June 15, 2014

Julie L. Ozanne
Chairperson, ACR Advisory Committee on Transformative Consumer Research

Dear Julie and the TCR Research Grant Committee,

Thank you for your consideration of this TCR grant proposal for our research entitled “The Effects of Consumer Vulnerability on Service Evaluations and Well-being Outcomes,” a research collaboration between transformative consumer researchers at Arizona State University (ASU) and the Mayo Clinic. This TCR grant proposal covers the second phase of a three phase project to better understand how consumer vulnerability shapes consumer well-being and service evaluations in the critical service domain of health care. We add to the consumer literature on vulnerability by considering both internally and externally derived dimensions of vulnerability within one study. We explore consumer vulnerability as an independent variable to identify how three dimensions of vulnerability—contextual (situational) vulnerability, health status vulnerability, and perceived experience vulnerability—differentially affect consumer well-being and service evaluations. Our ultimate goal is to identify conceptually based service interventions that can help reduce consumer vulnerability and improve consumer well-being.

In Phase I (completed), results found that dimensions of consumer vulnerability (contextual, health status, and patient experience vulnerability) differentially affect patient satisfaction, recommendations, complaints, and well-being outcomes. Using patient satisfaction data (N = 1688 patients completed all measures), results found that inpatients (vs. outpatients) reported better outcomes of care and fewer complaints about care. Results also found that the lower a patient’s perception about their overall level of health, the lower their perception of the outcomes of their care and the more complaints they make. This finding has real implications for health policy and value-based purchasing, as providers, departments, and health care organizations that consistently see more critical patients are likely to have poorer evaluations than those who see healthier or more routine patients. Value-based purchasing is conducted by Medicare/Medicaid in that a portion of their reimbursement to health care organization is now based on patient satisfaction and experience measures – pay for performance. Additionally, these scores are made public. There are many positive outcomes to this pay structure based on consumer satisfaction and experience; however it may disadvantage organizations that see more vulnerable consumers. Finally, regarding patient experience vulnerability, patient perceptions about the provider’s empathy and the level of information received were major drivers of value and quality perceptions, recommendations, complaints, and well-being.

In Phase II, we aim to build on our findings from Phase I to better understand the role of information and provider empathy during the service experience in promoting consumer well-being. To do so, we propose a video-based health care scenario experiment that will implement separate information and empathy interventions. Participants will be randomly assigned to view one of eight videos of a health-care interaction (4 Intervention type: information control, information intervention, empathy control, empathy intervention x 2 Appointment type: critical vs. routine). Key dependent measures will mirror Phase I and include satisfaction with the provider, likelihood to recommend, complaints, perceptions about the service experience, and beliefs about how much the patient has been helped. We will conduct this online experiment to answer some fundamental questions about the roles of information and provider empathy in reducing consumer vulnerability: How much information is desired by patients? Is more information always a good thing (e.g., a terminal diagnosis)? And in which service interactions are information and empathy most important?
In the balance of this proposal, we outline our research questions, research framework, and proposed methodology. We then highlight the intended TCR contributions of this research and provide a research timetable and an expected research budget. Finally, we discuss Phase III of the project for which we will see additional funding in the form of a larger MSI or health based grant. Taken together, this research will inform theory and practice via the development and testing of service interventions to reduce consumer vulnerability and improve consumer well-being.

Thank you again for your consideration of this important project for a 2014 TCR grant.

Best,

Laurel Anderson, Ph.D.
Principal Investigator
Associate Professor, Marketing
W.P. Carey School of Business
Arizona State University

Contact Information:
P.O. Box 874106
Tempe, Arizona 85287
Laurel.Anderson@asu.edu
602-617-2572

Eligibility notes:
- The principal investigator (Laurel Anderson) is a current member of the Association for Consumer Research.
- Phase 1 of this research project has been approved and deemed exempt by the Arizona State University institutional review board. Phase 2 will also be approved and deemed exempt as it is anonymous and randomly assigned.
- The PI gladly agrees to provide guidance to future TCR proposal writers and agrees to share this TCR grant proposal upon request.
- If funded, the PI agrees to acknowledge funding support from ACR and the Sheth Foundation in all future research presentations and publications including the data collected in this proposal.
- The research team plans to present this research at future conferences, such as ACR or Marketing & Public Policy.
THE EFFECTS OF CONSUMER VULNERABILITY ON SERVICE EVALUATIONS AND WELL-BEING OUTCOMES

