Author Query Form

AUTHOR QUERIES – TO BE ANSWERED BY THE CORRESPONDING AUTHOR

These proofs are for checking purposes only. They are not in final publication format. Please do not distribute them in print or online. Do not publish this article, or any excerpts from it, anywhere else until the final version has been published with OUP. For further information, see https://academic.oup.com/journals/pages/authors

Figure resolution may be reduced in PDF proofs and in the online PDF, to manage the size of the file. Full-resolution figures will be used for print publication.

Select each question and describe any changes we should make on the proof. Changes against journal style will not be made and proofs will not be sent back for further editing.

AQ1:   Please check all author names and affiliations. Please check that author surnames have been identified by a pink background in the PDF version, and by green text in the html proofing tool version (if applicable). This is to ensure that forenames and surnames have been correctly tagged for online indexing.

AQ2:   Please provide department name (if any) for affiliations '1–3, 6' and also provide full road and district address and Zip or postal code for all the affiliations.

AQ3:   If your manuscript has figures or text from other sources, please ensure you have permission from the copyright holder. For any questions about permissions contact jnls.author.support@oup.com.

AQ4:   Please check whether the section hierarchy is OK as set.

AQ5:   Please provide complete details for (Lightfoot et al., 2014, Sánchez-Casado et al., 2017, Kramer et al., 2012, and Hernández et al., 2018) in the reference list or delete the citation from the text.

AQ6:   We have changed to following reference citations as per the reference list. Please confirm if this is fine. "Kretzman and McKnight, 1993 to Kretzmann and McKnight, 1993"; "Hernández, 2014 to Hernández et al., 2014"; "Denzin, 2011 to Denzin and Lincoln, 2011"; "Hernández et al., 2014 to Hernández-Sampieri et al., 2014."

AQ7:   You may need to include a "conflict of interest" section. This would cover any situations that might raise any questions of bias in your work and in your article's conclusions, implications, or opinions. Please see https://academic.oup.com/journals/pages/authors/authors_faqs/conflicts_of_interest.

AQ8:   Please check that funding is recorded in a separate funding section if applicable. Use the full official names of any funding bodies, and include any grant numbers.

AQ9:   Please check that all web addresses cited in the text, footnotes and reference list are up-to-date, and please provide a 'last accessed' date for each URL.

AQ10:   Please provide the volume number and page range for Pérez-Wilson et al., 2020b.

Asset map in a Chilean Health Promoting University: 'a strategy for revitalization'

AQ1

Patricia Pérez-Wilson[1,2,3], Jorge Marcos-Marcos ⓘ [4,*],
Mercedes Carrasco-Portiño[2,3,5], María Teresa Ruiz-Cantero[3,6], and
Carlos Alvarez-Dardet[3,6]

[1]Health and Family Medicine Program, School of Medicine, University of Concepcion, Concepcion, Chile,
[2]Health Promoting University Program (Promosalud), University of Concepcion, Concepcion, Chile, [3]Public
Health Research Group, University of Alicante, Alicante, Spain, [4]Department of Health Psychology,
Faculty of Health Science, University of Alicante, Alicante, Spain, [5]Obstetrics and Childcare Department,
School of Medicine, University of Concepcion, Concepcion, Chile and [6]Public Health and Epidemiology
AQ2 Biomedical Research Network (CIBERESP), Madrid, Spain

*Corresponding author. E-mail: jorge.marcosmarcos@ua.es; marcosmarcos.jorge@gmail.com

Summary

Health Promoting Universities (HPUs) are more likely to perform actions intended to change habits and increase personal empowerment, than they are to develop community actions. The objective of this research is to create an asset map to visualize collective actions in a Chilean HPU. A qualitative study, based on the ABCD model was conducted. There were 149 people, distributed into 48 semi-structured interviews and 14 focus groups, who participated in this study (students, employees, ex-students and retirees). An asset map was elaborated, identifying the contributions of residents, associations and organizations, local institutions, physical resources, economic assets and local culture and with a new category, 'connecting assets'. These categories show the range of resources in a university. According to the participants, the questions on asset identification were a tool for reflection, and by giving their opinions and discovering or drawing attention to new resources, they gained a better understanding of the assets in the university. Several participants stated that these talks could generate a positive emotional environment, which boosted their wellbeing. There were gender- and group-based differences in how the assets were valued. Students stressed assets related to services and benefits from the institution, green areas, and collective spaces. Employees, retirees and ex-students emphasized assets related to belonging, identity and traditions. Men appreciated openness and privacy in physical spaces. Women highlighted assets related to the institution. The resulting map, displays a range of resources that can help the university develop new possibilities for comprehensive AQ3 and collective actions that would revitalize the HPU strategy.

Key words: Health Promoting University, health promotion, community assets, asset mapping, Chile

AQ4 # INTRODUCTION

Health Promoting Universities (HPUs) are a key component of the application of health promotion strategies. Their objective is to help strengthen human development and their students and employees' quality of life by projecting them in their immediate environment, so they can act as models of healthy personal and family behaviours in their future working environments and society AQ5 (Hermida, 2017; Dooris et al., 2020).

