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MATERNAL IDENTITY AND MATERNAL ROLE ATTAINMENT – DETERMINANTS OF MOTHERS' PARTICIPATION IN MATERNAL VIRTUAL COMMUNITIES

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MATERNAL IDENTITY AND MATERNAL ROLE ATTAINMENT – DETERMINANTS OF MOTHERS' PARTICIPATION IN MATERNAL VIRTUAL COMMUNITIES

Research in Progress

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Abstract

The importance of local communities for mothers has been well documented in the social literature. However local communities have changed significantly in the last decades due to a number of cultural factors, including women's increased participation in paid workforce and increasing geographical distance between family members. As easily accessible, location independent substitutes of local communities, maternal virtual communities (VC) have evoked an increased interest in the recent years. A considerable amount of literature has been published on the factors affecting members' participation behaviour in various types of VCs. However only limited research has focused on their specific form targeting mothers and future mothers as main audience. Subsequently, there is only limited understanding of what motivates especially mothers to actively participate in maternal social networks. Hence to fill this research gap, the primary goal of our planned research is to provide some understanding of the crucial factors that determine mothers' participation behaviours in maternal VC environments. Integrating the Technology Acceptance Model and the Updated Virtual Community Model extended by two new social factors Maternal Identity and Maternal Role Attainment we propose a research that might contribute to the newly evolving research stream on maternal motivation to participate in VCs.

Keywords: Virtual Communities, Technology Acceptance, Maternal Identity, Maternal Role Attainment

1 Introduction

What drives mothers to participate in maternal virtual communities? Is it their longing for information from others, their desire for social exchange with others aside their everyday environment, or their desire to share their knowledge with others? Whatever the answers to these questions are, the important role of *others* in each of them is indescribable. 'Mothers need others' - this inferred truism was presented by the evolutionary socio-biologist Hrdy (2011) and it sums up why the need to be part of a maternal network represents an indispensable part in every motherhood.

However, the accessibility of local communities, previously offering such support for local mothers, has changed significantly in the last several decades. This change was initiated by several cultural factors, including women's increased participation in the paid workforce, increasing rates of single parenthood (Gaudet et al., 2011) and increased geographical distance between family members (O'Connor & Madge, 2004). Changes in local community structures have resulted in increased social isolation for mothers raising young children accompanied by lack of vital social support, particularly

from other mothers (Valtchanov et al., 2014). In order to respond to these changes maternal virtual communities (MVC) became popular. In their definition VCs represent “mediated social spaces in the digital environment that allow groups to form and be sustained primarily through on-going communication processes” (Bagozzi and Dholakia, 2002, p. 3). In the case of MVC, such groups are represented by women, usually in the prenatal and postnatal period. The main advantage of MVCs relies on the fact, that they are not tied to place or time (van Dijk and J.A.G.M., 1997) and are location-independent (Loke, 2006).

Although a proper amount of research on participation in VCs has been conducted in the past years (Dholakia et al., 2004; Bagozzi and Dholakia, 2002; Hsu et al., 2007; Sun et al., 2012) only little is known about the reasons why especially mothers, a specific group of online users, connect in the virtual environment as well. The group of mothers is heterogeneous (e.g. Sinclair-Brown, 1982; Sutcliffe and Baki, 2009; Luster and Dubow, 1990). Besides their very personal characteristics, mothers are also heterogeneous with respect to many further factors such as their age, level of experience, number of children and according to psychological and socio psychological theories also with respect to the development of the so called Maternal Identity as well as the perception of the Attained Maternity Role (Rubin, 1984). To form a basis for their maternal behaviour and to evolve their new identities, mothers use throughout and after the pregnancy comparisons and role models within their circle of acquaintances (Rubin, 1984). The external factors such as childbirth classes, pregnant friends and relatives provide opportunities for mothers to identify and compare themselves to other pregnant woman (Sleutel, 2002). Considering the above-mentioned change in local communities we argue, that maternal VCs as new mediums convey these characteristics especially well. Findings from Valtchanov et al. (2014) posit that the dynamic possibilities of IT mediate the experience of motherhood (Valtchanov et al., 2014). A social networking site, enables women not only to combat their social isolation through the creation of an accessible and supportive online community of mothers (Valtchanov et al., 2014) but it also permits mothers to request and provide emotional support, share information, facilitate learning, or provide validation for the ‘normalcy’ of other women’s mothering experiences (Hall and Irvine, 2009).

Therefore, to fill this research gap and targeting the specific maternal group, our study is beside the common determinants of participation in VCs especially interested in these maternal characteristics as well. Hence, the following research questions were formulated:

RQ1: Which determinants impact mothers' community perception and satisfaction with maternal VCs?

RQ2: How does this impact differ with respect to the specific maternal characteristics, which comprise Maternal Identity and Maternal Role Attainment?

