Prevention Tracker: A systems approach

Prevention Tracker was a research collaboration between The Australian Prevention Partnership Centre and four communities across Australia.

The aim of Prevention Tracker was to identify a common set of methods and inquiry processes to describe local prevention systems, guide system change efforts and monitor the impact of these efforts.

By prevention system, we mean the people, processes, activities, settings and structures – and the changing relationships between them – that work together to try to improve the health of a community.

Prevention Tracker took a case study approach, applying a range of qualitative and quantitative methods to examine local prevention systems and the type of inquiry processes needed to facilitate change.

Glossary

The following definitions of key system terms appear **bolded** in the factsheets. Hover over the word to access the definition in the factsheets.

causal loop diagram	A visual representation highlighting the causes and drivers of a particular problem or situation. The diagram contains a series of nodes (constructs, issues or ideas) connected by arrows (indicating influence). Closed feedback loops can be identified within the diagram, which help to illustrate why the situation exists as it does. Causal loop diagrams help to describe complex adaptive systems.
coding framework	A structure for analysing and making sense of large, qualitative data sets, for example the transcripts of interviews or workshops. The coding framework identifies common themes in the data, either from within the data itself (inductive coding) or using a set of pre-determined, theoretically informed themes (deductive coding).[1]
complex adaptive systems	A system defined by a multitude of interdependent elements which interact and influence each other in a variety of ways.[2] The system may be self-organising, and responsive, able to adapt and accommodate external and internal changes, without fundamentally changing itself. The boundaries of complex adaptive systems may be fuzzy, in that influences on individual system elements may not always be visible, or may change over time.
feedback loops	Models of system behaviour which illustrate a set of nodes or concepts interacting and influencing each other in a closed loop, such that A influences B, which influences C, which influences A. Two kinds of loops can be seen in systems models:

- **reinforcing loops:** compound change in one direction with even more change, producing either growth and collapse (also sometimes called positive feedback loops; virtuous cycles or change loops). A simple example is compound interest on a bank account, in which the more interest is added to the account each year, the more will be earned in the future.

- **balancing loops:** lead to equilibrium – they bring things to a desired state and keep them there. They are sometimes called negative feedback loops or stability loops. A simple example is a thermostat which keeps a room at stable temperature by sensing and responding to changes in the surrounding temperature.

group model building	Defined by Vennix as "a process in which team members exchange their perceptions of a problem and explore questions such as: what exactly is the problem we face? How did the problematic situation originate? What might be its underlying causes? How can the problem be tackled?" It is a collaborative effort, potentially involving decision makers, technical experts, community members and so on, along with the modellers.[3,4]
liveability	The environment in which people live has an effect on their health and wellbeing. Liveability is a measure of the qualities in the local environment which have an effect on the residents' health. Indicators of liveability include things such as the built environment, food systems, transport and infrastructure, education and social services.[5]
local advisory group	A group established in each of the Prevention Tracker communities. Membership consisted of people and organisations who had a direct stake in the local prevention system. Their role was to provide advice to the Prevention Tracker project team (the researchers) to help guide the implementation of the project in each community.
mental models	Reflect the beliefs, values and assumptions that we personally hold, and they underlie the reasons for doing things the way we do. They are so powerful in affecting what we do because they influence what we see, and they shape our perceptions. Mental models are the filters through which we interpret our experiences, evaluate plans and choose among possible courses of action.[6]
non-government organisations	Commonly referred to as NGOs, are usually not-for-profit organisations, independent of governments, that are active in humanitarian, educational, health care, public policy, social, human rights, environmental, and other areas to affect changes according to their objectives.
social network analysis	A sociological effort to identify and understand the patterns in relationships between individuals, groups and/or organisations. Results may be displayed visually in "network maps".
system	A group of interacting, interrelated, or interdependent elements forming a complex whole. Almost always defined with respect to a specific purpose.[7]
system action learning	An ongoing problem-solving cycle. It involves a process of learning, whereby people understand what is causing the problems they see, design innovative strategies to address these problems and then carry out actions and learn about whether those actions made a difference in solving the problem.[8]
system impacts	Change which shifts the behaviour of elements or relationships within systems, causing an ongoing change in the whole system, not just the individual parts.
systems dynamics	A field of that study seeks to understand the nonlinear behaviour of complex systems and to make sense of the interrelationships between system elements.
systemic inquiry	Integrates systems thinking as a perspective and systems methods or tools to learn about a problem or situation.

systems thinking	A school of thought which focuses on recognising the elements which constitute systems, identifying the interconnections between the elements and synthesising them into a unified view of the whole.
systems thinking tools	Systems thinking uses different tools that include diagrams and graphs to model, illustrate and predict system behaviour. Examples of systems thinking tools include the *behaviour over time (BOT) graph*, which indicates the actions of one or more variables over a period of time; the *causal loop diagram (CLD)*, which illustrates the relationships between system elements; and the *simulation model*, which simulates the interaction of system elements over time.

References

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