HPUs have committed to launch an operational framework to promote the principles of the Ottawa Charter for Health Promotion which have been ratified in subsequent international declarations (Arroyo, 2018). In this sense, the Okanagan Charter (2015) recommends that health promotion aimed at university communities should focus on more comprehensive, collective strategies, linked to natural and social settings, and based on the principles of equity, social justice and people's wellbeing (International Conference on Health Promoting Universities and Colleges [ICHPUC], 2015). However, most interventions in HPUs have an individualistic approach and focus on changing habits and increasing personal empowerment (Dooris et al., 2014; Suárez-Reyes and Van den Broucke, 2016).

The Okanagan Charter is based on the salutogenic approach and the health assets model to generate prosperous, empowered, connected and resilient university communities (ICHPUC, 2015; Dooris et al., 2017). Salutogenesis is focused on the origin and upkeep of health, by identifying means that help people reach a positive health (García-Moya and Morgan, 2017; Pérez-Wilson et al., 2020b). Health assets are any factor or resource that can improve the ability of people, communities, and populations to maintain and strengthen their health and wellbeing, by highlighting the elements that allow them to control, maintain and improve their own health (Morgan and Ziglio, 2010).

As long as health promotion keeps focusing mainly on developing personal abilities and not so much on more systemic topics, its holistic approach is being undermined (McQueen and De Salazar, 2011). Considering that health behaviours are formed by society (López-Fernández and Solar, 2017), it becomes more important to add collective strategies that boost all members' involvement and recognize the elements that help develop community sense (Dooris et al., 2014; Pérez-Wilson et al., 2020a), and thus, this study is based on the asset-based community development (ABCD) model (McKnight and Russell, 2019).

The ABCD model proposed by Kretzmann and McKnight (1997) promotes identifying community assets that help discover and strengthen existing personal, collective and environmental capacities and abilities (Kretzmann and McKnight, 1997). According to this model, the most successful communities focus on the resources they have, then organize and mobilize them (McKnight and Kretzmann, 1996). Their model recognizes six assets or resources, which become a basis for building and boosting community development (Kretzman and McKnight, 1993; Blickem et al., 2018; McKnight and Russell, 2019):

a. *Contributions of residents:* people have several and diverse abilities, capacities and passions, and they are willing to use their knowledge and experience to contribute to collective wellbeing.
b. *Local associations and organizations:* formal and informal non-profit groups and associations, controlled by local communities.
c. *Local institutions:* public or private institutions, services and local businesses.
d. *Physical resources:* both natural and human-made environments, providing the scenery for discovering, connecting and putting into action the following resources: ground, physical infrastructure, public spaces, transport and general physical support.
e. *Economic assets:* economic resources generated by the people (either by producing or consuming) through deals, intangible or tangible exchanges or money, which can have an impact on the local economy.
f. *Local culture:* behaviours and activities that are meaningful for the people and the community, which promote diversity, and protect and preserve their stories, traditions, customs and resources.

Nobody has a full grasp of all the resources in a community; however, asset mapping allows people to discover the resources they already have and the best way to connect, access and activate them (Kretzmann and McKnight, 1993; McKnight and Russell, 2019) with an approach that focusses on improving the health of all its members (Guy et al., 2002). AQ6

Asset mapping is a process which involves community members who explore and identify the strengths and capacities found in the people, groups, associations, institutions and resources of a community (McKnight, 2013), conducting a dynamic inventory of its assets, and composing a physical and/or conceptual map that also highlights the interconnections and relationships among them (Lightfoot et al., 2014). Available evidence establishes that the asset-mapping process is a useful tool for working with local communities (Sánchez-Casado et al.,

2017), as it facilitates agency capacity (Kramer *et al.*, 2012). It is important to promote collective actions that strengthen relationships between people and to generate inclusive learning conversations that take into account the diversity inside a community (McKnight and Russell, 2019). The use of such a tool is a challenge for researchers of health promotion in universities (Martínez-Riera *et al.*, 2018), and its use as a previous step in developing community interventions is very limited. The objective of this research is to create an asset map to visualize collective actions in a Chilean HPU, in order to identify possible opportunities to improve the HPU approach.

MATERIALS AND METHODS

To analyse the personal experiences of members of a university community, a qualitative, phenomenological approach was chosen for this study (Fuster, 2019), with individual interviews, focus groups and semantic content analysis. This design allowed the use of the participants' opinions and the health assets they identified—after gathering and reconstructing their meaning—to create the asset map (Ruiz, 2012).

Participants were chosen through intentional non-probability sampling. All participants have had different academic backgrounds (Table 1) and are part of the University of Concepcion, which is a member of the Chilean and Ibero-American Network of Health Promotion Universities. Participants were female and male students (undergraduates and graduates), employees (directors, teachers, researchers, professionals, technicians, administrative and service staff), ex-students (who graduated at least 1 year before this study from the Concepción campus) and retired employees (from any faculty or service, with at least 1 year of work at the university and who were retired when participating in this study). In consideration of the fact that this is exploratory research and that the last two groups are included in university extension programmes, they were added to the study. This provided the opinions of people who do not have a daily link to the community but can offer a retrospective view, to fully understand the phenomenon in question (Ruiz, 2012). Field work was done between July 2017 and December 2018 at the Concepción campus, which is the biggest campus of the university.