Laurel Anderson, a Daniele Mathras, a Richard J. Caselli, M.D., b Denise M. Kennedy, b and John P. Fasolino, M.D. b

a Arizona State University, b Mayo Clinic Arizona

Principal Investigator (PI):
Laurel Anderson, Ph.D.
Associate Professor, Marketing Research Faculty, Center for Services Leadership W.P. Carey School of Business Arizona State University P.O. Box 874106 Tempe, AZ 85287-4106 Office: 480.965.3281| Summer: 602-617-2572 Laurel.Anderson@asu.edu

Biographical note:
Laurie Anderson’s research centers on Transformative Service Research (TSR) and consumer well-being, especially related to vulnerability, culture and health. Recent projects include alternative views of services and TSR, value-laden services, diabetes action research, space as public good, going between cultural worlds, self-socialization of teens, health organizations and consumer-centricity. She holds two health degrees and has been published in JCR, JPPM, JSR, JBR, Journal of Advertising and others. She is co-editor of a special issue of JSR focused on TSR. She has co-chaired three TCR conference tracks and is a member of the Patient Experience Committee Mayo Clinic.
TCR Problem

In this project, we explore the effects of consumer vulnerability on consumer well-being and service evaluations. We build on the extant literature in vulnerability by proposing an individual-level, multidimensional construct of consumer vulnerability (contextual, health status, and patient experience vulnerability. We conceptualize experience vulnerability as perceived empathy, level of control, level of information. Our Phase I research found significance for empathy and information). Consumer vulnerability in the health care domain is of utmost importance, as patients may experience physical and psychological pain, illness, fear of the unknown, and a perceived lack of control during the service interaction (Berry and Bendapudi 2007). Not only can consumer vulnerability in health care lead to physical and emotional harm to patients/consumers, but the lower level of consumer satisfaction scores associated with vulnerability can lead to decreases in federal reimbursements. Value-based purchasing is conducted by Medicare/Medicaid in that a portion of their reimbursement to health care organization is now based on patient satisfaction and experience measures – pay for performance. Additionally, these scores are made public. There are many positive outcomes to this pay structure based on consumer satisfaction and experience; however it may disadvantage or disincentivize organizations that service more vulnerable consumers.

Our key research question is: how does consumer vulnerability influence evaluations of the service experience, complaint behavior, and ultimately the health and well-being of the consumer? The construct of consumer vulnerability is becoming increasingly important due to changing economic conditions, evolving health complexities and disparities, health care reform, immigration patterns, and the widening educational divide. In this research, we define individual-level consumer vulnerability as the presence of internal (perceived) and external (contextual) forces that affect one’s stability and susceptibility to harm. Vulnerable populations have been covered quite extensively in the macro-marketing sense (see Journal of Macromarketing, 2005). Research on vulnerability often discusses
vulnerability as a grouping variable, with vulnerable populations characterized by their degree of physical sensitivity/competency, mental competency, and sophistication level (Morgan et al. 1995). Individual-level consumer vulnerability has been discussed in Luce and Kahn (1999) and the Health Belief Model (Becker 1974, Rosenstock 1974), where vulnerability is operationalized as one’s perceived susceptibility to contracting a disease in the future. A new diagnosis or false-positive test results can lead to a loss in one’s sense of control and order (Luce and Kahn 1999; Pavia and Mason 2004). In the past decade, research by Baker, Gentry, and Rittenburg (2005) and Baker and Mason (2011) consider vulnerability as a multi-faceted concept. Baker, Gentry, and Rittenburg (2005, p. 134) state that “vulnerability arises the interaction of individual states, individual characteristics, and external conditions within a context where consumption goals may be hindered and the experience affects personal and social perceptions of self.” Baker and Mason (2011) consider four dimensions of vulnerability: demographic (e.g., vulnerable populations), environmental (e.g., causal agents), situational (e.g., dynamic state), and community and context (e.g., community-defined dynamic state).

In this research, we add to this literature in vulnerability by empirically testing a multi-dimensional framework of consumer vulnerability within critical service interactions in the health care domain (see Figure 1). We hypothesize that higher levels of consumer vulnerability will lead to lower perceptions of value, quality, outcomes of care, recommendations, and higher complaints because these patients will require higher levels of service to boost stability and reduce perceived susceptibility to harm. Our first dimension, contextual vulnerability, represents the extent to which an individual’s present situation affects their stability and susceptibility to harm (similar to situational vulnerability, Baker and Mason 2011). For example, we operationalize contextual vulnerability in the health care domain as one’s appointment type: emergency, routine, critical, exploratory; in other words, the context of one’s health care visit. The second dimension, perceived health status vulnerability is one’s perceived level of general health. Consumers at the same objective level of health may perceive their overall health status
in very different ways. It is likely that these are related, but that perceived (vs. objective) health status is what leads to instability and perceived susceptibility to harm. Finally, the third dimension, *perceived experience vulnerability* is the perceived susceptibility to harm caused by the service interaction with the provider. Patients differ based on their perceptions of provider empathy (e.g., how much the provider is listening to them, knows them well, is caring for them) and the level of information they are receiving from the service provider (e.g., diagnosis, test results, information about options, directions for care).

