

From Doing Good to Feeling Good:
The Health Benefits of Prosocial Behavior

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AURA Short Report

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In helping others, we shall help ourselves, for whatever good we give out completes the circle and comes back to us” - Flora Edwards

Research Project:

Can everyday economic decisions, such as spending money on other people, help older adults live longer and more salubrious lives? When a grandchild asks for money, a child takes out their first mortgage or a charity calls asking for a donation, older adults are faced with the opportunity to behave generously or ungenerously and both decisions may have consequences for emotional and physical well-being. In fact, research has demonstrated that those who provide help to others exhibit a reduced risk of mortality and better overall health (e.g., Brown, Nesse, Vinokur & Smith, 2003).

While prosocial behavior seems to have benefits across the lifespan, research indicates that these benefits may be particularly salient for older adults. In a recent study examining the effects of prosocial behavior on health, giving support was associated with a decreased risk of mortality for older adults, even after controlling for health status and demographic variables (Brown, Consedine & Magai, 2005). Coinciding with this research, numerous longitudinal studies have found a positive relationship between volunteering and health for aging adults (e.g., Musick & Wilson, 2003; Greenfield & Marks, 2004). In one study, participants reported how many organizations they helped and how many hours they spent volunteering and then they underwent a physical exam to assess functional health. Five years later, participants who reported providing more help to others were 44% more likely to be alive. This relationship remained even after controlling for factors such as social support, which might have provided alternative explanations for the results (Oman, Thoresen & McMahon, 1999).

Although research shows a consistent and robust relationship between prosocial behavior and well-being in older adult populations, there are problems with the existing literature. For example, most studies assess the benefits of giving using correlational designs. Consequently, these studies cannot prove the existence of a causal relationship between prosocial behavior and health. Also, while the majority of research shows that providing support to others improves health and decreases mortality for older adults, there is almost no research explaining the underlying mechanisms of these observed benefits. Thus, in order to study generosity in an experimental context Dr. Dunn has developed a

paradigm that tests the short-term benefits of helping others. Specifically, in previous research, Dr. Dunn has tested the benefits of prosocial behavior using experimental studies of prosocial spending (spending money on others). In doing so, Dr. Dunn and her colleagues have shown that students randomly assigned to spend small windfalls of \$5 or \$20 on others are happier at the end of the day than students assigned to spend this money on themselves (Dunn, Aknin & Norton, 2008). In a subsequent study, Dr. Dunn found that participants who gave more money to others in an economic game had lower salivary cortisol levels, a hormone implicated in the stress response, compared to participants who gave less money to others (Dunn, Ashton-James, Hanson & Aknin, 2010). This line of research provides preliminary evidence that prosocial behavior, in the form of spending money on others, leads to psychological and physiological benefits for the actor. Building on Dr. Dunn's past work, the current study aims to illuminate the causal pathways by which helping behavior (giving money to others) gets “under the skin” to improve health for community dwelling older adults.

To provide an experimental test of the relationship between prosocial spending and emotional and physical well-being, we are recruiting adults aged 65 and older to participate in a six-week study. For three consecutive weeks of the study, participants are given a payment of \$40 to spend each week. Participants are randomly assigned to spend this payment either on themselves or on others for the duration of the study. In addition to measuring emotional well-being, we are also measuring subjective and objective measures of health including salivary cortisol, blood pressure and sleep quality. To collect this information, participants complete three laboratory visits before, during and after they spend their study payments. During these visits, subjective sleep quality, BMI, waist-to-hip ratio and blood pressure are assessed. Salivary cortisol is also measured each week. Additionally, participants are asked to wear an Actiwatch, a wrist-watch like device that measures sleep, to capture changes in objective sleep quality. Finally, participants receive a phone call each week including after they have spent each study payment. The purpose of this phone call is to measure changes in subjective well-being and to collect information about how participants have spent their payment. This call also serves

as a compliance check, allowing us to confirm that participants have followed spending instructions.

Value of Proposed Research

This study extends past research conducted by Dr. Dunn demonstrating that prosocial spending increases emotional well-being (Dunn, Aknin & Norton, 2010). By expanding this research to include measures of physical health, this work will allow Dr. Dunn and her research team to develop a model of how prosocial behavior influences psychological and biological processes. By measuring emotional well-being and biological markers of health, we will be able to determine if participants assigned to the prosocial spending condition exhibit greater subjective well-being, improved sleep quality, as well as lowered salivary cortisol levels and blood pressure as a result of spending money on others. Furthermore, this research will help us to identify the causal pathways by which generous behavior shapes health, such as through exploring the underlying emotional mechanisms. Finally, this research may also provide practical advice for Canadian elderly about how to best spend their money to bolster overall health. We are currently half way through data collection and plan to finish by April 2012.