Potential participants were targeted by key people from different faculties through the snowball sampling technique (volunteers inviting other people to take part). By using an iterative approach, data production and analysis were done in parallel, allowing participants to join the interviews or focus groups according to the data from field work (Martínez-Salgado, 2012). The final sample consisted of 149 people. Sampling size was determined through the saturation criterion; that is, when the new data started repeating and stopped offering new information (Martínez-Salgado, 2012; Morse, 2015; Table 1). This study was approved by the Ethics

Table 1: Participant distribution by technique, gender and group

Technique	Group	Men	Women	Total
Interviews	People directly related to the university			
	Undergraduates and graduates	7	5	12
	Employees	12	13	25
	Total	19	18	37
	People related to the university by means of university extension			
	Ex-students	4	7	11
	Retirees	0	0	0
	Total	4	7	11
	All Interviews	23	25	48
Focus groups (FG)	People directly related to the university			
	Undergraduates and graduates (10 FG)	38	31	69
	Employees (2 FG)	5	9	14
	Total FG	43	40	83
	People related to the university by means of university extension			
	Retirees (2 FG)	6	12	18
	Ex-students (0 FG)	0	0	0
	Total FG	6	12	18
	All Focus Groups (FG) (14)	49	52	101
Total		72	77	149

Committee of the University of Concepción (Report CEI-045-17).

The use of both individual (semi-structured interviews) and group (focus groups) techniques allowed for cross-checking, following Guba and Lincoln's criteria for trustworthiness (2002). The first technique was used to reveal the participants' individual views, while the second technique was used to encourage the discussion and generation of ideas, promoting further exploration of their experiences (Wilkinson, 2011).

Forty-eight interviews and 14 focus groups were conducted (Table 1). There was a pilot test with three interviews (employees, ex-students and retirees) and a focus group (students); the latter was includes in the analysis.

This allowed to confirm that the questions were adequate and pertinent. In both cases, the first step was to review the definition of 'assets' and the six categories for community assets according to the ABCD model. These focus groups lasted 60–90 minutes and were guided by two moderators plus one observer. The semi-structured interviews were conducted by a member of the research team and lasted 20–40 minutes. Both activities were audio-recorded with the participants' consent.

A single topic guide, based on the six categories of the ABCD model (McKnight and Russell, 2019), was created for both the focus groups and the semi-structured interviews (Table 2).

After transcribing the audio recordings, a semantic content analysis was conducted (Hernández *et al.*, 2018) with NVivo 12 (QSR International). Given that the model our study was based on -the ABCD model- offers a frame of reference with predefined categories, we picked this type of analysis because our focus was to search for the manifest and latent content in the participants' words and local expressions that would later become the basis for the asset map.

Content analysis started by reading the interview text several times to get a general understanding of its content. This process allowed to organize and break up the text and to record any comments in reflexive journals and memos. The principal researcher and two external qualitative data analysis experts worked on codification with a mix of deductive and inductive approaches (Ruiz, 2012). Deductive methodology (Graneheim *et al.*, 2017) was based on theoretical categories of assets proposed by Kretzmann and McKnight (1997), and inductive methodology on unexpected assets that were not in the theoretical categories, leading researchers to identify additional codes and create special categories. A first approach used matrixes to identify assets through a general overview of the more often repeated and commonplace assets (and those which

Table 2: Topic guide for focus groups and semi-structured interviews

Contributions of residents	**Which people in the university do you see as assets for the university community? What abilities, capacities, knowledge, and experiences do you see in them? What do they offer to the collective wellbeing?**
Local associations and organizations	What associations and organizations do you see as assets for the university community? What do they offer to the collective wellbeing?
Local institutions	Which elements from the university as an institution do you see as assets? What do they offer to the university community's wellbeing?
Physical resources	What spaces, places, or environmental elements at the university do you see as assets for the university community? What do they offer to the collective wellbeing?
Economic assets	What local economy elements do you see as assets for the university community? What do they offer to the collective wellbeing?
Local culture	What local culture elements do you see as assets for the university community? What do they offer to the collective wellbeing?

were not so common) in participants' discourses and to visualize the emphasis given by each group to the different assets through their prevailing discourses.

In order to ensure the study's trustworthiness and credibility (Guba and Lincoln, 2002), different sources and collection methods were used in the triangulation of data (Hernández-Sampieri *et al.*, 2014)—from production to analysis and interpretation—which was done by members of the research team and by external researchers (Denzin and Lincoln, 2011).

RESULTS

Participants identified assets in all categories of Kretzmann and McKnight's model; however, further analysis yielded a new category, called 'connecting assets', which can be seen in Table 3. According to the participants, the questions on asset identification were a tool for reflection and by giving their opinions and discovering or drawing attention to new resources, they obtained a better understanding of the assets in the university community. Several participants stated that these

Table 3: Category-based summary of community assets

Contributions of residentes	Associations and organizations dedicated to	Institutions	Physical resources	Economic assets	Local culture	Connecting assets
Creating a welcoming and supporting environment	Sports and recreation	Benefits	Open campus	Access to financial services	Sense of belonging	Socialization
Proactivity and self-management	Culture and arts	Services	Green áreas	Community generate resources	Distinctive elements and identity	Participation
Knowledge and skill development	Politics and unions	Administrative structure	Symbolic buildings	Commerce	Values	
	Community and voluntary work	Activities for general population	Collective spaces	Exchanging and bartering	Knowledge generation	
	Religion Ecology Sciences	International networks	Acquired spaces Physical conditions for study and work		Bonds with the region Cultural activities Traditions and customs	

talks could generate a positive emotional environment, thus boosting their wellbeing.

