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grant report

Translating Health Psychology Research into Health Policy and Practice: Reflections from Intervention Mapping

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Johns Hopkins Bloomberg School of Public Health Despite mounting discourse on the need to better translate health psychology research into policy and practice,

progress needed. Researchers in health psychology have pushed and created frontiers in psychology and behavioral medicine in past decades, but translating our theoretical and empirical knowledge into policy interventions will further ensure that our fruits of labor achieve their maximum potential. As I situated this researchpractice gap, two possible mechanisms became salient during my participation at the 2017 CREATE Workshop on Intervention Mapping (IM). First, the systematic processes of planning and implementing interventions create opportunities for researchers to leverage policy makers and practitioners' existing influence and expertise in the field, therefore advancing our work closer to the nexus between research and practice (Kok et al., 2016). Second, multi-level thinking underlies IM, allowing us to conceptualize how individual-level constructs transcend and manifest in groups, organizations, communities, and beyond(Morgeson & Hofmann, 1999). As a researcher in health policy and management with training in health psychology, understanding these two aspects of IM brought insight into how I can combine paradigms from both disciplines for research that will yield higher impact.

The core of IM includes a 6-step iterative approach in the development of health promotion interventions: 1) conducting needs assessment/problem analysis, 2) specifying change objectives, 3) selecting theory-based intervention methods

and practical applications, 4) integrating these practical applications into an organized program, 5) planning for adoption, implementation, and sustainability, and 6) creating an evaluation plan (Bartholomew Eldredge et al., 2016; Kok et al., 2016). Health psychology theory yields the highest impact during steps 2 and 3. But interventions do not exist in a vacuum, and further architecting a continuous interface between the intervention developers and users during steps 3, 4 and 5 is crucial to ensure its effectiveness. Kok et al. (2004) referred to this as the "linkage system." The explicit need to create this interface for interactions and information exchange paves the way for a stronger role for, or closer collaborations with, policy makers and practitioners. This is especially key for health issues and interventions at the policy level. Addressing these issues requires concerted efforts among various stakeholder groups, and IM generates a framed opportunity for theory users to precisely integrate practitioners' field expertise for enhanced feasibility, diffusion, and effectiveness (Kok et al., 2016).

As an example, unintentional injury is the fifth leading non-disease cause of death in the U.S., with 33,091 deaths due to opioid overdoses in 2015 (Centers for Disease Control and Prevention, 2016, 2017). At its core, the opioid epidemic has arisen from drug diversion and abuse at the individual level, but individual psychosocial interventions have not been effective in mitigating the problem (Amato, Minozzi, Davoli, & Vecchi, 2011). This necessitates policy solutions, such as prescription drug monitoring programs (PDMPs), which are opioid prescription information databases at the state-level for clinical, law enforcement, and public

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health purposes that involve multiple stakeholder groups (Rutkow et al., 2017). PDMPs are by definition a policy solution, but it essentially is a form of behavioral change intervention that includes the conditions, actions, and actors in opioid users' social and physical environments in its design and implementation (see Commers, Gottlieb, & Kok, 2007). A case in point is the Institute for Behavioral Health at Brandeis University, which is one of the centers of excellence in the U.S. that conducts research and interventions to address the opioid epidemic. Their three-pronged approach to mitigate the increasing phenomena of deaths due to opioids overdosing is as follows; i) behavioral change for opioid PDMPs for surveillance, prescribers, ii) iii)ensuring access to and high quality of addiction treatment (Pearlstein, 2017).

Second, implicit to IM and the translation of research to policy and practice is the importance of multi-level thinking. Kok et al. (2004) pointed to the need to organize methods and strategies at "each ecological level" when selecting underlying theories for interventions. I expand on this view by drawing from scholarship in organizational behavior, as this discipline has been articulating issues related to multi-level theory and research development for decades (e.g., Klein & 2000; Mowday & Sutton, Kozlowski, Rousseau, 1985). Scholars in organizational behavior are driven to contemplate these issues, in part, by the need to delineate the influence of individuals yield on groups and organizations to understand organizational phenomena better (Mowday & Sutton, 1993). In the same vein, if health psychology researchers can apply such thinking, and extend individual-level constructs into higher levels, we might be able to create new paradigms to apply our knowledge in ways that policy makers and practitioners will view with immediate relevance.

