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Happy Hookers: findings from an international study exploring the effects of crochet on wellbeing

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Keywords

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Abstract

Aims: With rising rates of mental health disorders reported globally, it is imperative that we investigate economical and accessible ways to increase relaxation and reduce stress. While there is a plethora of anecdotal evidence as to the positive effects of domestic crafts on mental wellbeing, there is little empirical research in this area. As such, we aimed to explore perceived links between crochet and wellbeing.

Methods: An online survey was developed and piloted, based on an existing tool that explored knitting and wellbeing. The final survey was promoted through social media, over a six-week period, resulting in valid responses from 8,391 individuals.

Results: Most respondents were female (99.1%), aged between 41-60 years (49.5%) and living in 87 different countries. Many respondents reported crocheting for between 1-5 years (42.6%). The three most frequent reasons reported for crocheting were to: be creative (82.1%); relax (78.5%) and for a sense of accomplishment (75.2%). Respondents reported that crochet made them feel calmer (89.5%), happier (82%) and more useful (74.7%). There was a significant improvement in reported scores for mood before crocheting ($M=4.19$, $SD=1.07$) and mood after crocheting ($M=5.78$, $SD=0.82$); $z=-69.86$, $p < .001$, $r=-0.56$. Content analysis of free-text responses identified five major themes: Health benefits; Process of crochet; Personal connection; Crochet as contribution; and Online crochet communities.

Conclusions: The data suggested that crochet offers positive benefits for personal wellbeing with many respondents actively using crochet to manage mental health conditions and life events such as grief, chronic illness and pain. Crochet is a relatively low cost, portable activity that can be easily learnt and seems to convey all of the positive benefits provided by knitting. This research adds to the social prescribing evidence base and suggests that crochet can play a role in promoting positive wellbeing in the general population.

Keywords: crochet, craft, wellbeing, health promotion, social prescribing

Background

Previous research into the impact of arts and crafts as leisure activities has generally come from visual and performing arts and has overlooked the benefits of ‘domestic pursuits’, such as sewing, knitting and crochet. While there is a plethora of anecdotal evidence as to the positive effects of domestic crafts on mental wellbeing, there has been little empirical research in this area (1–4). Mental wellbeing is defined as *“a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community”* (5). Depression and anxiety are both ranked within the top ten causes of disability globally, being placed first and sixth respectively and accounting for 10.9% of all years lived with disability in 2015 (6). Globally, more than 300 million people of all ages suffer from depression (7). High rates of mental health disorders are also evident in Australia, with one-in-five Australians aged between 16–85 years reporting having a mental health disorder in the previous 12-months (8). This included 2.3 million (14.4%) with an anxiety disorder and 995,900 (6.2%) with an affective disorder, such as depression (9). While there are effective psychological and pharmacological treatments for both depression and anxiety, there is scope to further investigate non-pharmacological interventions particularly with increasing interest in social prescribing (10). Social prescribing specifically targets those people who are socially isolated and/or living with long-term mental or physical health conditions (11). Primary health care physicians are able to refer patients to a social prescribing coordinator or link worker. This person, in turn, is able to link the patient to existing community groups and organisations. It is postulated that using non-medical interventions to address the broader social determinants of health that are known to affect health allows patients to better manage their conditions (10). It also bridges the gap between health services and the community sector (12).

Crochet

The term crochet is thought to derive from the French word meaning ‘hook’(13). Crochet refers to the process of creating fabric by interlocking loops of yarn. Crochet requires a hook and yarn, or thread that will be crocheted. Unlike knitting, where knitters use two needles, crochet use only one hook. With most forms of crochet, usually just one stitch is kept on the hook at a time. Crochet hooks come in a range of sizes and can be made from different materials, most commonly plastic, steel or bamboo. While patterns are widely available, in the English-speaking world, crochet stitches have names that vary by country. These are usually referred to as British (UK) or American (US).

Crochet patterns can also be shared through diagrams. Popular crochet projects include blankets, hats, shawls and bags (14). The first known printed crochet patterns date from the early nineteenth century (13).