Another interesting finding was that although participants thought that the ABCD model's definition of assets was broad according to their previous personal understanding, this process helped them put things into context and gain a new perspective. This helped them identify resources that are not usually considered as an aid to wellbeing, such as economic assets. The assets that were spontaneously mentioned by the different groups were those related to physical resources, culture and 'connecting assets', which are valued as a direct contribution to the university community's wellbeing.

Some categories might converge on a similar purpose (e.g. meeting spaces), while a single asset could have different purposes, as seen below. Most of the identified assets were focussed on collective wellbeing, which is important when contemplating an approach which goes beyond changing individual behaviours. On the other hand, each group emphasized different assets. Students highlighted the services and benefits granted by the institution, which cover their needs and let them study. Both students and employees highlighted the physical resources, which may be due to their continuous movement through the campus. Employees, retirees and ex-students remarked on local cultural assets, and especially on the sense of belonging, because they felt involved in the university community even after graduation or retirement. Last, women concentrated on the 'institution' category,

while men focus on the 'physical spaces' aspect. Table 3 shows the assets in each category, which are described below. People directly related to the university had a different evaluation of assets than people related by means of university extension, which shows a dynamic view of asset identification in the different moments of the life course—more specifically, depending on their academic and career trajectories.

Contributions of residents

In this category, participants named different people who lead actions focused on collective wellbeing, and identified the abilities and knowledge, expressed as instrumental or affectional actions, offered by members of the university community to help others. Teachers appreciated openness to dialogue as an asset to create welcoming spaces. For the students—especially those from cities other than Concepción—emotional support was truly important, with administrative and service staffs deserving a special mention.

> The secretaries… they have given me a lot of support and sense of family life during these years that I have been apart from my family. [Participant n° 52 -female, student]

Employees recognized students' proactivity and self-management skills as an asset, and thought of them as key actors in driving the university community. For students, learning and developing abilities beyond the scope

of their field was a resource that allows them to better confront risky and/or adverse situations. In general, both employees and students valued leadership in processes of change inside the university community.

> Knowledge is one of the factors that we gain over the years (…) and with it, we can know what is bad and what is good for us. Knowledge in itself can be a health asset. [Participant n° 1 - male, student]

Local associations and organizations

Participants valued the variety of organizations in the university community, as facilitators to meet people with shared interests and with whom to develop personal, social and professional skills. The most known organizations are those for sports, recreational activities and arts. For students and employees, political and union organizations (the student federation, students' associations and employees' unions) facilitate access to wellbeing benefits, and offer them participation and representation, letting people discuss, make decisions and mobilize whenever needed.

> [Students' associations] are in charge of organising or even generating student participation and cultural activities, creating the conditions for meeting places and even some specific measures… to get more scholarships, to deal with any problem in the canteen, or to obtain more economic benefits, such as the boarding fee we got some time ago. [Participant n° 52 - female, student]

Participants highlighted the organizations for voluntary work and support, which helped both the university community and general population. Employees saw students as having an inspiring role in this area. Both valued religious organizations as a spiritual and wellbeing asset, even if they do not participate in them. They also mentioned environmental organizations, for their contribution to the university community's health and environment. Students appreciated peer support groups for academic reinforcement and scientific societies, as they contribute to their professional development and conduct health interventions aimed at the university community.

> There were courses with a truly high failure rate, mostly physics and mathematics. Basically, what we did was to create (…) a community space, where people could exchange experiences and knowledge, and that had great results. Actually, that was an initiative from the students themselves. [Participant n° 60 - male, student]

Local institutions

Given that this study covers a university, assets in this section are about the university as an institution. The main assets here were the benefits and services provided by the university: access to health care, food, boarding, scholarships, book lending, supplies and materials. Employees identified administrative conditions as a factor in the university's stability and trustworthiness, although they thought it could be further improved. In the case of retired employees, benefits received during their working years have led them to feel 'indebted' to the institution. Women highlighted the benefits of family support given by the institution.

> I'm truly grateful to the university… All I have is thanks for the university… because I got here when I was 23 years old and worked for 34 years, so I have always been able to get by, thank God. [Participant n° 131 - male, retiree]

Activities open to the general population (television, radio, sports club, theatre and the symphony orchestra) were also greatly appreciated. Employees valued the networks and exchange programmes with international universities, which have a positive impact on the institution.

> [Student exchange]… The student who goes abroad comes back with a big advantage later. We never value ourselves. But if they can go to other countries, they come back thinking differently. And people who come from other places see us as better than we really are, and sometimes they can notice our big flaws, which allow us to improve. [Participant n°88 - female, director]

Physical resources

Physical resources were mainly valued for facilitating exchanges among people and were seen as helping generate a sense of belonging, which is a key factor when building an image of community. The university campus was considered as a park and a wide, open space, which the university community and the general population can cross freely. Participants appreciated how well the campus is maintained and thought that it contributes to collective wellbeing. The campus is a key element of the identity and the urban and architectural layout of the city.