For example, health psychology researchers are familiar with the construct and impact of self-

efficacy on individual behaviors, but it also has implications profound in teams, within organizations, and for organizational development and change(Cummings & Worley, 2014; Gist, 1987). In implementation science, the organizational readiness for change concept builds directly on Albert Bandura's work. Weiner (2009) refers to this concept as "organizational members' change commitment and change efficacy to implement organizational change" (p. 2). This is not to suggest that conceptualizing multi-level research within health psychology is straightforward. Crucial thought must still be given to conceptualization and measurement issues to avoid anthropomorphizing higher level entities institutions with individual-level constructs (Klein, Dansereau, & Hall, 1994), but there are certainly avenues to apply multi-level thinking in health psychology, and moreover in theoretically-driven ways (e.g., Morgeson & Hofmann, 1999).

Immersing myself with the IM method has provided two forms of insight to better translate health psychology research into policy and practice: structured opportunities to leverage policy makers and practitioners' familiarity and field expertise for interventions oriented at communities or populations, and the application of multi-level thinking. It is my hope that these brief propositions will spur thought on the ways we can conduct research in health psychology to generate higher impact on policy and practice.

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References

- Amato, L., Minozzi, S., Davoli, M., & Vecchi, S. (2011). Psychosocial combined with agonist maintenance treatments versus agonist maintenance treatments alone for treatment of opioid dependence. *The Cochrane Database of Systematic Reviews* (10), Cd004147. doi: 10.1002/14651858.CD004147.pub4
- Bartholomew Eldredge, L. K., Markham, C. M., Ruiter, R. A. C., Fernández, M. E., Kok, G., & Parcel, G. S. (2016). *Planning Health Promotion Programs: An Intervention Mapping Approach* (4th ed.). CA, United States of America: Jossey-Bass.
- Centers for Disease Control and Prevention. (2016). Wide-ranging online data for epidemiologic research (WONDER). Retrieved from: http://wonder.cdc.gov/
- Centers for Disease Control and Prevention. (2017).

 Prescription Opioid Overdose Data. Retrieved
 from: https://www.cdc.gov/drugoverdose/data/
 overdose.html
- Commers, M. J., Gottlieb, N., & Kok, G. (2007). How to change environmental conditions for health. Health Promot Int, 22(1), 80-87. doi:10.1093/heapro/dal038
- Cummings, T. G., & Worley, C. G. (2014).

 Organization Development and Change (10th ed.): South-Western College Pub.
- Gist, M. E. (1987). Self-Efficacy: Implications for Organizational Behavior and Human Resource Management. doi:10.5465/AMR.1987.4306562
- Klein, K. J., Dansereau, F., & Hall, R. I. (1994). Levels Issues in Theory Development, Data Collection, and Analysis. *Academy of Management Review, 19*(2), 195. doi:10.5465/ AMR.1994.9410210745
- Klein, K. J., & Kozlowski, S. W. J. (2000). From Micro to Meso: Critical Steps in Conceptualizing and Conducting Multilevel Research.

 Organizational Research Methods. doi: 10.1177_109442810033001
- Kok, G., Gottlieb, N. H., Peters, G.-J. Y., Dolan

- Mullen, P., Parcel, G. S., Ruiter, R. A. C., . . . Bartholomew, L. K. (2016). A taxonomy of behaviour change methods: an Intervention Mapping approach. *Health Psychology Review,* 10(3), 297-312. doi: 10.1080/17437199.2015.1077155
- Kok, G., Schaalma, H., Ruiter, R. A. C., Van Empelen, P., & Brug, J. (2004). Intervention Mapping: Protocol for Applying Health Psychology Theory to Prevention Programmes. *Journal of Health Psychology*, 9(1), 85-98. doi: 10.1177_1359105304038379
- Morgeson, F. P., & Hofmann, D. A. (1999). The Structure and Function of Collective Constructs: Implications for Multilevel Research and Theory Development. *Academy of Management Review*, 24(2), 249. doi:10.5465/AMR.1999.1893935
- Mowday, R. T., & Sutton, R. I. (1993).

 Organizational behavior: Linking individuals and groups to organizational contexts. *Annual Review of Psychology*, 44(1), 195.
- Pearlstein, M. (2017). Taking Aim at America's Opioid Crisis. *Heller Magazine*, Summer 2017, 14-19.
- Rousseau, D. M. (1985). Issues of level in organizational research: Multi-level and cross-level perspectives. *Research in Organizational Behavior*, 7, 1-37.
- Rutkow, L., Smith, K. C., Lai, A. Y., Vernick, J. S., Davis, C. S., & Alexander, G. C. (2017). Prescription drug monitoring program design and function: a qualitative analysis. *Drug and Alcohol Dependence*, 180, 395-400. doi:10.1016/j.drugalcdep.2017.08.040
- Weiner, B. J. (2009). A theory of organizational readiness for change. *Implementation Science*, 4(1), 67. doi:10.1186/1748-5908-4-67r



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