The role of motivation and guilt in predicting HIV adherence in China

Taryn Vian,1 Mary Bachman DeSilva,1 Howard J. Cabral,2 Geoffrey C. Williams,3 Allen L. Gifford,4,5 Zhong Li,7 Xie Wubin,7 Christopher J Gill1,2, Lora Sabin1,2

1Center for Global Health and Development, Boston University, Boston, MA 2Department of Biostatistics, Boston University, Boston, MA 3Departments of Medicine and Psychology, University of Rochester, Rochester, NY 4Departments of Health Policy and Management and Medicine, Boston University, Boston, MA 5Edith Nourse Rogers Memorial VA Hospital, Bedford, MA 6FHI 360, Beijing, China

Background

• Self-determination theory (SDT), a theory of human motivation, posits that satisfaction of the basic human psychological need for autonomy can lead to improved health-promoting behaviors like adherence. Individuals acting with autonomous motivation choose to do so because of the personal importance of the behavior for their health.
• Critics of SDT imply it does not consider cultural differences, especially eastern cultures which may not place high value on autonomy.
• We used data from the China Adherence through Technology Study (CATS) to examine relationships among components of the SDT model, including treatment support, motivation (autonomous and controlled), and perceived competence.

Methods

CATS Intervention

• This observational analysis used data from a randomized controlled trial of a text-message intervention to increase adherence among 120 Chinese patients. 115 patients completed the study and were included in analyses.
• Subjects were classified according to objectively measured adherence into high (≥95%) and low (<95%) adhering groups. The 34 low and 81 high adhering patients were followed longitudinally over time. Timing of measures is shown below.

Measures

• A relative autonomy index measured different types of self-regulation, including
  • Identified (valuing adherence as personally important)
  • Integrated (integrating adherence goals with other life goals)
  • Introjected (feeling guilty if a dose is missed)
  • External (feeling compelled by others).
• Adherence was measured as the proportion of on-time dose taking (±1 hour), as measured by electronic pill dispensers.

Analysis

We calculated correlation coefficients to assess relationships among variables and to determine associations with adherence.

Results

• We found strong correlations among treatment support, motivation, and competency. However, relationships differed between low and high adherers.
• Among low adherers, treatment support was positively correlated with identified (.45, p≤0.01) and integrated (.41, p≤0.05) motivation, but was not significantly related to introjected or external motivation.
• Among high adherers, treatment support was moderately correlated with external motivation (.26, p≤0.05) and introjected motivation/guilt (.34, p≤0.01). It is moderately correlated with perceived competence (.47, p≤0.001).
• Among low adherers, introjected motivation/guilt was not correlated with perceived competence, but among high adherers this relationship was significant (.33, p≤0.01).
• External control was not correlated to perceived competency among low adherers, but the relationship approaches statistical significance among high adherers (.20, p≤0.10).

Conclusions

We found positive associations between treatment support and introjected motivation (guilt), and between introjected motivation and increased competence, among high adherers in China. This suggests that guilt may be a driver of patients’ adherence behavior in China.

Acknowledgements

We acknowledge funding from the National Institute for Drug Abuse (1R34-DA032423). We thank Jessica Haberer, David Bangsberg, and Ariel Falconer. We are grateful to the clinicians and patients in Nanning who participated in the CATS intervention trial.