> The university's philosophy is expressed in its spaces. Let's say, when you or someone who isn't from the university goes to visit it, they realise that entering is easy – but that is, in some way, the university's (philosophical) view on, for example, how to improve inclusive spaces. Then there's an impact on people who pass through, too. [Participant n°98 - male, worker]

The existence of several green areas ('the grass fields') was frequently brought up in the participants'

discourses, while certain buildings or specific physical spaces (e.g. the forum and the art gallery) were mentioned as symbolic elements and part of the university's patrimony. Meeting places of faculties were important as well. Students saw green areas as free spaces that contribute to their mental health, stress relief and leisure. For ex-students, these places were associated with memories of bonding with their peers.

> *The grass fields are therapeutic. [Participant n°18 - female, student]*

Students from faculties located outside the campus stated that, while this situation may hinder the interaction with other programmes, it also strengthens the environment inside these faculties. For these students, collective spaces inside the campus, gained even more relevance, as they give them a chance to interact with their peers. Among these spaces, the central library was particularly important for students who do not have the conditions for studying in their living spaces and thus saw it as a contribution to their mental health. Students also valued the physical spaces obtained through (student) movements, showing a sense of ownership and extra appreciation for these.

> *It's just so cool to know that we fought for these rooms, and now they are ours! Now this space has another meaning for me, because we fought for and won this whole building. [Participant n°12 - female, student]*

Male participants emphasized implementation and equipment in faculties as key conditions for their well-being. They commented on collective workplaces for meetings and networking, as well as mentioning private spaces where they can concentrate, which do not only grant more comfort, but also help them be more productive and thus generate more knowledge.

> *In this faculty, we try to give each academic their own space and laboratory to carry out their activities – or at least their own office. Laboratories are usually shared, but offices allow academics to attend to students and have some privacy. But there's a time when the academic needs to concentrate and work on a publication, write a report, prepare their classes – and for that, [privacy] is essential. [Participant n°83 - male, teacher]*

Economic assets

Participants needed an additional reading of the different categories to think about these assets. When specifically asked for this category, employees appreciated the opportunity to have a bank, a public health insurance office (*Fonasa*, Chile's National Fund of Health), a post

office, and stores selling food and agricultural products made in the other campuses, which are believed to energize the local economy. On the topic of commerce, women recognized that their colleagues or classmates have small-scale businesses, such as selling clothes, food, or study notes, to increase their income. Men appreciated the access to low-cost food and the diversity of informal vendors, especially that of street food vendors. Students and employees highlighted the existence of spaces for exchanging and bartering goods.

> *There were places in the university where you could barter – you went there with something and offered it; 'Look, I have this', 'Let's trade it for this', and then you could exchange things without using money. [Participant n°109 - male, graduate]*

Local culture

This category has several elements mainly associated with the university's identity, values, and role, and the different cultural actions in the university community, which are also part of the learning process. Among the identifying elements mentioned by all groups, there was the '*sello UdeC*' ('University of Concepcion seal'), a distinctive element of the whole community that is associated with critical thinking, acceptance and appreciation of diversity and political mobilization. This fits with the university's image as an agent of social transformation. For directors, this was associated with academic prestige, excellence, and quality and with the renown and drawing power of the institution. These characteristics were seen as reasons to study or work in the university, and to establish or fortify alliances between the university and other institutions.

> *One of the university's traditions and customs is that it is truly 'mobilised'; it is always up to date on the possibility of demonstrations, elections, whether we go on strikes or not... I think that the University of Concepcion does have a 'mobilised seal' – it's part of its tradition and culture, one could say. [Participant n°39 - male, student]*

Especially for women, the sense of belonging was clearly important, highlighting the university's intergenerational transmission. Employees and teachers remarked on generating knowledge for other people and communities to use as a cultural element and part of the university's role. Values chosen by the participants were solidarity, commitment, pluralism, free thinking, openness to diversity and social responsibility—the latter associated with its bonds with the city, the region and the country.

The most remarkable thing about [its] identity is the free thinking and pluralism aspect. People aren't afraid to express themselves and search for the truth. [Participant n° 65 - female, teacher]

The university's contribution to both the university and general community was a recognized part of its role. Participants appreciated having access to a wide range of cultural activities, and saw its traditions as an important element of community bonding, whether these traditions are related to the university community (new students' entrance, anniversaries, festivities and sponsoring new students) or to families and general community (Christmas or National Independence days).

The university has different cultural spaces, like museums, murals, and others, that are open to all. It is also known for having a strong cultural offer all year long: open-air shows, literary and pictorial presentations, fairs, plays, roundtables, seminars, symphony orchestra, etc. [Participant n°117 - female, graduate]

Connecting assets

This category originally covered all assets that were not part of the categories previously described. After grouping them, an appreciation of the daily bonding with others can be seen—a bonding that is not mediated by organizations or administrative structures, but that is seen in small groups with common affinities or interests, whose members are friends, classmates or colleagues. The willingness to collaborate and participate in decision making was considered an important asset, mainly by employees and students, and by women. This shows the importance of transforming power relationships by redistributing opportunities among all members of the university community so they can take part in these processes, which are seen as essential by their members.