Consequently, in this research in progress paper we propose a research model that incorporates the main factors generated by previous research on maternal online behaviour and combine them with the Updated Virtual Community Model and Technology Acceptance Model. The model specifically considers the maternal target audience. The remainder of this paper is structured as follows: the next section presents and elaborates on our research model and hypotheses. In the subsection 2.1 we focus our analysis on the general determinants of participation in VCs and examine those through the lens of the maternal target audience. The Subsection 2.2 elaborates on the new constructs of Maternal Identity and Maternal Role Attainment. Section 3 discusses our research approach. In Section 4, the expected contributions are discussed in detail.

2 Methodological Foundations

2.1 Determinants of participation in maternal virtual communities

For the purposes of our study we decided to focus on the combination of two well established models, the Updated Virtual Community Model (Lin and Lee, 2006; Lin, 2007; Lin 2008) and the Technology

Acceptance Model (Davis, 1989) as both models provide a good basis for understanding the determinants of maternal behavior in maternal VCs.

The updated Virtual Community model is the result of an adaption of the DeLone and McLean (1992) Information System Success Model to the context of a VC (Lin, 2008). This shift required a move in focus from “information system use” to a focus of “belonging to a VC”, and a change from “net benefits” to “member loyalty” (Lin, 2008), which is considered to be a crucial determinant of a VCs success (Shen et al., 2010).

Generally seen, the success of VCs has been identified as an outcome depending on two groups of factors: social and technical. Based on the work of previous researchers (DeLone and McLean, 1992; Seddon and Kiew, 1996; Seddon, 1997) Lin and Lee (2006) proposed a research model which incorporates these social and technical factors that impact online community success (Lin and Lee, 2006). They presented a model, which comprised several dimensions. Three of these dimensions were related to the quality of the system, the quality of the presented information and to the quality of the service. Their impact on the user satisfaction and the behavioral intention (Lin and Lee, 2006) were considered as further two dimensions. The involvement of members in an online community, measured as the participation in community operations and communications with other members was considered as the dependent dimension called member loyalty (Lin and Lee, 2006). According to the research results the model shows significant appropriateness in identifying the determinants of success of online communities, demonstrating that system quality, information quality and service quality had a significant impact on member loyalty through user satisfaction and behavioral intention to use the online community (Lin and Lee, 2006).

In order to better understand the determinants of sustainability of VCs the Updated Virtual Community Model was later incorporated in the extended Technology Acceptance Model (Lin, 2007). VCs exist and play a socialization role to the same extent as “real” communities (Rheingold, 1993). They are also similar to general web-based information systems that have a significant impact on individual decision-making behavior (Romm et al., 1997). Therefore, as a well-accepted, theoretically grounded general model of user acceptance for new information technologies, which has also been used in studies on traditional information systems (e.g. Venkatesh and Morris, 2000) as well as web-based information systems (e.g. Vijayasarathy, 2004), the technology acceptance model was chosen as an appropriate model for studying the adoption and use of VCs (Lin, 2007).

Previous research and theory have confirmed that the Technology Acceptance Model is a very powerful and parsimonious model for explaining usage intentions and behavior (Davis, 1989; Davis et al., 1989). Perceived usefulness and perceived ease of use have been identified as primary determinants of system use (e.g. Chen and Tan, 2004; Shang et al., 2005). Davis (1989) defined perceived usefulness as “the degree to which a person believes that using a particular system would enhance his or her job performance” (Davis, 1989, p. 320) and perceived ease of use as “the degree to which a person believes that using a particular system would be free of effort” (Davis, 1989, p.320). However, while applying these definitions on our research, the specific context of VCs, especially in combination with the characteristics of mothers must be considered. Here, perceived usefulness indicates user belief in their ability to obtain information and services, share their experiences with others, and enhance their performance in information exchange while using the particular community (Lin, 1997).

Further in the technology acceptance model, the user's behavioral intention to use is influenced by the attitude towards usage (Lin, 2007). Whilst perceived ease of use has a direct impact on perceived usefulness, both perceived ease of use as well as perceived usefulness jointly affect attitude (Lin, 2007).

The Technology Acceptance Model defines the attitude towards usage as the degree to which a person associates and evaluates the target system and technology with her or his job (Davis, 1998). However, VCs differ from traditional information systems, as they are commonly described as integrations of groups of individuals using the Internet to maintain social relations around common interests (Ridings

et al., 2002; Flavian and Guinaliu, 2005). Although each VC is unique and has its own management strategies, they have one characteristic factor in common, namely the members' sense of belonging to the community (Tinto, 1993). Sense of belonging is defined as "an individual's sense of identification or positioning in relation to a group [...] which may yield an affective response" (Tovar & Simon, 2010, p. 200). It is treated as a crucial feature for participation in VCs (Tinto, 1993). Hence, with respect to the characteristics of VCs, sense of belonging is a more appropriate indicator of VC involvement than "attitude toward usage" (Lin, 2007).

