‘A synergy model of health’ - an integration of salutogenesis and the health assets model

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‘A SYNERGY MODEL OF HEALTH’ - AN INTEGRATION OF SALUTOGENESIS AND THE HEALTH ASSETS MODEL

SUMMARY

This article proposes to advance the connections between salutogenic theory and assets models for health improvement. There is a need to integrate their use in public health and health promotion so that their respective potentials can be fully developed. This requires their synergies to be made more explicit so that a more coherent approach can be taken to their utilisation. A mechanism is therefore needed that helps to raise awareness of them and their value as a resource together. Bronfenbrenner’s bioecological theory provides one framework that can support better integration of salutogenesis with the applied nature of assets based models. This paper proposes a new ‘synergy model for health’ which integrates key concepts associated with salutogenic theory - Generalized and Specific Resistance Resources (GRRs/SRRs) and Generalized and Specific Resistance Deficits (GRDs/SRDs) – and the Sense of Coherence (SOC). In doing so, it highlights those GRRs and SRRs which are assets that, either individually or collectively, help to develop a stronger SOC. Higher levels of SOC can then support the transformations of potential resources into available assets (that people can understand, manage, and make sense of), capable of producing positive health development. The proposed ‘Synergy model of health’ aims to contribute to a deeper theoretical understanding of health and development through the integration of the key elements of both salutogenesis and assets models. This can facilitate a better contextualization of the ideas into public health policy and practice by making the salutogenic theory more action-oriented and the assets model more theoretical.

Keywords: public health, salutogenesis, assets models, health promotion.

INTRODUCTION

The basic principles of health promotion, encapsulated in the Ottawa Charter (1986), show health as an intrinsic positive force. However, there are few practical and theoretical

frameworks available to articulate this issue. Two such frameworks are a) the Asset-Based Community Development (ABCD) approach, which was formed out of community development practice by Kretzmann and McKnight (1993), and subsequently developed and brought into the field of public health by Morgan and Ziglio (2007), and b) Antonovsky's salutogenic theory (1979, 1987), from the field of medical sociology. Both frameworks are concurrent with real life, by interacting with and complementing it (Bauer et al., 2006). Similarly, both approaches have aroused interest researchers and professionals from different fields, as seen in recent systematic reviews. Suárez et al. (2020) review 61 articles on salutogenesis. Two other reviews by Van Bortel and colleagues (2019) and Cassetti et al. (2019) synthesize 478 and 30 publications, respectively covering the field of assets. These reviews demonstrate their continuing importance in the field of health the opportunities arising from their application.

Despite the known connections between salutogenesis and asset based models of health, advances in their theoretical development in the main continue in parallel. The authors of this paper argue that efforts to integrate the two related ideas would help tackle some of their respective challenges. In the field of salutogenesis, it would strengthen our ability to incorporate an action component leading to the development of models for salutogenic interventions. This would include key elements of the theory which go beyond individual health status, applying it to the whole range of human health experience (Bauer et al., 2019). In the case of asset-based models, this would facilitate an improved theoretical framework which would help to settle some of the definitional, theoretical and evaluative issues associated with the implementation of the approach. Hence contributing to a continued enthusiasm and sustainability of the ideas behind it (Van Bortel et al., 2019).

BACKGROUND

Contemporary discourses on health usually start from the 1948 Constitution of the World Health Organization (WHO), where health was described as 'a state of complete wellbeing and not only the absence of disease' (World Health Organization, 2014, p. 1). It is true to say that, even now, a disproportionate amount of effort has been put into the latter part of this

description across medicine, public health and social science. This paradigm is usually known as the 'pathogenic perspective' and focuses on risk factors and diseases (Bauer et al., 2006). Thus, it tends to emphasize the role of education on helping people reduce their risk. Since then, the tenets of health promotion as set out in the Ottawa Charter (1986) have long taken a more strengths-based approach. Salutogenesis reinforces this approach and would be a more powerful research guide than the pathogenic orientation (Antonovsky, 1996, p. 11). Morgan and Ziglio (2007) proposed that both policies and practice should focus on salutogenic and asset based thinking to as a means of furthering opportunities for both health improvement and reductions in inequalities. More than ten years later, it seems there is still work to do to deepen our understanding of the commonalities, differences and complementarity of salutogenic theory and assets models for health.

Salutogenic theory could be seen as the theoretical foundation which supports the implementation of an asset approach (Morgan and Hernán, 2013). Integration of the two facilitates more in-depth insights and knowledge of these complementary approaches. It could also, have an impact on how we understand social reality and design promotive, preventive, disease and curative strategies for individual and community interventions particularly in their action phase.

The aim of this article is therefore to present and discuss a 'Synergy Model of Health' which uses a framework based on bioecological systems theory to integrate two related themes.

THE BASIS OF THIS PROPOSAL

Salutogenesis as a framework

Antonovsky (1979, 1987) established that salutogenesis focuses on the origins of health. Initially, it was a stress resource-oriented concept that focused on resources, and maintained and improved the movement towards health, explaining why some people stayed well in spite of stressful situations and hardships (Antonovsky, 1987; Mittelmark et al., 2017a). He noted

that health is an active, dynamic process of self-regulation, and that chaos and stress are part of life and natural conditions (Antonovsky, 1979, 1987).