The contact with other people –to speak, talk and interact with them– has also a positive impact on health; it's beneficial for mental health. [Participant n°36 -female, student]

The fact that there are students making more institutional decisions is super-important as an asset, as the rest of us place our trust in them and they are working for everyone. [Participant n°26 - female, student]

DISCUSSION

This study allows the elaboration of a community asset map, based on Kretzmann and McKnight's six assets plus a new category yielded from the data, which covers

bonds among community members and their participation in decision making. This shows a wide range of resources in the university community, which facilitates the design of collective strategies in an HPU that go beyond changing individual behavior. According to these results, talking about and exchanging opinions on the university community's assets coloured participants' views on the visualization and potential benefits for the health and wellbeing of the assets. This helped understand, manage and perceive these resources, so the community could see them as available (Pérez-Wilson *et al.*, 2020b).

The participants' focus was on different assets, which suggests that groups assess health-generating conditions according to their gender and position in their life course—specifically, when it comes to academic and career transitions and trajectories (Pallas, 2003). Interacting with other people is considered an asset by all age groups, and becomes more important as they age (Koelen *et al.*, 2017), which is can be seen in how retirees and ex-students valued these 'connecting assets' and those related to culture and organization. In turn, this could also be related to looking back on their life trajectory, experiences and memories; as through memory, people create place meaning and connect it to the self (Scannell and Gifford, 2010). This shows that it is necessary to incorporate a life course approach to health promotion, as proposed by other authors (Lindström and Eriksson, 2009; Koelen *et al.*, 2017).

Regarding gender, the fact that women highlighted family services and benefits could be related to a traditional view of gender roles, where women are assigned affective activities for family care—that is, the reproductive role (Goldscheider *et al.*, 2015). The relevance men gave to physical spaces that protect their privacy and isolation when needed is stated in other studies, which mention that, although an open workspace promotes collaboration, it can also be a distracting element and affect academic productivity (Kearns, 2007).

The 'connecting assets' category, appreciated across different groups, is associated with the construction of social fabric, groups of people or networks connected via relationships that constitutes an asset for individuals and community (Cassetti *et al.*, 2018).

These groups are different from community organizations and associations, which are more formal and structured. These assets would affect the community dynamics, by arranging how their members can bond and make decisions, and by creating opportunities to generate belonging, which is a key element for developing a sense of community (Sarason, 1974; McMillan and Chavis, 1986). This new category could add a new

dimension to the community assets, as it could connect and articulate them for later dynamization.

The ABCD model establishes that social capital is key to community development, suggesting that connectivity, social networks, and reciprocity are necessary to produce significant results in the community (Glasgow Centre for Population Health, 2011). The variety of associations and organization recognized as assets by the university community shows the existence of several communities where people can generate networks and have the chance to get involved, commit themselves and participate (Dooris *et al.*, 2017). These could represent a community's ability to address external threats and challenging events (Kawachi, 2010), making social capital one of the group's attributes (Villalonga-Olives and Kawachi, 2015).

The narrative justifying the chosen assets overlaps with elements of a university community's daily life, as seen in the organizations and physical resources categories: both are known as (physical or bonding) spaces for meeting people. Given that human activities occur in a space, viewing physical resources as a meeting space becomes important. This could be because (a) a strong network of social relationships is easier to maintain when at short distance than at long distance, and (b) in these spaces, there is a spatial concentration of potential co-actors, which facilitates creating networks that constitute a community asset (Kawachi, 2010; Foster *et al.*, 2015). Members of the university community contribute to it with their capacity for organizing, participating, and starting collective actions for mutual benefit, which is a key element of health promotion (Kawachi, 2010).

Local culture assets (shared values, belonging and collective identity) show the role of universities as instruments of social change, contributing to civil society by promoting new cultural values (Dooris *et al.*, 2017, 2020). Furthermore, the traditions and sense of belonging are assets that are believed to show a stronger commitment to the community, which is associated with better wellbeing (León and García, 2013).

Economic assets are the least known by participants, which could be due to having little knowledge of the different economic exchanges in the campus and their allegedly lesser worth as elements that contribute to people's health. Given that economic decisions have a direct or indirect impact on population's health (Gálvez, 2010), it is necessary to delve into this type of assets.

These different assets and their assessment could help examine the concept of university community, going beyond the identification of its components (students, employees and directors) and adding common elements valued by its members.

Starting interviews and focus groups by reviewing the definition of assets and the categories of the ABCD model might have influenced the data and even have induced social desirability bias. Combining these techniques allowed for a deeper exploration of personal and sociocultural factors regarding the object of study. Focus groups were particularly useful for comparing experiences, by identifying expectations and manifestations of social desirability. Interviews allowed delving into the participants' existing knowledge. Having different researchers perform quality control on both techniques enabled the verification of the redundancy and credibility of the results. Data triangulation was done by unaffiliated experts in qualitative research, through technique triangulation and reviewing the results.

The evidence found by interventions from HPUs shows that their main strategy has been individual approach to healthy lifestyles (Dooris *et al.*, 2014; Suárez-Reyes and Van den Broucke, 2016) which must be complemented with an explicit acknowledgement of the social nature of human behaviours and health (Blaxter, 1990; López-Fernández and Solar, 2017). In this sense, this study's main strength is the use of a more collective approach, such as the creation of an asset map in a university, by applying the ABCD model.