Whilst crochet, like many other arts and crafts, declined in popularity during the second half of the twentieth century, the start of the twenty-first century has seen an increase in people, in the United States, undertaking fiber arts including crochet (15). This has been paralleled by the availability of social media platforms that have enabled people to learn crochet and connect with others. Such platforms include, You Tube, launched in 2005 and Ravelry, a free social networking service primarily for people who knit and crochet, launched in 2007 (14). Ravelry allows members to share patterns and finished projects and connect with others locally, nationally and internationally. While crochet is often seen as a domestic activity, it is also rooted in the sciences having been used to create the first durable models of hyperbolic planes, replacing the delicate paper models that were previously used (16). Crochet is also central to the *Crochet Coral Reef* one of the largest science and art projects in the world (17).

There is some, much cited, evidence that knitting helps alleviate depression and reduce anxiety (18,19). Both Riley et al and Corkhill et al investigated the benefits of knitting (n=3545) and found evidence that knitting provided significant psychological and social benefits. Further a Canadian based intervention study introduced knitting to 38 women, with anorexia nervosa who had been admitted to an eating disorder unit (20). The researchers found that nearly three-quarters of participants (74%) reported increased relaxation and comfort and the same proportion reported “benefits of distraction/distancing from their eating disorder thoughts and feelings” (20). Another, US based study, found that knitting and crocheting helped people relax (85%) decreased stress (81%) and decreased anxiety (57%)(21). However, this study did not differentiate between people who knit and crochet. This is an important differentiation as knitting is a bilateral activity (it utilises two needles) whereas crochet is unilateral activity (one hook)(19). Due to this difference, it is argued that those who crochet would also experience the benefits found from knitting. The aim of this research was to investigate the impact of crocheting on individuals’ wellbeing and to explore how online craft communities are used to transfer crafting knowledge through social interaction. This paper reports solely on the impact of crocheting on individuals’ wellbeing.

Methods

An online survey was compiled to address the aims of the study, using Survey Monkey. The initial survey contained 74 questions. Fifty-four items originated from a survey tool that was used to investigate the impact of knitting on individuals' perceptions of their mental and social wellbeing (18). The wording of these questions was modified to ask about crochet rather than knitting. Survey items included questions related to demographics, mood, cognition and social aspects. The other 20 items related to use of online craft forums, such as Ravelry (<https://www.ravelry.com>). These questions were adapted from previous studies examining individual motivations and factors that influence online relationships and knowledge sharing in organisational virtual communities (22–24). The results related to the online craft forums are not presented here. Ethics approval was obtained from the university's ethics committee (HREC 2018/067).

To improve reliability and validity, the survey was piloted in a crochet related Facebook group for a period of 24 hours. In this period, nearly three hundred responses were received (n=274). Analysis of the pilot data resulted in a number of changes being made to the survey tool. These changes included the addition of survey logic for some questions and the movement of the demographic questions from the start of the survey to mid-way through, in order to increase completion rates. The final survey contained 71 items.

The final survey was launched at the end of March 2018. The survey was promoted through social media, primarily through Facebook. However, a number of influential crochet bloggers and instagrammers subsequently promoted the survey to their followers. The survey remained live until the end of April 2018. At this point, 8,437 responses had been received during the six-week period that the survey was live. Forty-five surveys were completed by people who did not crochet. These responses were removed leaving a final sample of 8,391.

Descriptive data analysis was undertaken in SurveyMonkey. The data was subsequently downloaded and interrogated through the use of SPSS v.25. The last question was an open-ended question, which asked: *"Is there anything else you would like to add?"*. As almost half of respondents left a comment (n=4,028), this data was cleaned and content analysis was undertaken in Microsoft Word (25).

Initially, both researchers reviewed the text for key themes. These were subsequently discussed and refined between the researchers. Where appropriate, individual responses were categorised into multiple themes. Analysis of the free text responses received identified five main themes:

- i. Health benefits – responses referring to either mental or physical health benefits gained through crochet were coded under this theme. Mental health benefits included the use

of crochet in dealing with depression, anxiety and stress. It also included the use of crochet through major life events such as death of a close relative, divorce or major illness.

- ii. Process of crochet – this theme was used to capture responses that were gained through crochet and included expression of creativity and the rhythmic nature of crochet.
- iii. Personal connection – many responses referred to the connections that crochet allows them to form with other people. This theme also included connections made to both past and present generations through crochet.
- iv. Crochet as contribution – responses that spoke about crochet making them feel useful or allowing them to contribute to their household or society were coded under this theme.
- v. Online crochet communities – this theme included responses referring to online forums and supports around crochet. This included references to Ravelry, You Tube and Facebook. This theme is not directly relevant to wellbeing and is not discussed in this paper.