The process of self-regulation starts with an appraisal process in different stages (Antonovsky, 1987). First, a judgment of the nonambiguity and certainty of the stimulus; second, a decision that the situation does indeed have meaning, and third, coping or adaptation of the situation (Antonovsky, 1987, p. 61). Antonovsky refered to Shalit and his Appraisal Integration Model (AIM) as highly compatible with the salutogenic model of health. Shalit (1982, p. 4) stated that 'the more coherent a picture an individual can attain of his situation or environment, the better his potential for acting on or interacting with this environment'. Antonovsky (1987, p. 61) further referred to what Lazarus and Folkman (1984) called the stage of primary appraisal 'as indicative of the value, meaningfulness, relevance or danger/benignness of the situation'. It is the three stages in the AIM model that are parallel to comprehensibility, meaningfulness and manageability. However, differences are apparent between Shalit and Antonovsky with regard to the significant issue of understanding appraisal. Antonovsky (1987, p. 61) argued: 'He [Shalit] has not dealt with the question of a generalized trait characteristic that might be called strength of appraisal. He claims that unless one reaches a reasonable level of comprehensibility, one cannot decide whether the situation is meaningful, whereas it seems clear to me that one can have a very high level of investment in a situation or life area that is perceived as chaotic'.

Salutogenesis focuses on three aspects: (a) the solution to problems and search for answers, (b) the identification of resources that help people maintain or improve their health, and (c) the identification of a global and generalized sense of meaning in individuals, groups, communities, or systems, that serves as the overall mechanism or capacity for this process: the Sense of Coherence or SOC (Lindström and Eriksson, 2006).

According to Antonovsky (1987), health is a process in an ease/dis-ease continuum (fig.1). This means that, instead of focusing on diseases and associated diagnoses as dichotomous results (sick vs not-sick), health is always present, with a higher degree in some stages of life and lower in others (Bauer et al., 2019). Then, salutogenesis is defined as the process of

moving towards a health end in the ease/dis-ease continuum (Antonovsky, 1993). Central concepts for the movement in the ease/dis-ease continuum are the Generalized (GRRs) and Specific Resistance Resources (SRRs) and Generalized and Specific Resistance Deficits (GRRs-RD) (Antonovsky, 1987).

[insert – Fig. 1. The ease/dis-ease continuum (Antonovsky, 1979, 1987). Graphic: Bengt Lindström, Monica Eriksson, Peter Wikström (Lindström and Eriksson, 2010) - here]

Generalized resistance resources: preconditions for developing SOC

Generalized resistance resources (GRRs) are any characteristic of a person, group, or environment that can facilitate the effective management of stress (Antonovsky, 1979). Their nature can be genetic, constitutional, physical, biological, cognitive, emotional, moral, attitudinal, relational, socio-cultural, material, spiritual, and psychosocial (Antonovsky 1979, 1996; Eriksson, 2017; Idan et al 2017). These resources act in support of both individual and collective abilities to cope with stressors and life's challenges, and help individuals build coherent and meaningful life experiences (Antonovsky, 1979, p. 103; Idan et al., 2017).

An improved ability to cope with stressful situations appears when GRRs are complemented with Specific Resistance Resources (SRRs) – particular context-bounded resources that can be activated to deal with a specific stressor. When these are in operation, tension caused by stress does not become debilitating (Antonovsky, 1979; Mittelmark et al., 2017b). Equally important are the Generalized and Specific Resistance Deficits (GRDs/SRDs) for understanding the function of GRRs. Antonovsky (1987, p. 28) proposed 'major psychosocial generalized resistance resources–resistance deficits' as a unified concept. It is known that GRRs and SRRs provide life experiences that promote the development and maintenance of a strong SOC; on the other hand, Antonovsky stated 'that suffering from generalized and specific resistance deficits provide life experiences that vitiate one's SOC´ (Antonovsky, 1987, p. 129).

This can be exemplified by the statements made by Eriksson and Lindström (2008) regarding a salutogenic approach to the metaphor of the river of health. They propose that the mainstream of the river follows the direction of life, so they talk about health in the 'River of Life'. The river, like life, is full of risks and resources, however, the result is based on our orientation and learning through our experiences, thus acquiring the ability to identify and use the necessary resources to improve our options for better health and, consequently, life.

The above can be complemented by Lindström's drawing (fig. 2) that exemplifies the metaphor of a person travelling through the river of life with a backpack full of GRRs that they have acquired during life (Lindström and Eriksson, 2010). In their travel, they find several stressors, tests, and tribulations that they can face using the GRR already in their backpack. SRRs would be available in the same river and may be chosen and used when needed, without having to keep them in the backpack for later. Through the SOC, GRRs allow people to identify and manage these SRRs, activating the most fitting resources to avoid tension turning into debilitating stress (Mittelmark et al., 2017b). In this way, GRRs and SRRs become elements on which to intervene supporting the challenge of developing salutogenic interventions.