CONCLUSIONS

Kretzmann and McKnight's ABCD model allows the elaboration of a community asset map for a university. These assets are diverse, dynamic, but there are different opinions on their value. Results suggest that some differences could depend on the members' transitions, trajectories, gender and group.

This means that this asset map must be continuously reviewed, by creating spaces for discussing asset identification, connection and mobilization.

For HPUs, the current challenge is to discover their own assets and how their members value them. This exploration could lead to the design of new promotion strategies in universities. Spreading, mobilizing, increasing, and developing these assets would contribute to fortifying the community potential and the development of their own health-generating abilities.

For this to happen, the different types of assets must be included in more actions, through comprehensive and systemic programmes for the whole university community as one group. These actions must consider different weights that members give to each asset, and must have a gender perspective, so interventions become more precise, pertinent, effective and inclusive. It is important that the university community itself can propose

guidelines to strengthen these identified assets. Finally, all of this must be within a salutogenic and asset model framework to help revitalize the HPU strategy.

ETHICS INFORMATION

This study was approved by the Ethics Committee of the University of Concepción (report CEI-045-17). Participation was free and voluntary; the participants gave their informed consent and confidentiality and anonymity were guaranteed.

ACKNOWLEDGEMENTS

AQ7

AQ8 FUNDING

AQ9 REFERENCES

Arroyo, H. V. (2018) El movimiento de universidades promotoras de la salud. *Revista Brasileira Em Promoção Da Saúde*, **31**, 1–4.

Blaxter, M. (1990) *Health and Lifestyles*. London, Routledge.

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**, 215824401878722.

Cassetti, V., López-Ruiz V., Paredes-Carbonell J. J, and por el Grupo de Trabajo del Proyecto AdaptA GPS (2018). Participación comunitaria: mejorando la salud y el bienestar y reduciendo desigualdades en salud. Zaragoza: Ministerio de Sanidad, Consumo y Bienestar Social – Instituto Aragonés de Ciencias de la Salud.

Denzin, N. K. and Lincoln, Y. S. (2011) *The SAGE Handbook of Qualitative Research*. Thousand Oaks, CA, Sage.

Dooris, M., Doherty, S. and Orme, J. (2017) The application of Salutogenesis in Universities. In Mittelmark, M., Sagy, S., Eriksson, M., Bauer, G.F., Pelikan, J.M., Lindström, B. and Espnes, G.A. (eds). *The Handbook of Salutogenesis*. Chapter 23. Springer, Cham, pp. 237–245.

Dooris, M., Powell, S. and Farrier, A. (2020) Conceptualizing the 'whole university' approach: an international qualitative study. *Health Promotion International*, **35**, 730.

Dooris, M., Wills, J. and Newton, J. (2014) Theorizing healthy settings: a critical discussion with reference to Healthy Universities. *Scandinavian Journal of Public Health*, **42**, 7–16.

Foster, K. A., Pitner, R., Freedman, D. A., Bell, B. A. and Shaw, T. C. (2015) Spatial dimensions of social capital. *City & Community*, **14**, 392–409.

Fuster, D. (2019) Investigación cualitativa: método fenomenológico hermenéutico. *Propósitos y Representaciones*, **7**, 201–229.

Gálvez, A. M. (2010) Economía y salud en el camino hacia la eficiencia. *Revista Cubana de Salud Pública*, **36**, 1–2.

García-Moya, I. and Morgan, A. (2017) The utility of salutogenesis for guiding health promotion: the case for young people's well-being. *Health Promotion International*, **32**, 723–733.

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

Goldscheider, F., Bernhardt, E. and Lappegård, T. (2015) The gender revolution: a framework for understanding changing family and demographic behavior. *Population and Development Review*, **41**, 207–239.

Graneheim, U. H., Lindgren, B. M. and Lundman, B. (2017) Methodological challenges in qualitative content analysis: a discussion paper. *Nurse Education Today*, **56**, 29–34.

Guba, E. G. and Lincoln, Y. (2002) Paradigmas en competencia de la investigación cualitativa. In Denman,C. and Haro J. A. *(Comps.) Por Los Rincones: Antología de Métodos Cualitativos en la Investigación Social*. Hermosillo (Sonora): El Colegio de Sonora. Mexico, pp. 113–145.

Guy, T., Fuller, D. and Pletsch, C. (2002) *Asset Mapping: A Handbook*. Ontario: Canadian Rural Partnership.

Hermida, C. (2017) Vinculación con la sociedad y universidad saludable. *Revista de la Facultad de Ciencias Médicas*, **42**, 150–155.

Hernández-Sampieri, R., Fernández, C. and Baptista, M. P. (2014) *Metodología de la Investigación*. 6th ed. México, McGraw Hill.

International Conference on Health Promoting Universities and Colleges (2015). *The Okanagan Charter. An International Charter for Health Promoting Universities & Colleges*. http://docs.wixstatic.com/ugd/cfb751_a1b5d827f0d8447e9f43bfb8c6320729.pdf

Kawachi, I. (2010) The relationship between health assets, social capital and cohesive communities. In Morgan, A., Davies, M. and Ziglio, E. (eds), *Health Assets in a Global Context, Chapter 9*. Springer, New York, NY, pp. 167–179.