Responses that had been coded as theme (v.) 'Online crochet communities' were removed from the dataset. Tag Crowd™ was subsequently used to generate a word cloud showing the frequency of words represented by the open-ended responses. In order to optimise this pictorial the following words were excluded: ago, gives, keep, lot, others, really, somethings, things, think, sometimes, and years.

Results

Most people who responded were female (99.1%) and aged between 41-60 years (49.5%) (Table 1). The sample included people living in 87 different countries, with Australia (42.7%) and the USA having the highest representation (21.3%).

Table 1: Age Distribution

Age Group	Female	Male	Other	Total
< 20 years	66	1	2	69 (0.9%)
21 - 30 years	851	5	8	864 (11.2%)
31 - 40 years	1665	14	8	1687 (22.0%)
41 - 50 years	1883	6	1	1890 (24.6%)
51 - 60 year	1902	8	1	1911 (24.9%)
61 - 70 years	1020	8	1	1029 (13.4%)
71 - 80 years	212	2	0	214 (2.8%)
81 years or older	16	0	1	17 (0.2%)
Total	7615	44	22	7615 (100%)

Qualitative Data

Analysis of the free text responses received identified five main themes. Quotes from these themes have been used to support and add context to the quantitative data. The word cloud (Figure 1) reinforces the most popular concepts elicited through the free-text response.

Crochet Habits

For many respondents, crochet was a relatively new pastime with 42.6% reporting crocheting for between 1-5 years (Table 2). Most respondents crocheted at least once a week (90.9%), with over one-third reporting that they crocheted daily (40.1%) (Table 2).

The top three reasons reported for crocheting were: to be creative (82.1%); to relax (78.5%) and for a sense of accomplishment (75.2%).

“I find when I am stressed or down, I realise that I haven't done anything creative for a while. As soon as I begin crocheting I find myself relaxing and feeling more grounded again.”

Respondent 1346 (Theme: Health & Process)

"I love to crochet. I live in an isolated community and it has helped me relax and feel a sense of accomplishment that I might not have had otherwise." **Respondent 3713 (Theme: Health & Contribution)**

"I feel a real sense of accomplishment producing something physical with my hands (my job is mostly computer work with no tangible result)." **Respondent 5264 (Theme: Contribution)**

Figure 1: Word cloud showing frequency of responses

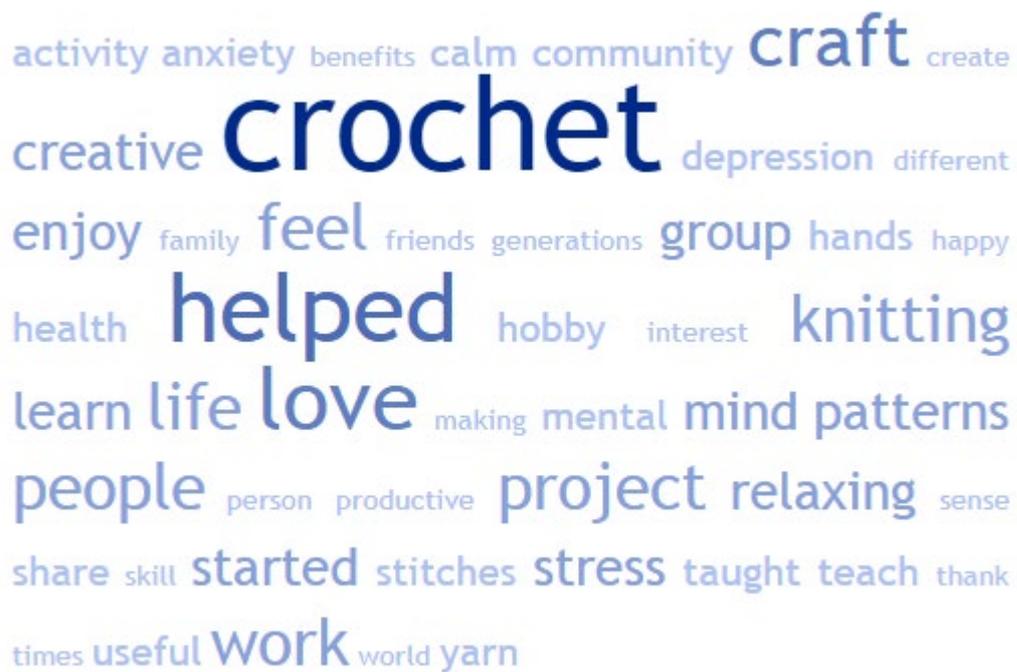


Table 2: How frequently respondents reported crocheting compared to how recently they started crocheting regularly