[insert – Fig. 2. Health in the journey of life. Graphic: Bengt Lindström, Monica Eriksson, Peter Wikström (Lindström and Eriksson, 2010) - here]

Sense of Coherence: the driving force of life

Sense of Coherence (SOC) is a global orientation that expresses the extent to which one has a pervasive, enduring yet dynamic feeling of confidence that (1) the stimuli from the internal and external environments in their life are structured, predictable, and explicable; (2) there are available resources to meet the demands posed by these stimuli, and (3) these demands are challenges, worthy of investment and engagement (Antonovsky, 1987, p. 19). In view of this, SOC components are: (a) comprehensibility, the cognitive component; (b) manageability, the instrumental or behavioral component, and (c) meaningfulness, the motivational component (Antonovsky, 1987, pp. 16-18).

The development of SOC involves a complex, interactive, and interdependent process, which flows dynamically through the life-course (Lindström and Eriksson, 2006). GRRs by definition create life experiences characterized by consistency, participation in shaping outcomes, and an underload-overload balance, giving rise to or reinforcing a strong SOC (Antonovsky, 1987, p. 28). Therefore, they are an important factor in easing movement towards health in the continuum (Antonovsky, 1996) and have the potential to create health-promoting abilities (Koelen et al., 2017).

Antonovsky also proposed that SOC could appear as a collective attribute (Antonovsky, 1987; Eriksson, 2017). Community SOC involves the same three components identified in individual SOC (cognitive, behavioral, motivational), but regarding groups of people (Peled et al., 2012; Idan et al., 2017). In addition to the three established components of SOC, recent scientific literature has pointed to a fourth component: influence. This can be understood as the degree to which people feel they can affect their community (Elfassi et al., 2016; Sagy and Mana, 2017). The existence of community SOC has the potential to facilitate the enhancement of collective abilities. These are generated when people participate in community activities or are part of local organizations that are coherent with the kind of life they aspire to have – hence, there is a bidirectional relationship between individual capacities and social structures (Ibrahim, 2006, p.402).

The collective and community aspects of SOC have an influence on the ease/dis-ease process (Antonovsky, 1996). However, most of the available evidence focuses on analyses of individual SOC scores (using well-known survey instruments) and a range of health and health-related topics (e.g. quality of life) in a determined group of people (Eriksson and Lindström, 2006). This evidence creates a case for using a salutogenic framework to inform public health; however, it cannot support by itself the development of community programmes and interventions.

Health assets approach and revitalizing public health

The terminology of health assets (and related terms, such as asset-based and asset approaches) re-emerged into public health debates in the late 2000s (Morgan, 2014), reflecting the values and principles of the Ottawa Charter (WHO, 1986). Morgan and Ziglio (2007) proposed an 'assets model' as a means of galvanizing several positively structured ideas and concepts that could influence the way in which public health professionals think and act to create health. Salutogenesis was included in this model as a positively framed construct that could provide evidence to support a shift from pathogenic thinking in the context of intervention development (Morgan et al, 2010). McKnight's ABCD model was then included as a means of translating it into practice, given that its principles helped ensure that public health takes into account the best means for involving local communities in the health development process (Morgan, 2014).

A recent systematic review of related literature shows that the terminology of assets, in all its varied linguistic forms, shows a lack of consistency in use and meaning. Despite the different definitions used by international literature on health assets, the most frequently cited definition was the one coined by Morgan and Ziglio (Van Bortel et al., 2019). Nonetheless, the purpose of this article is not to dismiss one definition over the other, but to understand how they can be better integrated into health promotion practice.

Applying the assets model – involving people and communities with a positive approach

Morgan (2014) states that, given the growing interest in the approach, there is an imperative to confirm a set list of principles which can help guide the successful practical application of the main tenets of the asset idea. He proposed a set of five principles: (1) prioritize theoretically based positive paradigms for wellbeing; (2) effectively and appropriately involve individuals and local communities in health gain; (3) connect the individual with community and broader society; (4) support decision-focused, multi-professional, and multi-disciplinary working, and (5) secure sustainable investment through an evidence-based multimethod approach.

Evidence exists to suggest the benefits of adopting a positive (asset) approach at both the individual and community level in health promotion and public health (Van Bortel et al., 2019). Examples at the individual level include the study by Lindström (1994), focusing on age-specific assets for Nordic children, and the work of the Search Institute, which developed a series of 'developmental assets' (Search Institute, 1997) deemed necessary to support children in their early years and adolescent development. Complementary research by the Economic and Social Research Council (ESRC) from the United Kingdom explored the development of competences and stress-coping skills through different life stages and recognized resilience as an asset that allows individuals to recover from adversity, supporting their flourishment in future years (Bartley, 2006). Assets identified in these studies highlighted the protective factors related to individuals' inner resources, and some of those, such as affective support and networks, linked to their immediate environment.

Identifying assets and mobilizing people and communities

Kretzmann and McKnight's previous work on the ABCD model focused on empowering communities to identify and address their own problems using available local assets (Kretzmann and McKnight, 1993; Morgan et al, 2010; Blickem et al., 2018). They proposed six categories of community assets: people; for- or non-profit agencies or organizations; institutions; infrastructure or physical resources; economy, and culture (including traditions, identity and sense of belonging) (McKnight and Russell, 2018).

