paper was to share insight from our studies that could help other researchers test other positive interventions with the highest chance of success. While educational settings present challenges, continuing to develop strategies for intervening in this context has tremendous potential to benefit youth (Waters, 2011).

### Disclosure statement

No potential conflict of interest was reported by the authors.

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