Frequency of crocheting	Number of years reported crocheting regularly								Total	Frequency of crocheting (%)
	<1 yr	1-3 yrs	3-5 yrs	5-9 yrs	10-20 yrs	20-30 yrs	30-40 yrs	>40 yrs		
Everyday	275	713	622	509	316	180	210	408	3233	40.1%
3-5 times a week	311	770	600	492	285	150	146	265	3019	37.4%
1-2 times a week	101	257	214	164	128	53	71	97	1085	13.4%
Once every two weeks	29	82	63	44	34	16	27	28	323	4.0%
Once a month	27	31	33	27	18	11	19	40	206	2.6%
Less than once a month	46	25	23	29	19	19	22	21	204	2.5%
Total	789	1878	1555	1265	800	429	495	859	8070	100%
Length of time crocheting (%)	9.8%	23.3%	19.3%	15.7%	9.9%	5.3%	6.1%	10.6%	100%	

Respondents were most likely to report crocheting at home (95.8%), whilst waiting for an appointment (50.8%), and at family and friends’ houses (46.1%). However, people also reported crocheting in the car (41.1%) and on public transport (25%). The portability of crochet and the way it facilitates social interaction is highlighted through the following quotes.

“[...] the number of conversations that have been started by a stranger about the crochet project I'm working on in public never ceases to amaze me!” Respondent 1379 (Theme: Connection)

“While you are crocheting, in public like on the train, people like to talk to you, and it is really nice , much better than looking at the phone.” Respondent 1607 (Theme: Connection)

“It's incredible how many people will come and ask you what you're making, comment on the WIP [work in progress] and the colour/design. It's great!! Who knew! Not me before trying.” Respondent 2860 (Theme: Connection)

Crochet process

The texture of the yarn usually or definitely affected the mood of respondents (33.1%), whilst the colour of the yarn had less impact on mood (22.1%). The majority of respondents reported that the finished product was either fairly or very important to them (82.4%). Many respondents imagined others' reactions to their finished projects (42.0%), and just over half of respondents said that they planned their crochet projects in advance (54.2%).

"I enjoy the creative process of crochet- choosing colors, textures, patterns." **Respondent 6887 (Theme: Process)**

"The world turns into a color pallet [sic] and inspiration." **Respondent 4583 (Theme: Process)**

In the final free text question, many respondents chose to talk about the rhythmic nature of crochet.

"[...] the rhythmic nature seems to inhibit intrusive thoughts." **Respondent 45 (Theme: Process)**

"[...] I find the structure and repetitiveness calming and the creativity exciting." **Respondent 653 (Theme: Process & Health)**

"Crochet is, in my opinion, therapeutic. The repetitive counting of stitches and the concentration needed is very relaxing." **Respondent 2160 (Theme: Process & Health)**

Impact of crochet

Respondents were asked about the impact of crochet on their mood and thinking (Table 3). The majority of people said that crocheting made them feel calm (89.5%) and happier (82.0%). Very few respondents reported that crochet negatively affected their mood by making them feel worthless (0.5%), anxious (0.4%) or sad (0%).

Pearson's chi-square test showed significant association between crocheting at least weekly and feeling: calmer $\chi^2(1) = 85.98, p < .001$; happier $\chi^2(1) = 77.47, p < .001$; confident $\chi^2(1) = 41.87, p < .001$; forget pain $\chi^2(1) = 43.82, p < .001$; useful $\chi^2(1) = 12.17, p < .001$, and better about yourself $\chi^2(1) = 22.87, p < .001$. No significant associations were found between crocheting at least weekly and respondents feeling sad, anxious or stressed.

In terms of the impact of crochet on thinking processes respondents felt that crochet was good for their memory (74.2%) and improved their concentration (70.6%). Notably just over half of respondents reported that crochet helped them forget pain (53.8%) and forget problems (51.9%).