One specific method arising from the ABCD approach is the idea of asset mapping. Indeed, available evidence establishes that an asset-mapping process is a useful tool for working with local communities (Sánchez-Casado et al., 2017), as it facilitates agency (Kramer et al., 2012). Operating at the community level, this methodological tool helps recognize the already existing assets that can be used together for a common purpose. This process aims to reveal and mobilize community resources, helping create a web of relations and solutions based on the positive elements that the people, their community and their context already have. The mapping process does not end after collecting and presenting the information, as its main purpose is to mobilize the identified resources (Cofiño et al., 2016). Not doing so

undermines the whole process, restricting its capacity for action, community empowerment, and renovation - and thus, its potential to generate positive changes (McKnight, 1995). Thus, this tool is central to the ABCD process, as it provides a mechanism for empowering communities using the principles of collective participation.

The scoping review carried out by Cassetti et al. (2019) shows that there are three main strategies to mobilize assets in asset-based approaches: (a) connecting them, as seen in interventions focused on community participation, whose aim is to connect people and/or organization assets; (b) raising awareness on available assets, such as motivating local residents to use existent green spaces, and (c) allowing them to prosper, which may be associated with a more top-down strategy, where people's potentials are recognized or elements from their physical environment become assets.

Considering that, besides community assets, individuals have their own assets, what is missing is promoting the use of tools that help identify and dynamize the latter. Given that most evidence and thinking on the salutogenic model is at the individual level (Álvarez-Dardet and Ruiz-Cantero, 2011), while the asset approach is focused on the collective level, there is a need and opportunity to integrate them. Bringing them together under a common framework could improve the possibilities to develop concrete strategies and tools to address and enhance individual and collective capacities, and to foster collaborative work among professionals, institutions and citizens (Cofiño et al., 2016).

Bronfenbrenner's bioecological theory could be the common framework that unites asset models and salutogenesis, as it proposes a model of influences in human development that incorporates key elements of both. The Lindström model of Quality of Life (1994) was an early demonstration of the use of Bronfenbrenner's ecological framework for human development in connection to salutogenesis. Incorporating this framework could provide a multilevel, multimethodological, and multidisciplinary lens to help demonstrate further evidence about the overlap between them.

The bioecological model as a pathway to integrate salutogenesis and health assets model

Bronfenbrenner's bioecological theory (an evolution of his ecological model) states that a person's wellbeing is influenced by their social context, including the quality and function of their relationships with family, neighbors, and institutions (Bronfenbrenner and Morris, 2007). We believe that this theory provides an appropriate framework to better integrate salutogenic thinking with the more practically orientated asset approach – using the four components: process, person, context, and time (PPCT) (Bronfenbrenner and Morris, 2007; Boon et al., 2012), which interact with each other, to form a dynamic theoretical system.

The Process component is a basic concept and it encompasses the proximal processes that shed light on the reciprocal and progressive interactions between people and their environment. It allows us to understand how this relationship evolves and becomes more complex as people grow and develop. Proximal processes are seen as forces for development and include interactions with people, objects, and symbols, too. The Person component recognizes not only the biological, genetic, or physical elements of individuals, but also the subjective nature of their idiosyncratic characteristics, abilities, competences, and ways of seeing the world.

The Context component, perhaps the most well-known aspect of the theory, refers to the imbrication of four systems (Bronfenbrenner and Morris, 2007; Boon et al., 2012; Rosa and Tudge, 2013) that should not be considered as static compartments, as they are continuously interacting and influencing each other:

1) Microsystem: closest environment, where the person participates actively and can interact face to face with others (e.g., family).
2) Mesosystem: describes the relationships between two or more microsystems in which the person participates actively (e.g., family-school).
3) Exosystem: includes other people, entities, organizations, and places that the person or their family can access and be influenced by, but do not frequently interact with or participate in (e. g., community, mass media).

4) Macrosystem: the biggest and most remote group of people and structures/organizations, which have a great influence over the previous systems. It involves institutional systems that belong exclusively to a culture or subculture, such as economic, educational, legal or political systems, and the opinions and customs that represent the cultural fabric of a society. This level includes values, traditions, customs, religion, social rules, economic models, and government and corporate policies.

Finally, the Time component, or Chronosystem, refers to interactions and changes in the characteristics of the individual and their environment throughout their development, caused by inner or outer events or experiences.

AN INTEGRATED SALUTOGENIC AND ASSETS MODEL: A PROPOSAL

Morgan and Ziglio's assets model provided a high-level account of how a wide range of ideas and concepts that could be brought together to enhance the process of public health through a positively framed (salutogenic) lens (Morgan and Ziglio, 2007). Even though SOC was not explicitly mentioned, the assets model referred to its components – especially to resource identification and management strategies used by people to protect and promote their health (Mittelmark et al., 2017a). The authors recognized the potential for tools, such as 'asset-mapping', as a means of supporting professionals when working with communities with a strengths-based approach. They also highlighted the need to ensure that the process of assessing program and intervention effectiveness is framed by 'salutogenic indicators' (Morgan and Ziglio, 2007; Morgan et al., 2010).