Research Experience

Before receiving an AURA Award, I worked with Dr. Dunn on the study as a Project Coordinator and an Honours Psychology student. As such, I have been involved in every aspect of data collection – from creating the first set of questionnaires and running the first participants during pilot testing, to presenting preliminary findings at two undergraduate conferences.

Project Coordinator: I began work on the project in May 2010, where I assisted creating study materials, ran participant visits, and hired all necessary research assistants. I also managed this team of six student volunteers and provided them with training in the complex methods and technical aspects of the study, including cortisol procedures, Actiwatch programming and blood pressure measurements.

Honours Student: As an Honours Psychology student, I completed my third year thesis using preliminary data from the study. I analyzed sleep and questionnaire data from the first 20 subjects and completed regression and mediational analysis. Eventually, I compiled a poster and presented the

preliminary findings at both UBC and Kwantlen's Undergraduate Psychology Conferences.

AURA Award Recipient: From June – August 2011 I worked on this project as an AURA award recipient. In this role, which I took on after my Honours position ended, I facilitated the project's transition into the final stages of data collection. As such, I helped double the number of participants run during each six-week study period. Additionally, I helped one of the graduate students prepare an SPSS data file for future use and establish an online data collection platform for the phone call portions of the study. Furthermore, I continued to conduct lab visits and phone calls with participants. I also assisted Dr. Dunn with hiring and training two paid undergraduate study coordinators. In sum, by managing a team of undergraduates and by training the study coordinators, receiving an AURA award allowed me to continue to mentor and involve numerous peers in the research process.

Learning Outcomes

As result of receiving an AURA award, I have had the privilege of seeing this research grow from an idea in a grant proposal into a nearly completed project. I have also had the chance to watch myself grow in the process, gaining leadership skills and a newfound respect for research.

One of the lessons I have learned as an AURA award recipient is the importance of teamwork. This summer, Dr. Dunn, her collaborators and I worked hard to refine the study in order to speed up data collection. As such, I led and participated in numerous meetings between the new undergraduate project coordinators, graduate students, Dr. Dunn and a team of collaborators – including a gerontologist and a cortisol expert. We worked together to problem solve issues and as Dr. Dunn felt that I had the greatest overall understanding of the project, I was asked to be a part of each of these meetings and to integrate and implement information passed on to us by our collaborators. In turn, working in this dynamic team environment illustrated to me the importance of inviting and listening to diverse opinions when developing research. It also provided me with the opportunity to question and solidify my own knowledge of the study and to become an “expert” in the study's detailed procedures.

Additionally, this project has shown me the responsibility that comes with conducting research.

During lab visits I was often put in a position of helping participants make important health related decisions. In one situation, a participant came into the lab for her first visit. During this visit, her blood pressure readings were dangerously elevated. As a result, I gave her explicit instructions to see her physician. When I called her later that evening to follow up, I found out that she had not yet seen her doctor. Again, I stressed the importance of talking to her doctor about her elevated blood pressure. The next day, she called to tell me that she had seen her physician and was now taking medication. She thanked me for my persistence, which I now understand is essential when conducting research.

Finally, meeting each one of our older adult participants and getting to know them personally during lab visits has also given me a new perspective about what it means to conduct purposeful research. In our study, half of the participants are given instructions to spend their study payments on others, which has resulted in inspired purchases and inspiring stories. For example, B.F., the first participant in our study, was a war veteran. He beamed from ear to ear after telling me he had donated his study payment to a school built in honour of his friend, whom he had served with in the Vietnam War. Another participant, N.W., also smiled after finding out that she was going to spend the payments on others. As her smile faded and she wiped a tear from her cheek, she told me that she was going to donate these payments to a charity that had helped her granddaughter survive anorexia. Regardless of any findings, this study has benefited the lives of those who participated. As such, this study has shown me the potential of research to make meaningful contributions at both an individual and a societal level.

Overall, while working as an AURA award recipient, I have learned valuable skills, including leadership and time management. Most importantly, I have gained a new belief in my abilities and the confidence to pursue a future career in research. Today, as I am working on my first publication alongside Dr. Dunn, I feel unbelievably grateful to have had this experience and now have the chance to test my newly developed team management and collaboration skills in a professional context. In conclusion, this opportunity has provided me with abilities and experiences that will assist me as a student, and with memories that will serve and inspire me for the rest of my life.

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