Table 3: Impact of crochet on feelings and thinking

Mood	Percentage (%)	Thinking	Percentage (%)
Calm	89.5%	Good for memory	74.2%
Happier	82.0%	Improve concentration	70.6%
Useful	74.7%	Good ideas	58.2%
Better about self	73.4%	Thinking flow	55.1%
Confidence	60.8%	Think more clearly	54.5%
More in control	46.3%	Organise thoughts	54.2%
Excited	36.5%	Forget pain	53.8%
Stressed	2.1%	Forget problems	51.9%
Worthless	0.5%	Think through problems	44.0%
Anxious	0.4%	Dream	20.0%
Sad	0%		

Respondents were asked to rate, on a seven-point scale how they felt both before and after crocheting. A Wilcoxon-signed rank test was conducted to compare reported mood before and after crocheting. There was a significant difference in the scores for mood before (M=4.19, SD=1.07) and mood after (M=5.78, SD=0.82) crochet; $z=-69.86$, $p < .001$, $r=-0.56$, suggesting that crochet positively affects mood.

Respondents also reported actively using crochet to deal with clinical diagnoses such as anxiety and depression and eating disorders.

“Crochet has allowed me to decrease my dependency on prescription medications for my anxiety and depression.” **Respondent 982 (Theme: Health)**

“I crochet largely for my anxiety. I have found it has a similar affect on me when I am anxious as playing music, sewing or gardening.” **Respondent 1097 (Theme: Health)**

“I learnt to crochet during group therapy while an inpatient at an eating disorder clinic, it helped fill the awkward silences and made me feel like no one was watching me.”
Respondent 1451 (Theme: Health)

Many respondents reported using crochet as a form of therapy, particularly as a means of surviving life-events such as marriage breakdowns, the death of a loved one and illness.

“Just that for me; crocheting has been like medication for me; as I stayed beside my dad’s bed as he was dying! When he left; the grief I felt; so painful; eased a bit as I crocheted!”
Respondent 3587 (Theme: Health)

“[...] since my divorce 3 years ago, I crochet every day. It is my therapy.” **Respondent 2729 (Theme: Health)**

“I learnt how to crochet because I have a child with an chronic medical condition. I spend so much time in hospital, at appointments and in emergency situations. It’s so calming to be productive when you are so useless otherwise. It helps me to not resent the time we spend dealing with illness if I can combine it with a hobby.” **Respondent 2596 (Theme: Health)**

Respondents also spoke about the positive impact that crochet had on other aspects of their health, such as decreasing smoking, drinking and blood pressure and dealing with chronic pain.

“Crochet helped me quit smoking and is now helping me cut back on alcohol.” **Respondent 21 (Theme: Health)**

“I took it [crochet] up again after Cyclone Debbie. And drinking to[o] much. Haven’t given drink away but gone from 2 bottles to 2 glasses daily [...]” **Respondent 2861 (Theme: Health)**

“When I have to go to the doctor I always take something to crochet. It has been known to lower my blood pressure before I have to see him. This is a big plus for me.” **Respondent 79 (Theme: Health)**

“The repetitive process and motion, the concentration and focus, the sense of accomplishment and the challenge all come together to aid in pain management. It’s not something I read about, but something I discovered by doing it. I have a long history of a bad

back and am unable to take pain medicine. The act of crocheting gives me something to focus on besides the pain.” Respondent 697 (Theme: Health & Process & Contribution)

“Crocheting has made dealing with chronic illnesses less stressful, and keeps my mind off of my multiple symptoms and side effects” Respondent 2249 (Theme: Health)

Many respondents commented on how crochet made them feel that they were productive and contributing to their families and/or society.

“[...] I am able to be creative; help others around me through charity work; give people handmade, bespoke gifts; work with gorgeous colours and textures; feel like I’m contributing; and I feel productive.” Respondent 2810 (Theme: Process & Contribution)

“Crocheting is like meditation but it's also helps me to feel like I'm contributing to my household whilst not able to work due an ankle disability.” Respondent 3502 (Theme: Health & Contribution)

“[...] It also enabled me to feel productive and capable, kept my brain stimulated and gave me something to show that I had created, as a lot of my work had nothing to show for it!” Respondent 1014 (Theme: Contribution)

Crocheting with others

Half of all respondents said that they found it easier to talk to other people who crocheted (50%), which had resulted in over a third of respondents making new friends through crochet (39.2%) and feeling less lonely (31.3%). Despite these reported benefits, only just over a quarter of respondents said that they crocheted with other people (26.3%).

