

## The Health and Wellness Effects of Organic Diets

LIZA OATES<sup>1</sup>, MARC COHEN<sup>2</sup>, LESLEY BRAUN<sup>3</sup>

**Key words:** health, wellness, organic diets, organic food, organic consumers

### Abstract

*Consumers of both conventional and organic food believe that organic foods are healthier yet research supporting these beliefs is limited. The Organic Health and Wellness Survey (OHWS) aimed to gain a better understanding of the beliefs, personal wellbeing and health experiences reported by regular organic consumers in Australia. Respondents (n=404) were predominantly female, tertiary educated, in a healthy weight range; and rated higher than average on the Personal Wellbeing Index. The OHWS found that 75.7% of respondents perceived their overall health to be better since moving to an organic diet, with an average improvement of 2.5 points on a 10-point scale (p<0.001). Respondents reported that increased consumption of organic food was associated with health improvements including resistance to and recovery from illness, physical energy and mood. Many respondents referred to psychological benefits from purchasing products they believe reflect their values. These results are consistent with similar studies in Australia and abroad and suggest that organic food has multidimensional benefits to human health.*

### Introduction

The commonly held views that health is simply the absence of disease and diets are the sum of their nutrient content discounts important social, environmental and psychological aspects of food and the potential for organic agriculture to impact on wellness.

Consumers of both conventional and organic food believe that organic foods are healthier than conventional foods (Lockie et al. 2002, Lea and Worsley 2005). Yet despite these beliefs, there has been very little prospective research documenting specific health benefits of organic diets (Dangour et al. 2010, Smith-Spangler et al. 2012) and this may affect consumers' willingness to pay the price premiums for organic food.

Retrospective studies of dedicated organic consumers in Europe report many perceived benefits from moving to an organic diet including improved resistance to and recovery from illness, a positive effect on mental wellbeing and fewer digestive complaints (Huber et al. 2005, Rembialkowska et al. 2008, van de Vijver and van Vliet 2012).

We conducted the Organic Health and Wellness Survey (OHWS) to gain a better understanding of the beliefs, personal wellbeing and health experiences reported by regular organic consumers in Australia.

### Methods

A preliminary set of questions was developed based on a review of the existing literature and results from a previous Australian survey conducted by the researchers (Oates et al. 2012). Feedback on the study design was also sought from the primary author of a similar Dutch study (van de Vijver and van Vliet 2012) and other colleagues working in the field. A combination of closed and open questions were used to provide both quantitative and qualitative data regarding the perceived health and wellness experiences of organic consumers. The OHWS also included questions about food consumption and purchasing behaviour as well as basic socio-demographic characteristics.

Following ethics approval from the RMIT University Human Research Ethics Committee, the OHWS survey was conducted over a two month period from mid-October to mid-December 2011 using the Survey Monkey® online survey tool. Dedicated organic consumers were recruited through advertisements in retail outlets and websites that sell or promote organic produce. All participants were asked to confirm that they were over 18 years of age and agreed with the statement 'I make a deliberate choice to consume at least some organic foods on most days'.

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<sup>1</sup> School of Health Science (Wellness Group), RMIT University, Australia, [www.rmit.edu.au](http://www.rmit.edu.au), [liza.oates@rmit.edu.au](mailto:liza.oates@rmit.edu.au)

<sup>2</sup> School of Health Science (Wellness Group), RMIT University, Australia, [www.rmit.edu.au](http://www.rmit.edu.au), [marc.cohen@rmit.edu.au](mailto:marc.cohen@rmit.edu.au)