Applying these results to the context of maternal VCs we assume, that system characteristics and the fact how users perceive the usefulness of a maternal VC as well as its ease of use might have a positive impact on their perceived "sense of belonging" as well as their satisfaction with the provided services. As the search for information was identified as one of the major drivers of maternal online behavior (see Chapter 1) we assume, that the effect in the case of information quality might be even stronger than for the other two factors describing the system characteristics. Therefore we formulate the following general hypotheses:

H1: System Quality (1), Information Quality (2) and Service Quality(3) have a positive impact on mother's satisfaction with the VC(a) as well as their sense of belonging to the community (b).

H2: The Impact of Information Quality on Mother Satisfaction is stronger than the impact of System Quality and Service Quality.

We further hypothesize, that besides the "perceived sense of belonging" the sense of community has a significant impact on mother's intention to participate in the VCs as well. Sense of community is generally defined as "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan & Chavis, 1986, p. 9). The very fine difference between sense of community and sense of belonging relies on the assumption that mothers can expect and rely on support from other members which is not necessary obliged by the other as one can belong to a group that is not necessarily behaving as community. Therefore, the following hypothesis was formulated:

H3: System Quality(1), Information Quality(2) and Service Quality(3) as well as Perceived Ease of Use(4) and Perceived Usefulness(5) have a positive impact on sense of community.

At its core, trust can be defined as the willingness of one party to be vulnerable to the actions of another party, and it is a function of access to information either through direct or indirect interactions (Mayer et al., 1995; Shapiro, 1987). In the context of a VC trust determines if a member will maintain the relationship with the VC in the future or not. It is especially crucial when the absence of workable rules requires others to behave in a socially acceptable manner (Lin, 2008). This is considered when the collective trust is examined, meaning the degree to which an individual feels that members of a group are: a) receptive to expression of personal thoughts and concerns (e.g., emotional trust); and b) dependable and reliable (e.g., cognitive trust) (Rocco et al. 2000). The lack of trust among members was identified as a major barrier in establishing VCs (Lin, 2008). In addition, in the context of maternal virtual behavior, trust plays a crucial role in accepting the received information. Hence, in the context of maternal VCs we formulate the following general hypothesis:

H4: Trust in the maternal VC has a positive impact on mother's satisfaction with the VC.

The next factor that we postulate that has an impact on mother's participation in maternal online communities is the perceived social usefulness of the VC. Social usefulness refers to the benefits related to the social standing one obtains in being a part of the VC, such as recognition and social approval from other VC members (Gupta and Kim, 2007). In the context of maternal VCs we expect that mothers who enjoyed these benefits e.g. in form of positive comments related to their past contributions, intend to contribute in the future again. Moreover, we assume that this recognition will strengthen the mothers' satisfaction with the particular maternal community. Hence, the following general hypothesis is formulated:

H5: Perceived Social Usefulness has a positive impact on mother's satisfaction with the VC

2.2 Impact of Maternal Identity and Maternal Role Attainment

Next to the factors described in the previous chapter we expect, that two new social factors, Maternal Identity and Maternal Role Attainment deserve an increased research interest in the field of maternal VC success estimation.

The concepts of maternal identity and maternal role attainment were introduced into nursing science literature over 30 years ago by Rubin (1984) to describe and explain psychological processes that occur during pregnancy and the postpartum period (Walker et al., 1985). Maternal role attainment was initially presented by Rubin (1967a, 1967b) as beginning prenatally and culminating with formation of a maternal identity during the infant's first year (Walker et al., 1985). Later, Mercer (1981) described the stages of maternal role attainment and reiterated the position that maternal identity marks the endpoint of maternal role attainment (Walker et al., 1985).

According to Rubin (1984), the core of maternal identity resides in the concepts "I" (mother) and "You" (infant), as these influence each other (Walker et al., 1985). Maternal identity is constructed during pregnancy, by way of an "idealized image of self as mother of this child" (Rubin, 1984, p.39). During the postpartum period maternal identity entails "a shift in focus from third-person models of a child or of an expert mothering person to this child and to self in relation to this child" (Rubin, 1984, p. 50). With the process of knowing their infants and knowing what to expect of their infants after birth, maternal identity is enhanced and consolidated (Walker et al., 1985). More interesting, there is a movement from unity with the infant after birth to a differentiation of the maternal self from that of the infant (Walker et al., 1985). Therefore, maternal identity can be described as the personal and very specific relationship between mother and her child (Walker et al., 1985). Rubin further claims that as identity is specific, it must be achieved individually with each child a woman bears (Rubin, 1984, p. 38). At the end of the postpartum period there is "an operational location of "you" the "I" in relation to "you" and the "you" in relation to "me"" (Rubin, 1984, p. 50). Following, the formation of maternal identity and the attachment to the infant are "interdependent coordinated of the same process" (Rubin, 1984, p. 51). Maternal identity entails constructing a reciprocal relationship in which mothers establish both, linkages and boundaries between themselves and their infants (Walker et al., 1985).