Pearson’s chi-square test showed significant association between crocheting in a group and feeling: happier $\chi^2(1) = 12.65, p < .001$; confident $\chi^2(1) = 12.46, p < .001$; useful $\chi^2(1) = 15.41, p < .001$, and better about yourself $\chi^2(1) = 12.58, p < .001$. No significant associations were found between crocheting in a group and respondents feeling sad, anxious stressed or calmer.

The rest of the answers in this section refer only to this sub-sample of people who reported crocheting in a group setting (n=2,041). Over three-quarters reported that they enjoyed being with others whilst they crocheted (76.7%) and that it gave them a sense of belonging (77.8%). A majority also reported that crocheting with others gave them confidence (69.1%). Unsurprisingly for this group, few reported that crocheting with others made them nervous (0.9%; n=19).

Responses to the open-ended question indicated that the connection that crochet provides to other generations, both past and future was important to many people.

"[...] I come from a long line of women crocheters - great grandmother, Aboriginal grandmother, and mother.... and me! It unites us even though all of them have died. and I reflect back on items they made... I have a ball of blue silk yarn that was my great grandmothers... and occasionally I will chain a little of it to feel it run through my hand... I use her hand me down hook as well... I have a collection of hooks from them all. [...]"

Respondent 124 (Theme: Connection)

"[...] It's nice to do something my gran did (she taught me). Sort of like carrying on a tradition by making heirlooms for my kids, using a technique taught to me by their great grandmother. Nice feels :)" **Respondent 1576 (Theme: Connection)**

"Crocheting is a skill I do so I can pass it down through the generations and to make beautiful quality things to treasure and become heirlooms." **Respondent 2369 (Theme: Connection & Contribution)**

Discussion

The online survey received a large response rate (n=8,391) which is reflective of the recent resurgence in popularity of crochet, interest in the connection between crochet and wellbeing and social media attention (26–29). As far as we are aware this is the first study of its kind to attempt to quantify the effects of crochet on wellbeing, although positive case-studies exploring this association exist (30).

The majority of respondents were female (99.0%) which is similar to respondents of the survey exploring knitting and wellbeing (98.8%) (18). It is also reflective of the fact that craft is often seen as a domestic craft, and as such, women's work (31). The modal age of respondents was 51-60 years, which was considerably higher than respondents in the knitting survey (21-30 years) (18). Some of this variation is likely due to older adults becoming more familiar with technology in the intervening eight-year period, as both surveys were administered online. However, crochet and other domestic crafts are still often viewed as something undertaken by women of previous generations out of necessity. The results strongly suggest that for many people crochet provides a non-pharmacological

adjunct to psycho-social wellbeing. Further, crochet is a relatively cheap and portable craft that is easily learnt and can be readily adapted to suit individuals' needs and skill level. This is important as we know that the risk of becoming depressed is increased by poverty, which is mediated by life events such as unemployment, grief and loss, physical illness and drug and alcohol use (6)

Crochet process

Most people reported crocheting at home (95.8%) which was similar to respondents of the knitting study (98%) (18). The impact of colour and texture was less for people who crochet (22.1% and 33.1%) than knitters (24.0%; and 46.0%) (18). It is not clear why this difference has occurred, however, it should be noted that we did not explore the impact of the yarn content e.g. acrylic verses natural fibres on mood.

Crochet habits

Respondents reported crocheting for the following benefits creativity (82.1%); relaxation (78.5%) and accomplishment (75.2%). These reasons were also reported in a 2014 survey of people who knit and crochet, but at somewhat different rates: creativity 65%, relaxation 90% and sense of accomplishment 44% (21). It is likely that the different proportions reflect the way in which the questions were framed in each survey.

Impact of crochet

Respondents reported that crochet made them feel calmer, happier and more useful. Respondents also reported that crochet was good for their memory and that it helped improve their concentration. These results support research that has shown that older adults, aged 70-89 years, have decreased odds of developing mild cognitive impairment, when they reported participating in craft activities, such as knitting, (32).

The qualitative comments provided examples of respondents using crochet to help manage pain and deal with eating disorders. Such effects have also been reported with knitting (20,33).