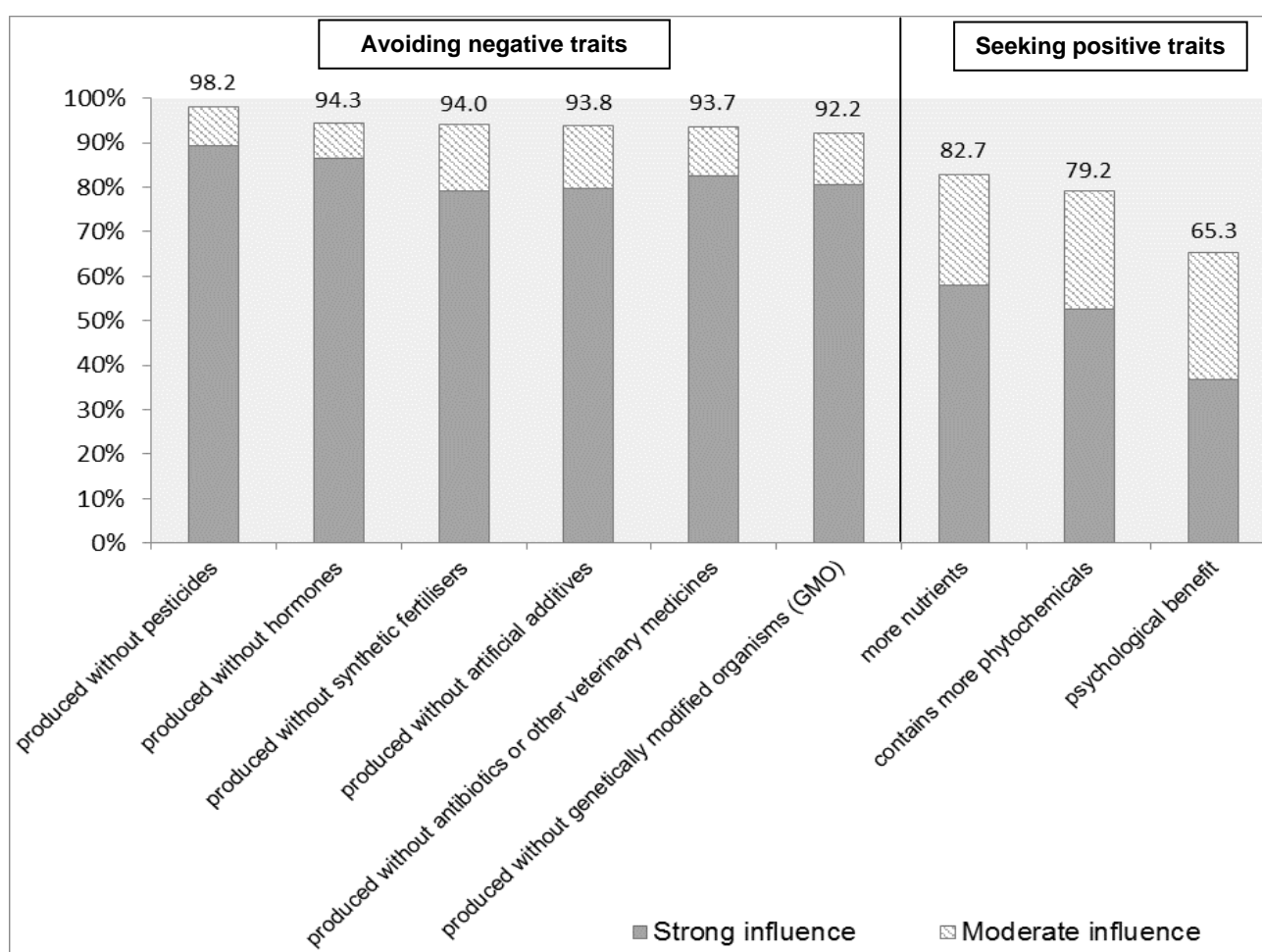
<sup>3</sup> Centre for Ethics in Medicine and Society, Monash University/ The Alfred Hospital, Australia, [www.cems.monash.org](http://www.cems.monash.org), [lgbraun@bigpond.net.au](mailto:lgbraun@bigpond.net.au)

## Results

A total of 404 useable surveys were submitted. The majority of OHWS respondents were female (81.4%), tertiary educated (73.4%), in a healthy weight range (59.7%), with a mean age of 41.2 years. Based on self-estimation reports, the percentage of people in the OHWS that consumed most or all (i.e. >65%) organic food in the previous 12 months was 50.1% for certified organic food and 68.1% when 'likely' organic foods were included. More than half of the respondents (56.8%) reported that they had consumed organic food for more than 5 years. The mean estimated weekly expenditure on organic food (either certified or 'likely') was 70.4% (SD=23.0) of the household food budget.

### Beliefs

Respondents held strong beliefs around the ability of organic diets to prevent a range of conditions including cancer (80.2%), allergic conditions (75.6%) as well as behavioural (74.8%) and developmental problems (71.9%) in children. When asked why they thought organic food was healthier, and what influence that belief had on their decision to consume organic food, they generally rated avoidance of negative traits more highly (Figure 1). In other words they believed the health benefits were related to what was not in their food, such as pesticides, hormones and veterinary medicines; rather than any nutritional superiority.