Beside the cognitive component of maternal identity, that is expressed in a definiteness about how, when, what, and why the mother carries out her care of her child (Rubin, 1984, p. 50), there is also an affective component expressed in empathy, i.e. in mothers positive affection for the infant and for herself as mother of this infant (Rubin, 1984, p.65 and p.9).

In order to form a basis for her behavior and evolving maternal identity, a mother uses throughout a pregnancy and after the pregnancy comparisons and role models within her circle of acquaintances (Rubin, 1984). The external factors such as childbirth classes, pregnant friends and relatives provide opportunities for mothers to identify and compare themselves to other pregnant woman (Sleutel, 2002). However we assume, that due to the lack of local maternal groups, maternal VCs provide new opportunities for future mothers as well as fresh mothers to receive necessary inputs and so form their maternal identities.

Social relationships offer feedback that is self-confirmatory to verify individual's identity and self-conception, a process called identity support according to Swann and Brown (1990) (Swann and Brown, 1990). Sleutel (2002) recognises that the identity support process is very similar to the maternal role attainment process, in which the mother's family and friends play a key role (Rubin, 1967a; Rubin, 1967b) (Sleutel, 2002). Throughout pregnancy, the mother assesses and explores her relationship through interpersonal exchanges that provide data about childbirth and motherhood (Sleutel, 2002). However, maternal role attainment is mediated by psychological understandings and interpretations of the role of mother (Rubin, 1984, p.50). Interestingly, Mercer (1981) proposed that a new mother progresses through several stages in role attainment; included among these are rigidly adhering the rules and directives of others and so evolving her own interpretation of the maternal role (Walker et al., 1985). With the development of a mother's own style of role performance

accompanying self-confidence is increasing (Walker et al., 1985). Therefore we assume, that mothers and/or future mothers with a high level of maternal identity and an properly attained maternal role can identify better with the role "being a mother" and so show stronger sense of belonging in a VC explicitly constructed for the target group of mothers and that their intention to contribute in such a VC is positively affected as well. Hence, the following hypothesis was formulated:

H6: High level of maternal identity as well as high level of maternal role attainment have a positive impact on mothers' sense of belonging to the VC and the intention to contribute to this VC

Finally, we propose our conceptual model as illustrated in the following Figure 1:

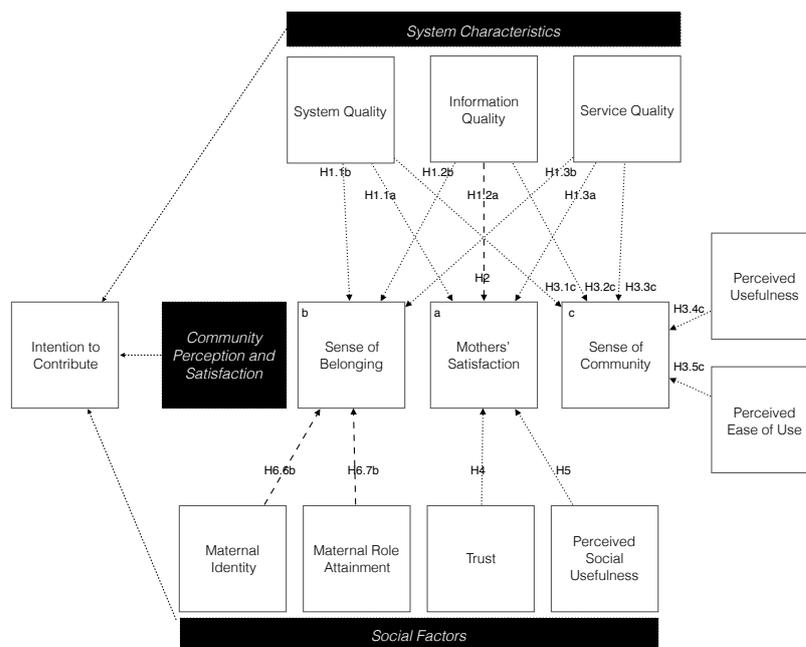


Figure 1: The proposed Research Model

3 Research Approach

To empirically validate our model we plan to construct a standardized questionnaire (Table 1) both in paper form and online in order to prevent a preliminary selection of online audience. Due to availability of current instruments measuring the ascribed variables we rejected qualitative study. The paper form questionnaire will be distributed through physical maternal and prenatal communities within the German speaking area, as well as pediatricians. We have already initiated contact with several maternal VCs' administrators as well as local maternal and prenatal communities and pediatricians. Most of them agreed to cooperate in our research once they have reviewed the final research design. The targeted group of our research is women in prenatal and postnatal period. The survey will take about 20 minutes and is completely anonymous. We intend to have the results at the end of the third quarter of 2017. In order to motivate women to participate in our survey they will be given the possibility to register their email in order to a) obtain the result of the survey and/or b) enter a draw and win one of five vouchers to the value of twenty-five euros for selected online book stores. We also intend to advertise that we would contribute one euro to a selected Mother in Need foundation for every survey completed.

