To eWOM, or not? Investigating the Restricting Factors to Provide Online Ratings for Physicians

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Abstract

Information exchange concerning evaluation products and services has increased over the internet. This trend does not stop at medical treatment services and the patients’ evaluation of their physician. However, ratings on Amazon.com show low participation of consumers. In the case of physician ratings, this even more severe. The scarce of ratings implicate an insufficient information basis for patients to rely on. This research investigates factors which prevent patients from contributing their information of medical treatment experiences by partially applying Social Exchange Theory (SET) and the effects of patients’ general capabilities to exchange information via the internet. Results show that the ability to exchange information is one main determinant for the participation in eWOM, whereas the costs derived by SET did not influence the rating behavior. This suggests that the specifics of the medical treatment service call for additional theories to explain why patients are so restrictive in their rating behavior.

Keywords

Physician Rating, Social Exchange Theory, Cognitive Cost, Executional Cost, Ability

Introduction

The internet enables consumers to distribute user-generated product and service reviews beyond the traditional face-to-face information exchange, the so-called Word-of-Mouth (WOM). Today, WOM is complemented - if not replaced - by its digital counterpart, the electronic Word-of-Mouth (eWOM). People from all around the globe are able to recommend products or services to others, based on their own subjective perception. However, not all reviews are promoting a product, there is also the adverse effect of discouraging other to acquire the products/services discussed. The effect, reviews have on purchasing decisions has increased dramatically (Gu et al. 2012; Lu et al. 2013) over the last years, in line with the growing number of reviews presented on the internet. Product and service ratings or reviews are visible on websites of retailers (e.g., Amazon.com) or on websites specifically dedicated to a specific type of service (e.g., yelp.com for restaurants). The trend towards rating has not stopped at medical treatment services. Physician rating websites (PRW) are platforms on which former patients can rate their doctor on pre-defined criteria and the possibility to leave a review in form of text and/or numerical values (5 stars etc.). In Germany, jameda.de is the dominant rating website on which patients can rate their physician. It shows an increasing trend of unique users per month, peaking in 2017 at 6 million, while containing over 480,000 physician addresses (jameda 2017). The attractiveness of PRWs has lately even more increased with the option to make appointments with the physicians online on the jameda website (Schaarschmidt et al. 2017). Although the numbers of reviews on the internet increases steadily, the proportion of ratings per product/service bought remains comparatively low. Studies show that in the case of Amazon.com, only 1 out of 1,000 consumers rates the product (Hu et al. 2017). Physician ratings are not different in this case; the rating frequency is even lower. A low number of ratings per product/service comprises several difficulties: If the number is too low, other consumers tend not to rely on it and ignore the rating. Also, a
lower number means that less people are forming the general tendency towards the product/service. Anderson (1998) showed that people tend to rate more often when they are dissatisfied with a product/service. With a weak participation in eWOM, ratings do not necessarily reflect the true state of product quality or if the services taken met the expectation of the consumers. Especially for physicians this is a problem, since the customer basis is much lower than for the products sold on Amazon.com. Very little bad ratings can damage the reputation of a physician greatly, while not reflecting the whole population of the (mostly satisfied but silent) patients. Research on why people participate in eWOM is scarce, and investigations into the restricting factors which prevent people from doing so, even scarcer. This study investigates what prevents patients to go online and rate their doctor. Therefore, the following research question arises:

“What factors prevent patients from participating on physician rating websites?”

To provide insights into this question, a quantitative study was conducted with patients in waiting rooms of five doctors located in southern Germany. Results show that the ability to use the internet for information exchange is one big constraint to participate in eWOM, whereas the costs are not a significant restrictor of the information contribution. This suggests that there are other restrictors which prevent people from rating, since the sample showed a very good ability to exchange information over the internet.

The paper is structured as follows. First the literature review with relevant and related work is presented. Afterwards the research model is explicated followed by research method and results. The paper closes with a discussion of its theoretical and practical implications, as well as limitations, suggestions for further research and the conclusion.