Improving the connections between salutogenesis and asset-based approaches is not an easy task. Although their common elements can be readily identified, visualizing their interactions is more difficult, which hampers a possible synergy. In addition, a consensus on conceptual definitions for a shared tool set has yet to be reached (e.g., what do we understand as a public health asset?). Although asset-mapping methodology has been recognized as helping integrate the two models, the lack of methodological evidence may reduce the growing

interest in this new (or revitalized) health approach, letting the hegemonic, biomedical approach take center stage again.

Lindström and Eriksson (2009) have already done some work in this regard. They proposed the integration of the ecological, salutogenic and resilient approach to health and quality of life, also incorporating the concept of habitus (Bordieu, 1993) and the concept of connectedness (Blum, 2002). This proposal includes different levels of analysis that cover the microsystem, mesosystem, exosystem and macrosystem. It aims to achieve a balance between the risk approach and the salutogenic approach to health research, with a solid ethical basis, adopting the principles of the Ottawa Charter.

This proposal emphasizes the need to develop a sense of coherence by expanding the salutogenic view and strengthening the connection between GRRs/SRRs, GRDs/SRDs, and SOC on scenarios that go beyond individuals, helping describe how to implement a salutogenic approach in the development of health-related public policies. Although this attempt at integration is a major advance, it does not explicitly explain how to implement this interaction among the different components of the model, and it does not consider asset-based approaches.

The integration proposal has the following goals:

Firstly, it confirms Morgan and Ziglio's (2007) premise that salutogenesis provides a useful framework to reinforce positive approaches to public health, and it can be seen as a theoretical construct that is supported by an asset approach, which is a practical method of implementation (Morgan and Hernán, 2013).

Secondly, it considers GRRs and SRRs as health assets. The GRR-RDs and the SRR-RD can also become assets by reflecting on the lessons that experiences of suffering and resource deficits can bring, and incorporate these learnings into the 'backpack'. All of these resources are not only for helping people cope with stressful situations, but also for promoting health and wellbeing, and helping people flourish in everyday situations (Antonovsky, 1996;

Morgan, 2014; Idan et al., 2017; Bauer et al., 2019). It is believed that this allows lets us to place a focus on the ability of people and communities to build up their potential for health development. Thirdly, it seeks to further advance Lindström and Eriksson's work, by extending their ideas through the bioecological model. By using the person, process, time and context components (PPCT) to explore potential health assets at different levels and with different approaches (Bronfenbrenner and Morris, 2007), it helps identify the strategic actors needed for their dynamization. More specifically:

- The Process component can identify the interaction and interdependence among people, communities, and assets during regular interactions for long periods of time. For example, in the case of babies, the availability of attachment and support figures and their interactions increases the possibilities of developing a sense of security and trust (Idan et al., 2017).
- The Person component can identify assets associated with people's contributions (Kretzmann and McKnight, 1993; McKnight and Russell, 2018), inner assets (Morgan and Ziglio, 2007), and GRRs/SRRs and GRDs/SRDs (Antonovsky, 1979), such as skills, talents, knowledge, cognitive capacities, emotional management, appraisal processes and even the ability to integrate personal and environmental assets.
- The Context component identifies assets related to support networks, organizations, institutions (Morgan and Ziglio, 2007), groups, and customs (Kretzmann and McKnight 1993, McKnight and Russell, 2018) at the micro-, meso-, exo- and macrosystem levels. The context will also influence whether a characteristic is perceived as a resource (Maass et al, 2017).
- The Time component allows the exploration of assets throughout the life cycle. Depending on their life stage, people are at different points in the health continuum (Koelen et al., 2017), so the role of resources could change throughout the life-course. For example, in the study by Maass et al (2017) a playground in the neighborhood, described as a formerly important area, lost its relevance when the children grew up, and the challenge of fixing it no longer seemed worthwhile. It may or may not be an asset for future generations of children.

Between the phases of asset identification and dynamization, there is the awareness phase – an intermediate process in which assets must be acknowledged as available. Although health assets are a part of every person, they might not be used purposefully or mindfully, and therefore, not necessarily mobilized (Glasgow Centre for Population Health, 2011). It is at this point where the SOC arises as a key element, either individually or collectively, since merely identifying assets does not imply their availability or their implementation.

Therefore, one could differentiate between potential resources, which have not been visualized or used, and available assets. SOC would have a key role, as it would transform the former into assets once people recognize, understand, manage, and make sense of them. Giving a more practical example, the SOC would be the commutator in a dynamo, helping it transform mechanical energy into electrical energy. In this way, the SOC is a key component to mobilize and connect assets, raise awareness of their availability, and let them prosper. This would be a mutual and dynamic relationship – just like SOC has an impact on assets, the latter's availability and use can help increase people's SOC levels, thus improving their views on their lives.

Returning to the analogy of the person travelling through the river of life with a backpack (Fig. 2), in this integrated model one could see that the backpack contains the assets obtained by people during their lives with the help of SOC. For example, a flask by itself is merely a possible item for an expedition – it can only become an asset and be added to the backpack, when the person knows what it is (a container for carrying liquids), how to carry it (hanging from the shoulder or fastened to the waist), how to cover it with insulating material to protect its temperature, and the importance of being properly hydrated.