The first section of the questionnaire will contain construct questions referring to the factors considering the system characteristics of a maternal VC: System Quality, Information Quality, Service Quality. In the following questions referring to the factors considering the Perceived Usefulness and Perceived Ease of Use will be asked. In the second part, questions to measure the impact of social factors will be asked. The third section will consist of questions related to demographics, namely age,

gender, nationality, marital status, highest educational achievement, current position, average gross yearly income and residence. Additionally questions considering the motherhood, such as participation in a local maternal community and state of pregnancy and number and age of children are going to be examined.

In order to provide participants unfamiliar with virtual maternal communities with enough information to be able to competently answer the questionnaire, a proper description of a fictive virtual maternal community, its structure and functionality will be offered at the beginning of the questionnaire. Patients will be also asked a short set of questions to assess whether they understand what the term "maternal VC" means and how to use it. Additionally, participants of the online survey will have the possibility to gain the information about maternal VCs not only in written form but also in an optional short video tutorial. Data analysis is planned with the partial least squares approach to structural equation modeling (PLS-SEM) in order to assess how well the latent constructs were measured and to estimate their relationships (Chin, 1998). For this analysis the software SmartPLS will be used to determine path influences. To test their significance, we intend to use the bootstrapping procedure incorporated in SmartPLS.

Construct	Measurement Items	Sources
System Quality [SQ]	SQ1. The operation of the maternal VC is reliable. (Reliability) SQ2. The maternal VC allows information to be readily accessible to me. (Accessibility) SQ3. The maternal VC provides information in a timely fashion (Response time) SQ4. The maternal VC can be adapted to meet a variety of needs. (Flexibility)	Following Nelson et al. (2005)
Information Quality [IQ]	IQ1. The information provided by the maternal VC is accurate. (Accuracy) IQ2. The maternal VC provides me with all the information I need (Completeness) IQ3. The information from the maternal VC is always up to date. (Currency) IQ4. The information provided by the maternal VC is well laid out. (Format) IQ5. The maternal VC provides me with all the information I need. (Completeness)	Following Nelson et al. (2005)
Service Quality [SEQ]	SEQ1. I feel very confident about the maternal VC. SEQ2. The maternal VC does not give prompt service. SEQ3. The maternal VC has personalized information. SEQ4. The maternal VC does not show a sincere interest in solving members' problems	Following Lin (2007)
Perceived Usefulness [PU]	PU1. Using the maternal VC enhances my ability to get information from community members. PU2. Using the maternal VC enables me to share knowledge with community members. PU3. Using the maternal VC helps satisfy my social needs. PU4. Overall, using the maternal VC meets my needs.	Following Davis (1989) & Lin (2007)
Perceived Ease of Use [PEOU]	PEOU1. Learning how to operate the maternal VC is easy for me PEOU2. My interaction with the maternal VC is clear and understandable PEOU3. It would be easy for me to become skilful at using the maternal VC. PEOU4. Overall, using the maternal VC is easy for me	Following Davis (1989)
Sense of Belonging [SB]	SB1. I feel a strong sense of belonging to the maternal VC SB2. I enjoy being a member of the maternal VC SB3. I am very committed to the maternal VC SB4. Overall, the maternal VC has a high level of morale.	Following Teo et al. (2003) & Lin (2007)
Mothers Satisfaction [MS]	MS1. I am pleased with the experience of using the maternal VC. MS2. I am very satisfied with the maternal VC efficiency and effectiveness. MS3. Overall, my interaction with the maternal VC is very satisfying.	Following Langerak et al. (2003)
Sense of Community [SC]	SC1. I feel closely connected to the members of the maternal VC. SC2. I have met great people in the maternal VC. SC3. I feel a sense of kinship with other members of the maternal VC.	McMillan & Chavis (1986)
Trust [T]	T1. I feel comfortable sharing ideas and feelings about motherhood with other members of the maternal VC. (emotional trust) T2. If I do not closely monitor other members' progress, my maternal (prenatal and postnatal) tasks will not be completed. (cognitive trust). T3. I cannot rely on other members to fulfil their commitments. (e.g., respond, give advice). ^f	Rocco et al. (2000)
Social Usefulness [SU]	SU1. Interacting in the maternal VC helps me to gain respect from other members. SU2. Interacting in the maternal VC improves the way I am perceived by the other members. SU3. Interacting in the maternal VC helps me in forming warm relationships with other members	Gupta and Kim (2007)
Intention to Contribute [IC]	IC1. I intend to use the maternal VC in the future. IC2. I am very likely to return to use the maternal VC. IC3. I believe it is worth for me to return to use the maternal VC.	Davis et al. (1989)
Maternal Role Attainment [MRA]	Maternal role attainment will be measured with three different instruments: <ul style="list-style-type: none"> Myself as Mother Scale – Scale assessing the subjective evaluation of a woman's progress in developing a maternal role (Walker, 1980) My Baby Scale - Scale measuring mother's evaluation of her infant (Walker, 1980) – Perceived Competence Scale - Scale assessing a mother's perceptions of competence in feeding and infant care tasks (Rutledge & Pridham, 1987) 	Walker (1980) Rutledge and Pridham (1987)
Maternal Identity [MI]	Maternal identity will be measured by the Maternal Identity Scale devised by Kho (1996). The scale consists of 17 items and measures two components of maternal identity: <ul style="list-style-type: none"> self-identity as a mother (11 items) identification with the baby (6 items) 	Kho (1996)