Kearns, R. A. (2007) Creating a place for population health: interpreting the spaces of a new School in Auckland, New Zealand. *Social Science & Medicine (1982)*, **65**, 125–137.

Koelen, M., Eriksson, M. and Cattan, M. (2017) Older people, sense of coherence and community. In Mittelmark, M., Sagy, S., Eriksson, M., Bauer, G.F., Pelikan, J.M., Lindström, B. and Espnes, G.A. (eds). *The Handbook of Salutogenesis, Chapter 15*. Springer, Cham, pp 137-149.

Kretzman, J. P. and McKnight, L. (1993) *Building communities from the inside out: A path toward finding and mobilizing a community's assets.* http://www.ekarifoundation.org/wp-content/uploads/2013/06/Kretzman_McKnight_BuildingCommunitiesInsideOut.pdf

Kretzmann, J. P. and McKnight, J. L. (1997) *A guide to capacity inventories: Mobilizing the community skills of local residents*. http://communitymagic.org/public/AGuide to Capacity Inventories.pdf

León, C. and García, G. J. (2013) Sentido de pertenencia y compromiso organizacional: predicción del bienestar. *Revista de Psicología*, **32**, 271–302.

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

López-Fernández, L. A. and Solar, O. (2017) Repensar la Carta de Ottawa 30 años después. *Gaceta Sanitaria*, **31**, 443–445.

Martínez-Riera, J. R., Gallardo, C., Aguiló, A., Granados, M. C., López-Gómez, J. and Arroyo, H. V. (2018) La universidad como comunidad: universidades promotoras de salud. Informe SESPAS 2018. *Gaceta Sanitaria*, **32**, 86–91.

Martínez-Salgado, C. (2012) El muestreo en investigación cualitativa. Principios básicos y algunas controversias. *Ciencia & Saude Coletiva*, **17**, 613–619.

McKnight, J. (2013) Mapa de activos en las comunidades. In Hernán, M., Morgan, A. and Mena, A. (eds), *Formación en Salutogénesis y Activos Para la Salud, Chapter 5*. Escuela Andaluza de Salud Pública, Granada, pp. 103–125.

McKnight, J. L. and Kretzmann, J. P. (1996) *Mapping Community Capacity*. Evanston, IL. Center for Urban Affairs and Policy Research Northwestern University

McKnight, J. and Russell, C. (2019) The four essential elements of an Asset-Based Copmmunity Development Process. *ABCD Institute*. https://doi.org/10.1017/CBO9781107415324.004

McMillan, D. W. and Chavis, D. M. (1986) Sense of community: a definition and theory. *Journal of Community Psychology*, **14**, 6–23.

McQueen, D. V. and De Salazar, L. (2011) Health promotion, the Ottawa Charter and "developing personal skills": a compact history of 25 years. *Health Promotion International*, **26**, ii194–ii201.

Morgan, A. and Ziglio, E. (2010) Revitalising the Public Health Evidence Base: an Asset Model. In Morgan, A., Davies, M. and Ziglio, E. (eds), *Health Assets in a Global Context, Chapter 1*. Springer, New York, pp. 3–16.

Morse, J. M. (2015) Data were saturated. *Qualitative Health Research*, **25**, 587–588.

Pallas, A. (2003) Educational transitions, trajectories, and pathways. In: Mortimer JT., Shanahan MJ. (eds), *Handbook of the Life Course. Handbooks of Sociology and Social Research. Chapter 8*. Kluwer Academic/Plenum Publishers, New York, NY, pp. 165–184.

Pérez-Wilson, P., Álvarez-Dardet, C., Ruiz- Cantero, M. T., Martínez-Riera, J. R. and Carrasco-Portiño, M. (2020a) Desarrollo del sentido de comunidad: una propuesta para las universidades promotoras de la salud. *Global Health Promotion*, **27**, 236–239.

Pérez-Wilson, P., Marcos-Marcos, J., Morgan, A., Eriksson, M., Lindström, B. and Álvarez-Dardet, C. (2020b) 'A synergy model of health': an integration of salutogenesis and the health assets model. *Health Promotion Integration*, 2020. doi: 10.1093/heapro/daaa084. Online ahead of print. [AQ10]

Ruiz, J. I. (2012) *Metodología de la Investigación Cualitativa*. 5th edition. Bilbao, Universidad de Deusto.

Sarason, S. B. (1974) *The Psychological Sense of Community: Prospects for a Community Psychology*. San Franscisco, Jossey Bass.

Scannell, L. and Gifford, R. (2010) Defining place attachment: a tripartite organizing framework. *Journal of Environmental Psychology*, **30**, 1–10.

Suárez-Reyes, M. and Van den Broucke, S. (2016) Implementing the Health Promoting University approach in culturally different contexts: a systematic review. *Global Health Promotion*, **23**, 46–56.

Villalonga-Olives, E. and Kawachi, I. (2015) The measurement of social capital. *Gaceta Sanitaria*, **29**, 62–66.

Wilkinson, S. (2011) Analysing focus group data. In Silverman, D. (ed), *Qualitative Research*. 3rd edition, Sage, London, pp. 168–184.