Assets are added to the backpack, based on one's experiences of consistency, the balance between demands and resources, decisions that determine one's destiny, and emotional bonds with others. With this backpack, people are ready to face the different situations they will find on their travels through the river of life, depending on their flow rate and speed. Sometimes, it will be more difficult, while on other occasions, this very same backpack and its contents may be useful to enjoy the water or rest on the river bank. This highlights how

assets can allow us to face stress and boost conditions to promote people's health and wellbeing.

To go through the river, we should take into account other components of the bioecological model: context and time. Context is relevant, as some assets are unique to where the river is, and these could help or obstruct its advance: guides, groups for travelers, bridges, roads, a well-kept infrastructure, meaning of the river to the community, etc. Time reminds us that our capacity to go through the river will change during our lives and that we will need to supplement the elements added to our backpack, e. g., with walking sticks. Also, time reminds us that we are part of a generation that, due to ozone depletion and more awareness of climate change, must use more sunscreen, which was not as necessary or obvious to previous generations.

This shows how dynamic assets can be, and must be keep that in mind to strengthen, maintain, and update them during the different stages of life. In the previous example, we must routinely check our backpack and its content, as well as the river and its surroundings, to keep an open path. The challenge is then to generate more evidence, so we can identify not only local assets, but also those that can be more generally applied, to different places or new situations. In our example, the ability to plan the trip could also help plan vacations or think about new life projects, such as starting a new life in another place. Likewise, exchanging this knowledge or making it available (e.g., a blog post) can be useful for other people to plan their own trip.

The proposed integrated model could be used to boost participatory processes, such as asset mapping and community action. For example, it can help to widen a communities search for potential assets by considering each components of the bioecological model (processes, people, time, and context). Using SOC as a mediator could then help to mobilize them. This would help design interventions oriented to raise awareness of assets and their value, and the importance of shared views of life and participation in decision making.

The integration of these models contributes to strengthen the autonomy and empowerment of individuals, families and communities' health and development, as well as diversifying their coping strategies against stress, risk or disease. In this way, salutogenesis and assets models can influence different strategies in health, complementing the hegemonic health paradigm and strategically reorienting actions to optimize their effect. Several challenges emerge from this including: the need to create new indicators to assess health status (and related outcomes); how best to understand, the interconnection, and impact of identified salutogenic factors over time; and the implications for research, design of policies and health promotion and disease preventive interventions that reinforce them.

CONCLUSION

Our proposed synergy model of health seeks to integrate the salutogenic theory with the practice of assets-based working, using Bronfenbrenner's bioecological framework to demonstrate the theoretical and operative contributions of both ideas. In doing so, this proposed model helps us to better visualize the synergies between them. In turn, this builds the capacity and willingness to reorient intervention and assessment strategies, which can generate different types of evidence. Overall, the model aims to emphasize the reverse challenges of the respective ideas. That is (a) it challenges the salutogenic theory to explicitly articulate an action component; and (b) it urges the assets approach to continue to develop a theoretical framework which can help to justify the case for investment.

The identification of assets (abilities, strengths, capacities, and personal and collective resources), mediated by the SOC, supports people to perceive life as meaningful, understandable and manageable. In turn, this contributes to a greater sense of autonomy and empowerment, whether that is in relation to health care, prevention, promotion, or rehabilitation. In this proposal, the SOC is a key. It enables theory and practice to be better connected facilitating the best possible chance of activating health promoting assets in relation to people, processes, time, and context. The implementation of this synergy model would show its conceptual utility and empirical applicability, thus widening and diversifying

the contributions of both salutogenic theory and asset based working at the individual and collective levels.

This article is an invitation to redouble our efforts to facilitate processes that allow people to take greater control over their health determinants, making visible the potential of community and population health and health promotion approaches; this may paradoxically be more important in time of crisis (Van den Broucke, 2020). In this sense, our proposal advocates the development of more integrated health models, which have 'the collective' as a cornerstone of human development. As such, communities are more able to cope and eventually thrive as and when new challenges arise.

REFERENCES

Álvarez-Dardet, C., Ruiz Cantero, MT. (2011) Assets Health Model. Are Possible Salutogenic Policies? [in Spanish] *Revista Española de Salud Pública*, *85*(2), 123–127.

Antonovsky, A. (1979) Health, Stress, and Coping. New Perspectives on Mental and Physical Well-Being. San Francisco: Jossey-Bass.

Antonovsky, A. (1987) Unraveling the mystery of health: how people manage stress and stay well. California, Jossey-Bass Inc.

Antonovsky, A. (1993) Complexity, conflict, chaos, coherence, coercion and civility. *Social Science & Medicine*, 37 (8), 969–74. doi 10.1016/0277-9536(93)90427-6

Antonovsky, A. (1996) The salutogenic model as a theory to guide health promotion. *Health Promotion International*, 11(1), 11–18. doi: 10.1093/heapro/11.1.11

Bartley, M. (2006) Capability and resilience: beating the odds. London, University College London.

Bauer, G., Davies, J.K., Pelikan, J. (2006) The EUHPID Health Development Model for the classification of public health indicators. *Health Promotion International,* 21(2), 153–159.

