

Conceptual Investigation of Values in Pregnancy Healthcare Journey Research

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HCI research has focused on investigating ways that technology can be used to address the needs of users. Less attention has been paid to investigating ways that user values are considered in the design of health technology. We identified values from the last 10 years of HCI pregnancy related research (N=43 papers) and used the Schwartz Human Value Model to organize the local expression of those values. Our preliminary findings depict the phases of the pregnancy healthcare journey where values are present or absent, uncover the values that are prioritized in pregnancy research, and identify gaps where values may be absent in the HCI literature.

Additional Key Words and Phrases: Pregnancy Journey, Values, Values-centered Design

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1 INTRODUCTION

Humans are not value-neutral. Our values affect how we see the world, interact with people, and use technology. Individuals may adopt a technology to help fulfill a need, and their engagement with that technology may conform or clash with their values. An individual's values influence behaviors such as decisions to continue to use a tool or to find other means of fulfilling needs in a way that aligns with their values. Research by Friedman et al [16], Le Dantec et al [24] Bardzell [5] and Smith [39] all highlight the importance of considering values in HCI research. We adopted Friedman's VSD for the conceptual investigation of values [16], Le Dantec's middle-ground recommendation for local expression of values [24] and Schwartz's Theory of Basic Human Values as a foundation for our investigation [37, 38]. We conducted a conceptual investigation of HCI research to identify human values in the pregnancy healthcare journey literature. present our preliminary categorization of values across the phases of the pregnancy healthcare journey. To achieve a truly human-centered design, we must consider both human needs and values.

Schwartz Values: Schwartz defines values as "a form of conscious goals and responses to three requirements with which all individuals and societies must cope—(1) needs of individuals as biological (2) requirement for smooth functioning and survival of groups and,(3)requisites of coordinated social interaction" [38]. Schwartz's initial model had 10 core values which were later refined into 19 values for granularity [38]. Figure 1 depicts value congruence and conflicts (where pursuing one value will conflict with another). The closer the values in the figure the more similar their underlying motivations. The farther apart the values are the more conflicting or antagonistic the underlying motivations.

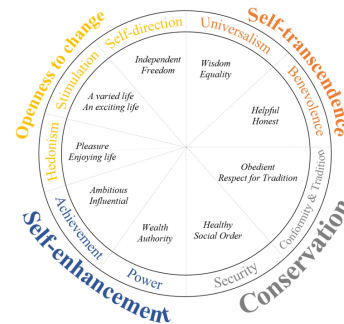


Fig. 1. Schwartz Model [26]

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Schwartz Model		Pregnancy Journey				
Original	Modified	Fertility	Menstruation	Pregnancy	Lactation	Postpartum
Self Direction	Individuality	[13, 22]	[8, 14, 45, 46]	[42]		
	Autonomy	[12, 36]		[3]		[23]
Stimulation	Stimulation					
Hedonism	Hedonism					
Achievement	Achievement			[7, 20, 31, 49]		[18, 19]
Power	Resources					
	Dominance		[15]			
	Face-saving		[47]	[1]		[17]
Security	Societal					
	Personal			[1, 2]		
Conformity	Rules					
	Interpersonal					
Tradition	Maintenance			[6, 30, 35]	[50]	
	Humility					
Benevolence	Trustworthiness	[13]		[20]	[4]	
	Caring			[1, 34]	[4, 43, 44, 48]	[17]
Universalism	Concern	[28]	[25, 27, 41]	[2, 9, 20, 32, 33]		
	Nature		[27, 29]			
	Tolerance	[28]	[11, 46]	[40]	[10, 21]	

Table 1. The HCI literature at different pregnancy healthcare journey phases categorized by the Schwartz values present in the papers

2 METHODS

We categorized a set of 43 HCI papers from the ACM digital library published 2012-2022 which focused on one of the 5 phases of the pregnancy healthcare journey– Fertility, Menstruation, Pregnancy, Lactation, and Postpartum. We identified the local expression of values and mapped them to the Schwartz value model. To identify the local expressions of values, we searched for values implicated in the paper discussions, values identified by participants of the study, and values specifically designed into the technologies across the various phases of the pregnancy healthcare journey.

3 PRELIMINARY FINDINGS

Table 1 shows the sampled papers organized by Schwartz’s human values. The majority of the literature in our sample focuses on values for *Benevolence* and *Universalism* while the values of *Stimulation*, *Hedonism* and *Conformity* were not noted in the pregnancy literature review–though these values exist in a broader scope of sexual and intimate health research. Values for *Self-Direction*, *Power*, *security*, *achievement* and *tradition* were present in different phases of pregnancy healthcare journey literature. We hope that this exploration will serve as a starter for discussions of considering values (in addition to needs), in the pregnancy healthcare journey. To be truly human-centered, we, as researchers, must consider both human needs and values when designing health technologies.

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