Considering each dimension of vulnerability is important in the health care domain because the first two dimensions (context, health status) are not controllable by the service providers, while understanding the final dimension (perceived experience vulnerability) allows for the possibility to affect change, transformation, and improvements in consumer well-being via service interventions.

**Research Framework & Methodology**

To test these dimensions of consumer vulnerability on key satisfaction and consumer well-being outcomes, we have planned a three-phase research collaboration between ASU and the Mayo Clinic (See Figure 1). In Phase I (completed), results found that dimensions of consumer vulnerability (contextual, health status, and perceived experience vulnerability) differentially affect patient satisfaction, recommendations, complaints, and well-being outcomes. Using patient satisfaction data (N = 1688 patients completed all measures), results for contextual vulnerability found that inpatients (vs. outpatients) reported better outcomes of care and fewer complaints about care. Results about health status vulnerability found that as a patient’s perception about their overall level of health decreases, patients report lower outcomes of care and make more complaints. Together, these findings have real implications for health policy and value-based purchasing, as providers, departments, and health care organizations that consistently see more critical patients are likely to receive lower scores than those who see healthier or more routine patients.

Finally, regarding the service interaction, patient perceptions about the provider’s empathy and the level of
information received were major drivers of value and quality perceptions, recommendations, complaints, and well-being, in the hypothesized direction.

In Phase II (for which we seek funding through a TCR grant), we aim to build on our findings from Phase I to better understand the role of information and provider empathy during the service experience in promoting consumer well-being. To do so, we propose a video-based health care scenario experiment that will test the effects of information and empathy in service interventions on reducing vulnerability and supporting well-being. To understand how information and provider empathy interventions affect the relationship between vulnerability and key outcomes, we will include process measures regarding levels of comfort, stability, stress, and risk perceptions. Participants will be randomly assigned to view one of eight videos of a health-care interaction (4 Intervention type: information control, information intervention, empathy control, empathy intervention x 2 Appointment type: critical vs. routine). Key dependent measures will mirror Phase I and include satisfaction with the provider, likelihood to recommend, complaints, perceptions about the service experience, and beliefs about how much the patient has been helped. We also seek to learn more about patient expectations as related to criticality of care. We will conduct this online experiment with an adult population to answer some fundamental questions about the roles of information and provider empathy in reducing consumer vulnerability: How much information is desired by patients? Is more information always a good thing (e.g., a terminal diagnosis)? And in which service interactions are information and empathy most important? The ultimate goal of this research is to empirically test the multiple dimensions of consumer vulnerability and to develop provider empathy and information interventions that will reduce consumer vulnerability and boost consumer well-being. We discuss Phase III of this research project in the “Future Directions” section.
FIGURE 1: Phases of Vulnerability Research

**Contributions to TCR**

This research exemplifies the overall mission of TCR, as illuminated by four key elements. First, we consider how multiple dimensions of consumer vulnerability affect consumer behaviors, evaluations, and importantly, health outcomes. In fact, Baker and Mason (2011) make a call for more TCR research in the area of consumer vulnerability. Second, we conduct this research in the health care domain, in which consumer well-being is of utmost importance because patients experience physical and psychological pain, experience fear of the unknown and a lack of control (Berry and Bendapudi 2007). Third, through this research we seek to identify conceptually based service interventions (i.e., fostering empathy, providing information) that may reduce consumer vulnerability and improve the customer experience. And fourth, this research is a true collaboration between transformative consumer researchers at ASU and service providers (Medical Director of Service Excellence, Director of Provider Communication Training) at the Mayo Clinic—with clinicians participating in the research process. Results have been and will continue to be disseminated to practitioners (via Patient Experience...
Committee, conference presentations, publications) to inform and improve practice, with the ultimate goals of reducing consumer vulnerability and supporting consumer well-being.

**Research Timetable**

Below you will find our planned timetable for Phase II of this project (the health care scenario, video-based experiments), with the goal of moving into Phase III of this project in Spring 2015.