Bauer, G.F., Roy, M., Bakibinga, P., Contu, P., Downe, S., Eriksson, M., et al. (2019) Future directions for the concept of salutogenesis: a position article. *Health Promotion International*, 35(2), 187-195.

Blickem, C., Dawson, S., Kirk, S., Vassilev, I., Mathieson, A., Harrison, R., et al. (2018) What is Asset-Based Community Development and How Might It Improve the Health of People With Long-Term Conditions? A Realist Synthesis. *SAGE Open,* 8(3), 1-13. doi: 10.1177/2158244018787223

Blum, R.W., McNeely, C., Nonnemaker, J. (2002) Vulnerability, risk, and protection. *J Adolesc Health,*31(1 suppl), 28–39.

Boon, H.J., Cottrell, A., King, D., Stevenson, R.B., Millar, J. (2012) Bronfenbrenner's bioecological theory for modelling community resilience to natural disasters. *Natural Hazards,* 60(2), 381–408.

Bourdieu, P. (1993) The field of cultural production: essays on art and literature. Cambridge, Polity Press.

Bronfenbrenner, U., Morris, P.A. (2007) The Bioecological Model of Human Development. In Lerner, R.M., Damon, W. (eds), Handbook of child psychology: Theoretical models of human development. John Wiley & Sons Inc., Hoboken, pp. 793-828.

Cassetti, V., Powell, K., Barnes, A., Sanders, T. (2019) A systematic scoping review of asset-based approaches to promote health in communities: development of a framework. *Global Health Promotion,* 0(0), 1–25. doi: 10.1177/1757975919848925

Cofiño, R., Aviñó, D., Benedé, C.B., Botello, B., Cubillo, J., Morgan, A., Paredes-Carbonell, J.J., Hernán, M. (2016) Health promotion based on assets: how to work with this perspective in local interventions? [in Spanish] *Gaceta Sanitaria,* 30, (suppl 1), 93–98.

Elfassi, Y., Braun-Lewensohn, O., Krumer-Nevo, M., Sagy, S. (2016) Community Sense of Coherence among adolescents as related to their involvement in risk behaviors. *Journal of Community Psychology*, 44(1), 22–37.

Eriksson, M., Lindström, B. (2006) Antonovsky's sense of coherence scale and the relation with health: a systematic review. *Journal of Epidemiology & Community Health,* 60(5), 376–381.

Eriksson, M., Lindström, B. (2008) A salutogenic interpretation of the Ottawa Charter. *Health Promotion International*, *23*(2), 190–199.

Eriksson, M. (2017) The Sense of Coherence in the Salutogenic Model of Health. In Mittelmark, M. et al. (eds), The Handbook of Salutogenesis. Springer, Cham, CH, pp. 91-96.

Glasgow Centre for Population Health (2011) Asset based approaches for health improvement: redressing the balance. https://www.gcph.co.uk/assets/0000/2627/GCPH_Briefing_Paper_CS9web.pdf (last accessed June 23th 2020).

Ibrahim, S.S. (2006) From Individual to Collective Capabilities: The Capability Approach as a Conceptual Framework for Self-help. *Journal of Human Development,* 7(3), 397–416.

Idan, O., Eriksson, M., Al-Yagon, M. (2017) The Salutogenic Model: The Role of Generalized Resistance Resources. In Mittelmark, M., et al. (eds.), The Handbook of Salutogenesis. Springer, Cham, CH, pp.57-69.

Koelen, M., Eriksson, M., Cattan, M. (2017) Older People, Sense of Coherence and Community. In Mittelmark, M. et al. (eds.), The Handbook of Salutogenesis. Springer, Cham, CH, pp.137-149.

Kramer, S., Amos, T., Lazarus, S., Seedat, M. (2012). The Philosophical Assumptions, Utility and Challenges of Asset Mapping Approaches to Community Engagement. *Journal of Psychology in Africa*, 22(4), 537–544.

Kretzman, J.P., McKnight, J.L. (1993) Building communities from the inside out: a path toward finding and mobilizing a community's assets. Evanston, IL, Institute for Policy Research.

Lazarus, R. S., Folkman, S. (1984) Stress, appraisal, and coping. New York, NY, Springer.

Lindström, B. (1994) The essence of existence. On the quality of life of children in the Nordic countries—Theory and practice in public health. Doctoral thesis, Nordic School of Public Health, Gothenburg.

Lindström, B., Eriksson M. (2006) Contextualizing salutogenesis and Antonovsky in public health development. *Health Promotion International,* 21 (3), 238–44.

Lindström, B., Eriksson, M. (2009) The salutogenic approach to the making of HiAP/healthy public policy: illustrated by a case study. *Global Health Promotion,* 16 (1), 17–28. doi: 10.1177/1757975908100747

Lindström, B., Eriksson, M. (2010) The hitchhiker's guide to salutogenesis: Salutogenic pathways to health promotion. Helsinki, Folkhälsan Research Centre.

Maass, R., Lindström, B., Lillefjell, M. (2017) Neighborhood-resources for the development of a strong SOC and the importance of understanding why and how resources work: A grounded theory approach. *BMC Public Health*, 17(1), 704. doi: 10.1186/s12889-017-4705-

x

McKnight, J. (1995) The Careless Society: Community and its Counterfeits. New York, NY, Basic Books.