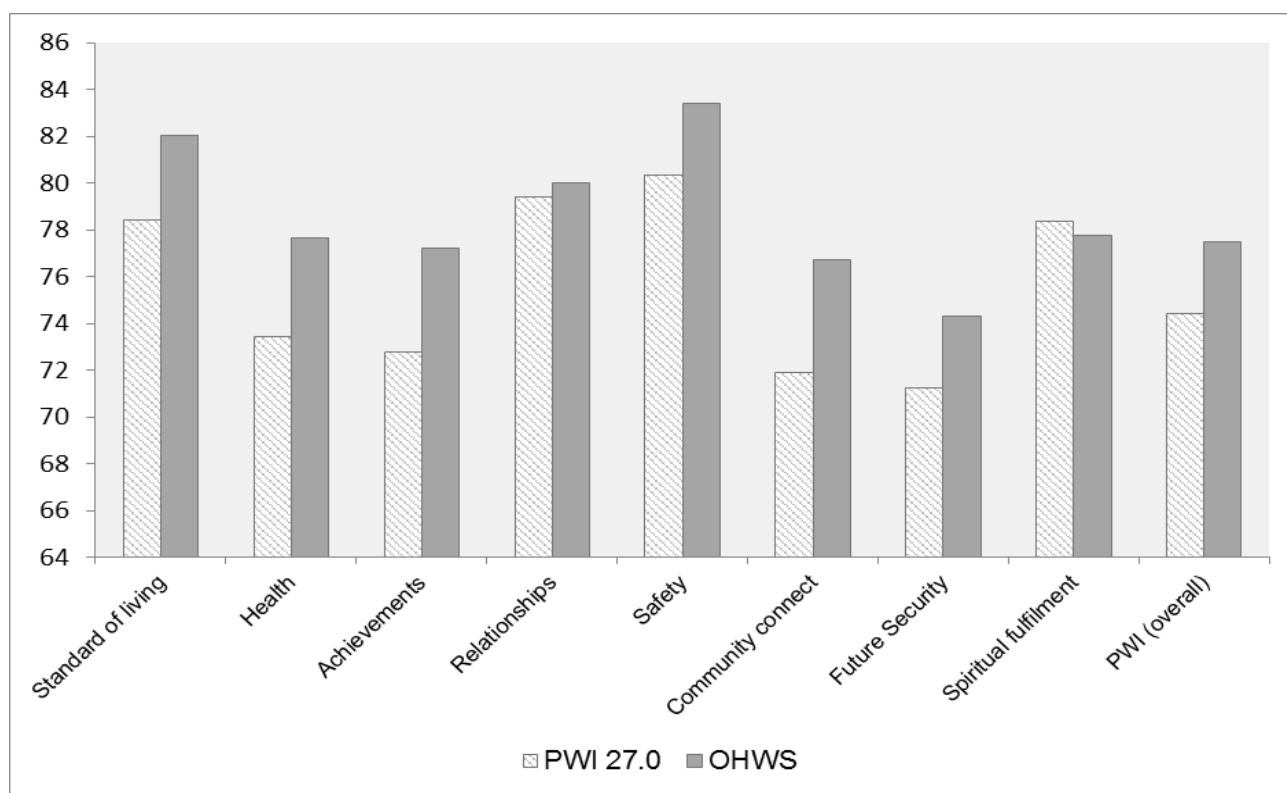


**Figure 1. Health beliefs influencing purchasing behaviour (n=404).**

### Personal Wellbeing

Respondents generally scored well on the Australian Unity Personal Wellbeing Index for adults (PWI-A), a measure of subjective wellbeing (M=77.5; 95% CI [76.2, 78.8]). This was above the mean for the Australian population (75.4 points, standardised on a 0-100 scale) and above the upper end of the Australian adult normative range (73.7-76.7) which has been calculated using data collected from over 60,000 representative

adults over the years 2001-2012 (Cummins et al. 2012). Differences in the means (Figure 2) were particularly apparent in the domains of community connectedness (4.83 points higher in the OHWS respondents), achieving in life (4.46) and health (4.22).



**Figure 2. Comparison between Australian averages (PWI 27.0) and OHWS respondents (n=373) for the different domains of the PWI-A.**

### *Health Experiences*

Overall 75.7% of respondents perceived their health to be better since moving to an organic diet with the average improvement being around 2.5 points on a 10-point scale ( $p < .001$ ). The health benefits most commonly reported by respondents were improvements in: resistance to and recovery from illness (71.1%), physical energy (61.1%), condition of skin/ hair/ nails (58.4%), mental alertness (56.7%), mood stability (56.3%), and sense of satiety (55.4%). Of the 24% who reported pre-existing health conditions, 96% believed that the condition improved since moving to organic food. Many respondents referred to psychological benefits from purchasing products they believe reflect their values and 62.5% reported making additional dietary or lifestyle changes around the time they moved to an organic diet that may have had an impact on their health.