**Literature Review**

*Cost in Social Exchange Theory*

Social Exchange Theory (SET) assumes that people base their behavior on cost and rewards (Blau 1964). Cost in this context is a negative value for a person, which restricts her or him from performing an action, whereas benefits increase the likelihood. Based on this definition costs can be seen as restrictors why people do not behave in a certain way, which is the scope for this research. Costs can occur in form of opportunity costs or actual loss of resources (Molm 1997). Opportunity cost refers to the possibility to allocate e.g. time to an alternative action. The motivation to contribute information to eWOM has been investigated by Hennig-Thurau et al. (2004) who derived the motivations from traditional WOM. However, these motivators alone do not present a holistic contribution behavior of consumers. Kankanhalli et al. (2005) showed that there are several cost factors which prevent people from information contribution to electronic knowledge repositories. Electronic knowledge repositories show similar characteristics to online rating websites, since people are able to share information which they think is valuable for others. In both environments information is exchanged between persons of same interest. In their research, codification effort, as one of the main costs, is defined as the effort and time needed to codify knowledge to the environment can happen. Tong et al. (2007) adapted SET in the context of information contribution to online feedback systems in general. In the study they mention the cognitive cost, which prevents people from participating in the feedback system due to the high effort in recalling past experiences. Besides the cognitive cost, the executional cost as second part of the cost side is introduced as the time and effort needed to “materialize” the information on the web. The executional cost is therefore in nature similar to the codification effort mentioned by Kankanhalli et al. (2005). The findings show that only the executional cost has a significant influence on the information contribution.

The literature shows that there are cost factors which restrict people from contributing knowledge or information to either knowledge repositories or dedicated feedback systems. For the scope of the research, to identify relevant restrictors to participate in eWOM, SET with its costs presents a framework to build on.
As Kankanhalli et al. (2005) suggest, the costs have to be empirically assessed to evaluate their relevance from context to context. Therefore, this study investigates their relevance in the context of physician ratings.

**Digital Literacy and Ability in eWOM**

Besides the costs of SET, another main restrictor to participate in eWOM was found by several investigations on the topic. To understand which groups of people have the tendency to use physician rating websites, Terlutter et al. (2014) conducted a study in Germany. Digital literacy is mentioned as one of the main factors which restrict people from exchanging information on physician rating websites. This is furthermore fostered by the fact that elderly people, who happen to be the more frequent patients, make rarely use of PRWs. This shows a discrepancy between actual users and the target group of medical treatment information. 1006 patients were asked, whereas a patient was defined as a person who had a doctor visit in the last 3 months before the study was conducted. The sample was distinguished between so called “users” who actively used PRWs and “non-users” who partly knew that PRWs exist, but do not use them. The results show that younger people have the tendency to use PRWs. Also, females tend to use PRWs more than males. Education was shown to influence the use of PRWs positively. Pi et al. (2016) discussed the motivations and factors of people to access information on social-networking sites (SNS) by focusing on the electronic word-of-mouth. As a foundation social capital theory and social exchange theory were applied with the addition of motivational factors and the ability to access SNS. They found that ability has a positive influence on the cognitive attitude (the way people perceive SNS) of SNS and therefore on the eWOM intention. The eWOM intention describes the willingness of people to actively participate in eWOM in form of providing ratings or reviews in text form. This is in line with the findings Terlutter et al. (2014) who showed that digital literate patients have a positive attitude towards information which is online accessible. Shih et al. (2013) investigated online consumer discussion forums on the foundation of the elaboration likelihood model. From 300 participants of a discussion forum concerning the Yahoo (Taiwan) e-auction website, information could be gathered to verify that the ability to operate e.g. smartphones, personal computers, etc. influences the eWOM intention in this context. It is argued that people need the capabilities to exchange information are constraining factors. Without a minimum of ability, it is not possible for people to exchange information, which classifies the ability as one barrier to participate in eWOM.

**Research Model**

eWOM intention describes the willingness of people to articulate their consumer experience on the internet (Pi et al. 2016; Shih et al. 2013). The eWOM intention in this context is the desired behavior which is observed in the framework of the SET. This research focuses on PRWs and which influences prevent patients from rating physicians. The actual rating or reviewing process is not considered in this study. Figure 1 depicts the research model for the study.