Table 1: List of intended measurement items incl. sources. (7 point-scale: Strongly disagree–Strongly agree)

4 Expected Contributions

Mothers need others. To put it differently: What mothers mostly need during their pregnancy and motherhood is contact to other mothers. Whereas in the past this desire for social contact was often satisfied with the presence of local maternal groups, both cultural and demographical changes in society, such as women's increased participation in the paid workforce and growing rates of single parenthood, resulted in mothers' increased social isolation. Especially for fresh mothers a vital social support gained from other mothers represents an indispensable part of every motherhood (Valtchanov et al., 2014). Such receipt of information, support or help is particularly important as it may facilitate the process of a mother's identity formation during the infant's first year (Walker et al., 1985). Hence, in order to face the social changes and to receive the needed social support, virtual maternal communities became proper substitutes for local maternal groups. In the presented research in progress paper we tend to investigate factors that encourage mothers to participate in maternal virtual networks. Furthermore, drawing upon the existing literature, we found strong indications that two factors, Maternal Identity and Maternal Role Attainment may influence mother's intentions to participate in maternal VCs. Maternal role attainment begins prenatally and ends with formation of a maternal identity during the infant's first year (Walker et al., 1985). Therefore, it is a construct that changes over pregnancy and describes to which extend the feeling "being a mother" is settled down into woman's perception. We assume, that mothers as well as future mothers with a high level of maternal identity and an properly attained maternal role can more identified with the VC especially developed for them - mothers and so feel encourage to contribute more to the VC than mothers who have none or only small level of this perceived feeling.

With our work we contribute to IS literature in multiple ways: First, we contribute to research on VCs by providing a more nuanced understanding of perceptions that lead especially mothers to involve actively in their usage. Second, we uniquely introduce two constructs, Maternal Role Attainment and Maternal Identity as new determinants of VC perception and satisfaction. Third, we provide indications, that mothers (or future mothers) with high level of maternal identity and an properly attained maternal role can more identified with the role "being a mother" and so show stronger sense of belonging to a VC explicitly constructed for them as a target group and that their intention to contribute to such a VC is positively affected as well.

In understanding these implications, our research raises awareness for the fact that mothers are a specific group of online users, heterogeneous in their level of maternal identity formation process and that this heterogeneity must be considered when examining their interaction with IS. Finally we expect that our research can not only theoretically contribute to the list of factors that have to be considered when examining maternal online behavior, but will also practically facilitate the receipt of social support mothers aimed at while using maternal virtual networks.

References

- Bagozzi, R. P., and Dholakia, U. M. (2002). "Intentional social action in virtual communities." *Journal of interactive marketing*, 16(2), 2-21.
- Bagozzi, R.P. and Utpal M. D. (2002). "Intentional social action in virtual communities." *Journal of interactive marketing*, 16(2), 2-21.
- Bernhardt, J.M. and Felter, M.E. (2004). "Online pediatric information seeking among mothers of young children: results from a qualitative study using focus groups." *Journal of medical Internet research*, 6(1), e7.
- Bouche, G. and Migeot.V. (2008). "Parental use of the Internet to seek health information and primary care utilisation for their child: a cross-sectional study." *BMC Public Health*, 8(1),1.