<table>
<thead>
<tr>
<th>Major Milestones</th>
<th>Description</th>
<th>Expected Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop scripts for videos</td>
<td>Develop scripts with Mayo Clinic’s Provider Communication training director; route for review and approvals</td>
<td>September 15, 2014</td>
</tr>
<tr>
<td>Hire actor for provider role</td>
<td>Hire actor for provider part, provide actor with scripts and direction for each video</td>
<td>September 20, 2014</td>
</tr>
<tr>
<td>Film video vignettes</td>
<td>8 hours filming, plus time for video editing</td>
<td>September 30, 2014</td>
</tr>
<tr>
<td>Develop survey instrument</td>
<td>Design survey instrument in Qualtrics, route to co-authors for review and approvals; run pre-tests</td>
<td>October 15, 2014</td>
</tr>
<tr>
<td>Collect data</td>
<td>Post survey to Amazon’s Mechanical Turk</td>
<td>November 1, 2014</td>
</tr>
<tr>
<td>Analyze data</td>
<td>Analyze data and prepare results for academic paper</td>
<td>November 15, 2014</td>
</tr>
<tr>
<td>Disseminate results</td>
<td>Prepare abstracts and presentations for academic conference submissions and to present results to Mayo Clinic</td>
<td>November 30, 2014</td>
</tr>
<tr>
<td>Prepare grant proposals for physiology study (Phase III)</td>
<td>With patient satisfaction survey and experimental studies completed, plan physiology study and submit for larger grant (MSI, other health grants)</td>
<td>Spring 2015</td>
</tr>
</tbody>
</table>

**Research Budget**

Below you will find our estimated budget for Phase II of this project (the health care scenario, video-based experiments), for which we seek support with this TCR grant proposal.

<table>
<thead>
<tr>
<th>Budgetary Item</th>
<th>Item Description</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Production – Videographer</td>
<td>Up to 8 hours filming on location plus 12 hours editing ($50/hour)</td>
<td>$1000.00</td>
</tr>
<tr>
<td>Video Production – Actor to portray doctor</td>
<td>Up to 8 hours filming on location ($25/hour)</td>
<td>$200.00</td>
</tr>
<tr>
<td>Online Surveys – Amazon Mechanical Turk</td>
<td>8 unique video conditions x 50 participants per cell x $1.00 per participant (plus $.10 Amazon Fee)</td>
<td>$440.00</td>
</tr>
</tbody>
</table>

**TOTAL ESTIMATED COSTS** $1640.00
Future Research & Funding Sources

As previously indicated, we plan to use Phase I and Phase II to inform and support Phase III. In Phase III, we will continue to explore the effects of consumer vulnerability on consumer well-being and service evaluations. However, in Phase III, actual dyadic patient and provider health care interactions will be our unit of analysis. Together with the Director of Provider Communication Training, we will develop empathy and information interventions. We will recruit providers to participate and patients of those providers to participate. Providers will be randomly assigned to control or intervention conditions (in intervention conditions, they will receive training on empathy or information provision). While Phase I and II use self-report measures, Phase III will also utilize physiological measures (e.g., skin conductance, heart rate) and audio recorded interactions to understand the roles of stress, vulnerability, and emotional contagion during service interactions. Specifically, we are interested to learn whether the empathy and information interventions can reduce both patient and provider vulnerability during the service experience and lead to improvements in consumer health and well-being. Our research team has tested elements of the physiological data collection process for this study. However, before we can be green-lighted for Phase III, we and Mayo Clinic would like to run the Phase II video-based intervention study to provide some proof of concept and to road test the interventions. To cover the physiology equipment needs (purchased, but may need to lease for this project), training course development and provider training, the need for an on-site technician to conduct this study and other costs, we plan to apply for additional larger research grants from Marketing Science Institute (msi.org), the Health Resources & Services Administration, joint ASU/ Mayo grants, and/or the National Institutes of Health.

Final Comments

Overall, we seek funding for the second phase of our three-phase research project. We introduce a theoretical and empirically-tested model of individual-level consumer vulnerability to understand its effect on service evaluations and consumer well-being. Our research provides new insights to
researchers interested in consumer vulnerability, as well as to service organizations and health policy makers for understanding the role of consumer vulnerability (contextual, health status, and perceived experience vulnerability) in shaping service experience and quality, satisfaction ratings, and consumer well-being. Our team of highly-qualified, committed TCR researchers and health care providers allows true collaboration in the research process and dissemination of findings. We contribute practical knowledge by testing conceptually based service interventions (i.e., information, empathy) to deliver services in a manner that decreases consumer vulnerability and improves consumer well-being outcomes. In fact, our findings are likely to impact Provider Communication Training programs. We plan future research to test the interventions in a clinical setting (Phase III) to measure their actual effects on consumer and provider well-being.

References