McKnight, J., Russell, C. (2018) The Four Essential Elements of an Asset-Based Community Development Process What Is Distinctive about an Asset-Based Community Development Process? Chicago, Asset-Based Community Development Institute at DePaul University https://www.nurturedevelopment.org/wp-content/uploads/2018/09/4_Essential_Elements_of_ABCD_Process.pdf (last accessed June 23th 2020).

Mittelmark, M.B., Bull, T., Bouwman, L. (2017a) Emerging Ideas Relevant to the Salutogenic Model of Health. In Mittelmark, M. et al. (eds.), The Handbook of Salutogenesis. Springer, Cham, CH, pp.45-56.

Mittelmark, M.B., Bull, T., Daniel, M., Urke, H. (2017b) Specific Resistance Resources in the Salutogenic Model of Health. In Mittelmark, M. et al. (eds.), The Handbook of Salutogenesis. Springer, Cham, CH, pp.71-76.

Morgan, A., Ziglio, E. (2007) Revitalising the evidence base for public health: an assets model. *Promotion & Education*,14, (suppl 2), 17–22.

Morgan, A., Davies, M., Ziglio, E. (eds) (2010) Health assets in a global context. New York, NY, Springer.

Morgan, A., Hernán, M. (2013) Promoción de la salud y del bienestar a través del modelo de activos. *Revista Española de Sanidad Penitenciaria,* 15, 78–86.

Morgan, A. (2014) Revisiting the Asset Model: a clarification of ideas and terms. *Global Health Promotion,* 21(2), 3–6. doi: 10.1080/09581596.2

Peled, D., Sagy, S., Braun-Lewensohn, O. (2012) Community perception as coping resource among adolescents living under rockets fire: A salutogenic approach. *Journal of Community Positive Practices,* 4, 681-702.

Rosa, E.M., Tudge, J. (2013) Urie Bronfenbrenner's Theory of Human Development: Its Evolution From Ecology to Bioecology. *Journal of Family Theory & Review*, 5(4), 243–258.

Sagy, S., Mana, A. (2017) The Relevance of Salutogenesis to Social Issues Besides Health: The Case of Sense of Coherence and Intergroup Relations. In Mittelmark, M. et al. (eds.), The Handbook of Salutogenesis. Springer, Cham, CH, pp.77-81.

Sánchez-Casado, L., Paredes-Carbonell, J.J., López-Sánchez, P., Morgan, A. (2017) Asset mapping for health and coexistence: proposals for action from an intersectoral perspective [in Spanish]. *Index de Enfermería*, 26(3), 180–184.

Search Institute. (1997) 40 Developmental Assets. https://www.search-institute.org/our-research/development-assets/developmental-assets-framework/ (last accessed June 23th 2020).

Shalit, B. (1982) The Prediction of Military Groups Effectiveness by the Coherence of their Appraisal. FOA Report C 55053-H3. Stockholm, Forsvarets Forskningsanstalt.

Suárez, O., Ruiz-Cantero, M., Cassetti, V., Cofiño, R., Álvarez-Dardet, C. (2020) Salutogenic interventions and health effects: a scoping review of the literature. *Gaceta Sanitaria (In Press).* doi.org/10.1016/j.gaceta.2019.12.002

Van Bortel, T., Wickramasinghe, N.D., Morgan, A., Martin, S. (2019) Health assets in a global context: a systematic review of the literature. *BMJ Open*, 9:e023810. doi: 10.1136/bmjopen-2018-023810

Van den Broucke, S. (2020) Why health promotion matters to the COVID-19 pandemic, and vice versa. *Health Promotion International*, 35(2),181-186.

World Health Organization (1986) The Ottawa Charter for Health Promotion. In WHO. https://www.who.int/healthpromotion/conferences/previous/ottawa/en/ (last accessed June 23th 2020).

World Health Organization (2014) Constitution of the World Health Organization. Basic Documents 48st ed. Geneva, WHO Press, https://apps.who.int/gb/bd/PDF/bd48/basic-documents-48th-edition-en.pdf (last accessed June 23th 2020).

Fig. 1. The ease/dis-ease continuum (Antonovsky, 1979, 1987).

Graphic: B. Lindström, M. Eriksson, P. Wikström (Lindström and Eriksson, 2010)

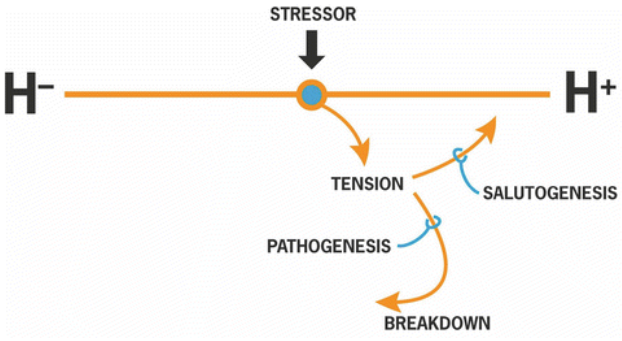

Fig. 2. Health in the journey of life

Graphic: B. Lindström, M. Eriksson, P. Wikström (Lindström and Eriksson, 2010)