- Brady, E. and Guerin, S. (2010). "Not the romantic, all happy, coo-coo experience": A qualitative analysis of interactions on an Irish parenting web site." *Family relations*, 59(1), 14-27.
- Cassery, M. (2009): Moms Connect On The Internet. Forbes. URL: <http://www.forbes.com/2009/08/06/mothers-online-blogs-forbes-woman-time-community.html>
- Chen, L. and Tan, J (2004). "Technology Adaptation in E-commerce: Key Determinants of Virtual Stores Acceptance." *European Management Journal*, 22(1), 74-86.
- Chung, J. E., Park, N., Wang, H., Fulk, J., and McLaughlin, M. (2010). "Age differences in perceptions of online community participation among non-users: An extension of the Technology Acceptance Model". *Computers in Human Behavior*, 26(6), 1674-1684.
- Davis, F.D. (1989). "Perceived usefulness, perceived ease of use, and user acceptance of information technology." *MIS quarterly*, 319-340.
- Davis, F.D., Bagozzi, R.P, and Warshaw, P.R. (1989). "User acceptance of computer technology: a comparison of two theoretical models." *Management science*, 35(8), 982-1003.
- DeLone, W.H. and McLean, E.R. (1992). "Information systems success: The quest for the dependent variable." *Information systems research*, 3(1), 60-95.
- Dholakia, U. M., Bagozzi, R. P., and Pearo, L. K. (2004). "A social influence model of consumer participation in network-and small-group-based VCs." *International journal of research in marketing*, 21(3), 241-263.
- Drentea, P. and Moren-Cross, J.L. (2005). "Social capital and social support on the web: the case of an internet mother site." *Sociology of health & illness* 27(7), 920-943.
- Falk, J. (1998). "The meaning of the web." *The Information Society*, 14(4), 285-293.
- Flavián, C. and Guinaliú, M. (2005). "The influence of VCs on distribution strategies in the internet." *International Journal of Retail & Distribution Management*, 33(6), 405-425.
- Gupta, S. and Kim, H.W. (2008). "Linking structural equation modeling to Bayesian networks: Decision support for customer retention in VCs." *European Journal of Operational Research*, 190(3), 818-833.
- Hall, W. and Irvine, V. (2009): "E-communication among mothers of infants and toddlers in a community-based cohort: A content analysis." *Journal of advanced nursing*, 65(1), 175-183.
- Hrdy, S.B. (2011). *Mothers and others*. Harvard University Press.
- Hsu, M. H., Ju, T. L., Yen, C. H., & Chang, C. M. (2007). "Knowledge sharing behavior in virtual communities: The relationship between trust, self-efficacy, and outcome expectations." *International journal of human-computer studies*, 65(2), 153-169.
- Jouini, N. and Pozza, I.D. (2014). *Introducing a Relationship Marketing perspective in the measurement of Online Community success*. No. 2014-191.
- Langerak, F. (2003). "An appraisal of research on the predictive power of market orientation." *European Management Journal*, 21(4), 447-464.
- Lee, H.K. (1995). "Maternal Role Attainment at Eight Months following Birth." *The Journal of Nurses Academic Society*, 25(2), 244-258.
- Lee, H.Y, Ahn, H. and Han, I. (2007). "VCR: virtual community recommender using the technology acceptance model and the user's needs type." *Expert Systems with Applications*, 33(4), 984-995.
- Lin, H.F. (2007). "The role of online and offline features in sustaining VCs: an empirical study." *Internet Research*, 17(2), 119-138.
- Lin, H.F. (2008). "Antecedents of virtual community satisfaction and loyalty: an empirical test of competing theories." *Cyberpsychology & behavior*, 11(2), 138-144.
- Lin, H.F. and Lee, G.G. (2006). "Determinants of success for online communities: an empirical study." *Behaviour & Information Technology*, 25(6), 479-488.
- Loke, S. (2006). *Context-aware pervasive systems: architectures for a new breed of applications*. CRC Press.
- Lopez, L.K. (2009). "The Radical Act of 'Mommy Blogging': Redefining Motherhood through the Blogosphere." *New Media and Society*, 11(5), 729-747.