Comments from many respondents indicated that the benefits that they gained were from the rhythmic and repetitive nature of crochet. They also spoke about the meditative properties of

crochet. It is likely that these comments are due to crochet eliciting the “relaxation-response”. The relaxation-response has been identified as a way of counter-acting the flight or fight response. To elicit the relaxation-response, it is suggested that the technique, described below, be carried out for between 10-20 minutes each day.

“Find a quiet, peaceful environment for practice; muscles should be consciously relaxed; a word such as “one” or “peace,” or a phrase, possibly a prayer, should be repeated silently in the mind; any intrusive thoughts should be observed only and then passively dismissed; and breathing should be slow and deep” (34).

The parallels between this practice and crochet are apparent, where the phrase being repeated is often the stitch count. A review of the literature suggested that the relaxation-response was effective in reducing hypertension, insomnia, anxiety, pain and medication use across population and settings (35), which further supports the findings of this study.

Crocheting with others

Far less respondents said that they crocheted in a group (26.3%) than compared to respondents in the knitting survey (50.3%) (18). It is unclear why this is the case, and such reasons could be explored in the future through qualitative interviews or focus groups. However, respondents reported being less lonely through crochet (31.3%) and over one-third reported having made new friends through crochet (39.2%), which is similar to the proportion reported in the knitting study (18). This suggests that participating in crochet has a positive impact on social connectedness, supporting its use in social prescribing.

The sense of connectedness to both past and future generations was an unexpected finding and was not reported in the knitting study.

Ideally, future research will include a multi-grouped randomised control trial comparing crochet amongst experienced and inexperienced people (as we know that learning to crochet is hard and a potential stressor (1)), and a control group. Such a design would allow the effects of crochet on wellbeing to be measured, whilst controlling for experience. There is also scope to conduct similar, survey-based research, investigating the impact of other crafts such as spinning, quilting, embroidery, tatting and weaving on wellbeing. Such research would add evidence to the options promoted through social prescribing.

Strengths & Limitations

One of the strengths of this survey is that we used the same tool previously used to examine wellbeing in people who knit (18), allowing direct comparison of the results. Secondly, a large international sample of people who crochet was obtained, suggesting validity. A number of international events may have affected the overall response to the survey. Primarily, the number of total respondents is likely to have been compromised by the Cambridge Analytica data scandal, which broke in March 2018. This scandal involved the release of user data from more than 87 million Facebook users to a third party company (36). A number of comments left in Facebook groups in which this survey was promoted suggest concern, even anger, that data harvesting was occurring, despite the fact that the survey link went to Survey Monkey and contact details for the University's Ethics Committee were supplied. This raises questions around general online literacy. Conversely, it is likely that April 2018 being National Stress Awareness Month positively affected the number of responses received and interest in the research.

Like much survey research, this project utilised a convenience sample, therefore those most interested in crochet were more likely to take part, potentially influencing the generalisability of the results. We also did not distinguish between people who solely crochet and those who both crochet and knit. Like all surveys, respondents were required to answer questions that may have led to social desirability bias. Further, the survey tool was only available in English, preventing people who did not read English from taking part.

There were a number of areas in which the survey did not elicit sufficient detail, this includes the fact that there are many different forms of crochet e.g. thread crochet (lace crochet), free-form crochet and Tunisian crochet and it is possible that the different forms of crochet have a different impact. Further, we did not tease out differences in impact between creators (those following a pre-existing pattern) and designers (those creating the patterns). Finally, many people reported being crocheting sporadically. This seemed to be influenced by the time of the year, with many respondents reporting crocheting in winter. This variability needs to be investigated further through qualitative research, which would allow in-depth exploration of the issue, in order to ensure that future interventions are successful.

Conclusions

We have shown for the first time that many people believe that crochet provides positive benefits for their personal wellbeing. Crochet is a relatively low cost, portable activity that is easily learnt and seems to convey all of the positive benefits provided by knitting. This study highlights the need for increased multi-disciplinary research across arts, medicine and health, and in particular the need to explore the impact of crafts that were previously seen as domestic work.

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Ethics approval and consent to participate

The survey protocol was approved by the University of Wollongong and the Illawarra Shoalhaven Local Health District (ISLHD) Human Research Ethics Committee (HREC 2018/067). The survey was anonymous and participants were informed of the study aims at the start.

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Competing interests

The authors declare that they have no competing interests.

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