### **Discussion**

The results of this survey do not necessarily represent all organic consumers. Nevertheless the socio-demographic and consumption characteristics of respondents are highly consistent with those from recent Australian and European studies (Oates et al. 2012, van de Vijver and van Vliet 2012). Beliefs around the ability of organic diets to prevent a range of conditions are consistent with the current scientific literature (Alfvén et al. 2006, Kummeling et al. 2008, Bouchard et al. 2010, Bouchard et al. 2011, Alavanja and Bonner 2012) and decisions to purchase organic food were driven more by risk aversion (especially to pesticides) than nutritional superiority.

Perceived health and psychological benefits resulting from a move to an organic diet are similar between participants in the OHWS and a similar Dutch study (van de Vijver and van Vliet 2012) and further research

across geographical locations is now required to corroborate these findings and determine their clinical relevance.

When assessing the benefits to consumers from purchasing organic food the full spectrum of nutritional, social, environmental and psychological benefits need to be considered. It is therefore recommended that future research incorporates a holistic approach to fully capture the potential of organic diets to positively impact health and wellness.

## References

- Alavanja MC & Bonner MR (2012): Occupational pesticide exposures and cancer risk: a review. *Journal of Toxicology and Environmental Health Part B: Critical Reviews* 15(4), 238-263.
- Alfvén T, Braun-Fahrländer C, Brunekreef B, von Mutius E, Riedler J, Scheynius A, et al. (2006): Allergic diseases and atopic sensitization in children related to farming and anthroposophic lifestyle – the PARSIFAL study. *Allergy* 61(4), 414-421.
- Bouchard MF, Bellinger DC, Wright RO & Weisskopf MG (2010): Attention-Deficit/Hyperactivity Disorder and Urinary Metabolites of Organophosphate Pesticides. *Pediatrics* 125(6), e1270 -e1277.
- Bouchard MF, Chevrier J, Harley KG, Kogut K, Vedar M, Calderon N, et al. (2011): Prenatal Exposure to Organophosphate Pesticides and IQ in 7-Year Old Children. *Environmental Health Perspectives* 119(8), 1189-1195.
- Cummins RA, Woerner J, Weinberg M, Collard J, Hartley-Clark L, Perera C, et al. (2012): Australian Unity Wellbeing Index: Survey 27.0. from <http://www.deakin.edu.au/research/acqol/auwbi/survey-reports/index.php>.
- Dangour AD, Lock K, Hayter A, Aikenhead A, Allen E & Uauy R (2010): Nutrition-related health effects of organic foods: a systematic review. *American Journal of Clinical Nutrition* 92(1), 203-210.
- Huber K, Henning J, Dlugodsch G & Fuchs N (2005). Ernährungs-Qualitätsstudie (Klosterstudie)(in German). Ende der Nische. Beiträge zur 8. Wissenschaftstagung Ökologischer Landbau.
- Kummeling I, Thijs C, Huber M, van de Vijver LP, Sniijders BE, Penders J, et al. (2008): Consumption of organic foods and risk of atopic disease during the first 2 years of life in the Netherlands. *British Journal of Nutrition* 99(3), 598-605.
- Lea E & Worsley T (2005): Australians' organic food beliefs, demographics and values. *British Food Journal* 107 (11), 855-869.
- Lockie S, Lyons K, Lawrence G & Mummery K (2002): Eating 'Green': Motivations behind organic food consumption in Australia. *Sociologia Ruralis* 42 (1), 23 - 40.
- Oates L, Cohen M & Braun L (2012): Characteristics and consumption patterns of Australian organic consumers. *Journal of the Science of Food and Agriculture* 92(14), 2782-2787.
- Rembalkowska E, Kazimierzczak R, Srednicka D, Bienko K & Bielska M (2008): Different aspects of organic and conventional food consumers' lifestyle. *New Medicine* 12(1), 16-19.
- Smith-Spangler C, Brandeau ML, Hunter GE, Bavinger JC, Pearson M, Eschbach PJ, et al. (2012): Are organic foods safer or healthier than conventional alternatives?: a systematic review. *Annals of Internal Medicine* 157(5), 348-366.
- van de Vijver LPL & van Vliet MET (2012): Health effects of an organic diet—consumer experiences in the Netherlands. *Journal of the Science of Food and Agriculture* 92(14), 2923-2927.