- Luster, T., and Dubow, E. (1990). "Predictors of the quality of the home environment that adolescent mothers provide for their school-aged children." *Journal of Youth and Adolescence*, 19(5), 475-494.
- Mayer, R.C., Davis, J.H. and Schoorman, F.D. (1995). "An integrative model of organizational trust." *Academy of management review*, 20(3), 709-734.
- McMillan, D.W. and Chavis, D.M. (1986). "Sense of community: A definition and theory." *Journal of community psychology*, 14(1), 6-23.
- Meghan, C. (2009): *Moms Connect On The Internet*. URL: <http://www.forbes.com/2009/08/06/mothers-online-blogs-forbes-woman-time-community.html>
- Mercer, R.T. (1981). "A theoretical framework for studying factors that impact on the maternal role." *Nursing research*, 30(2), 73-77.
- Nelson, R. R., Todd, P. A., & Wixom, B. H. (2005). "Antecedents of information and system quality: an empirical examination within the context of data warehousing." *Journal of management information systems*, 21(4), 199-235.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985). "A conceptual model of service quality and its implications for future research." *the Journal of Marketing*, 41-50.
- Rheingold, H. (1993). *The Virtual Community: Finding connection in a computerized world*. Addison-Wesley Longman Publishing Co., Inc.
- Ridings, C.M., Gefen, D. and Bay A. (2002). "Some antecedents and effects of trust in virtual communities." *The Journal of Strategic Information Systems*, 11(3), (2002), 271-295.
- Rocco, E., Finholt, T., Hofer, E. C., & Herbsleb, J. (2000). Designing as if trust mattered. Collaboratory for Research on Electronic Work (CREW) Technical Report.
- Romm, C., Pliskin, N. and Clarke, R. (1997). "Virtual communities and society: Toward an integrative three phase model." *International journal of information management*, 17(4), 261-270.
- Rubin, R. (1967a): "Attainment of the maternal role: I. Processes." *Nursing Research*, 16, 237-245.
- Rubin, R. (1967b): "Attainment of the maternal role: 2. Models and referants." *Nursing Research*, 16, 342-346.
- Rubin, R. (1984): *Maternal identity and the maternal experience*. New York, Springer.
- Rutledge, D., and Pridham, K. (1987). "Postpartum mother's perception of competence for infant care". *OCGN*, 3, 185-193.
- Seddon, P. and Kiew, M.Y. (1996). "A partial test and development of DeLone and McLean's model of IS success." *Australasian Journal of Information Systems*, 4(1).
- Seddon, P.B. (1997). "A respecification and extension of the DeLone and McLean model of IS success." *Information Systems Research*, 8(3), 240-253.
- Shang, R.A, Chen, Y.C. and Shen, L. (2005). "Extrinsic versus intrinsic motivations for consumers to shop on-line." *Information & Management*, 42(3), 401-413.
- Shapiro, S.P. (1987). "The social control of impersonal trust." *American journal of Sociology*, 623-658.
- Shen, Y. C., Huang, C. Y., Chu, C. H., and Liao, H. C. (2010). "Virtual Community loyalty: an interpersonal-interaction perspective." *International Journal of Electronic Commerce*, 15(1), 49-74.
- Sinclair-Brown, W. (1982). "A TA redecision group psychotherapy treatment program for mothers who physically abuse and/or seriously neglect their children." *Transactional Analysis Journal*, 12(1), 39-45.
- Sleutel, M.R. (2002). "Development and testing of the Labor Support Scale." *Journal of Nursing Measurement*, 10(3), 249-262.
- Song, J. and Kim, Y.J. (2006). "Social influence process in the acceptance of a virtual community service." *Information Systems Frontiers*, 8(3), 241-252.
- Strange, C., Fisher, C., Howat, P., and Wood, L. (2014). "The essence of being connected: the lived experience of mothers with young children in newer residential areas." *Community, Work & Family*, 17(4), 486-502.

- Sun, Y., Fang, Y., & Lim, K. H. (2012). "Understanding sustained participation in transactional virtual communities." *Decision Support Systems*, 53(1), 12-22.
- Sutcliffe, A., and Baki, Y. (2009). "What is known about children born to older parents." *Reproductive Ageing*, 173.
- Swann W.B. and Brown, J.D. (1990). *From self to health: Self-verification and identity disruption*. John Wiley & Sons.
- Teo, H. H., Chan, H. C., Wei, K. K., & Zhang, Z. (2003). "Evaluating information accessibility and community adaptivity features for sustaining virtual learning communities". *International Journal of Human-Computer Studies*, 59(5), 671-697.
- Thoits, P.A. (1992). "Identity structures and psychological well-being: Gender and marital status comparisons." *Social Psychology Quarterly*, 236-256.
- Tinto, V. (1993) "Building Community." *Liberal Education*, 7(4), 16-21.
- Tovar, E. and Simon, M.A. (2010). "Factorial structure and invariance analysis of the sense of belonging scales." *Measurement and evaluation in counseling and development*, 43(3), 199-217.
- Tsai, M.T., Cheng, N.C. and Chen, K.S.(2011). "Understanding online group buying intention: the roles of sense of virtual community and technology acceptance factors." *Total Quality Management & Business Excellence*, 22(10), 1091-1104.
- Valtchanov, B. L., Parry, D. C., Glover, T. D., and Mulcahy, C. M. (2014). "Neighborhood at your Fingertips Transforming Community Online through a Canadian Social Networking Site for Mothers." *Gender, Technology and Development*, 18(2), 187-217.
- van Dijk, J.A.G.M. (1997). "The Reality of virtual community." *Trends in Communication*, 1 (1), 39-63.
- Vaux, A. (1988). *Social support: Theory, research, and intervention*. Praeger publishers.
- Venkatesh, V. and Morris, M.G. (2000). "Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior." *MIS quarterly*, 115-139.
- Vijayasarathy, L.R. (2004). "Predicting consumer intentions to use on-line shopping: the case for an augmented technology acceptance model." *Information & management*, 41(6), 747-762.
- Walker, L. (1980). "Early parental attitude and parent-infant relationship". In D. Swain, R. Hawkins, L. Walker, & J. Penticuff (Eds.), *Exceptional infant*, New York Brunner/Mazel (4), 234-249.
- Walker, L.O. and Montgomery, E.(1994). "Maternal identity and role attainment: long-term relations to children's development." *Nursing Research*, 43(2), 105-110.
- Walker, L.O., Crain, H. and Thompson, E. (1986). "Maternal role attainment and identity in the postpartum period: Stability and change." *Nursing Research*, 35(2), 68-71.