![Figure 1 Research Model](image-url)
developed a research model in which the ability shows to be a determinant factor in whether people have the intention to go online. For a better understanding we call the construct “ability to exchange information.” The paper of Pi et al. (2016) does not support that the ability has an influence on the affective attitude; however, it supports the hypothesis on the cognitive attitude. Cognitive attitude is explained as specific belief a person develops related to an attitude object, which positively influences the eWOM intention. This concept is related to skill and use aspect of digital divide (Goode 2010). In digital divide insufficient capabilities to use information and communication technologies (ICT) emerged to a main restrictor since the declining cost of the pure access to ICT. Thus, we postulate the following hypothesis:

H1: A high level of ability to exchange information positively influences the eWOM intention.

Executional cost is derived by social exchange theory (Blau 1964). Tong et al. (2007) define it as the time and effort needed for people to “materialize” their rating or review in the online world. Before submitting a rating or review, the patient has to first recall information (cognitive cost) and then codify this information into a number or text. This is a contribution cost because of the possibility to allocate the time needed to other activities, or alternative behavior with higher priority (Ba and Pavlou 2002; Kankanhalli et al. 2005). Alternative behavior might grant higher benefits for the potential reviewer, in which case the eWOM intention is dropped. Past research has shown that if the information contribution on information sharing platforms takes a significant amount of time, knowledge sharing is inhibited (Orlikowski 1995). Thus:

H2: A high level of executional cost negatively influences the eWOM intention.

Due to the fact that the “materialization” of the rating or review is only possible with the use of ICT, the ability to exchange information directly influences the time and effort needed (executional cost). Digital literate individuals show a high frequency of use and experience with technology, which foster their skills (Cotten et al. 2011; Li and Ranieri 2010; Malliari et al. 2011). With the common use of the internet as communication tool, the executional cost to exchange information is lowered. Thus, we postulate the following hypothesis.

H3: A high level of ability reduces executional cost.

Similar to the executional cost, cognitive cost is derived by social exchange theory and altered to fit the context of eWOM (Blau 1964; Tong et al. 2007). It is defined as the cognitive effort needed to recall the medical treatment experience, which is needed to evaluate the service. In psychology individuals need to spend cognitive effort to process extensive information before responding to their environment (Fiske and Taylor 2013; Revelle 1993). In order to rate a physician on PRWs, patients have to recall their detailed experience with their physician. This process requires the mental organization of each piece of information. This cognitive effort may induce negative feelings, such as annoyance and unpleasantness, which in return may lead to an unwillingness to participate in eWOM (Tong et al. 2007). Thus, we hypothesize:

H4: A high level of cognitive cost negatively influences the eWOM intention.

Research Method

A quantitative data collection in southern Germany was conducted. The research team reached out for five physicians, who accepted that patients were interviewed in waiting rooms. The physician’s offices ranged from rural to urban areas. With the direct personal interaction people could ask if they had questions on the questionnaire and/or the study as a whole. Also, with most people short interviews were possible to foster the fact that the study was taken seriously by the participants. The data was collected in addition to several other questions towards the patient’s satisfaction with the medical treatment. This way, the physicians who participated in the study also gained important information. Patients filled the questionnaire partly before and after the treatment. We trust in the quality of the data, since patients came back after the treatment to finish the questionnaire. The items can be looked up in the appendix with the references.

The items for the eWOM intention, ability, executional cost and cognitive cost were measure reflectively with three items on a five-point Likert Scale. Monthly income after taxes was measured in 500 € clusters, ranging from 0 € to 3000 €, and above 3000 €, resulting in 9 clusters. The income was defined as income per month after taxes. The participants were not directly asked for their age, but could choose from 5-year
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Table 1 shows the demographic of the sample (n=115). There is a relatively even distribution among males and females. Also, the age shows an even distribution concerning the age clusters.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Sample</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>female</td>
<td>66</td>
<td>57.39%</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>49</td>
<td>42.61%</td>
</tr>
<tr>
<td>Age</td>
<td>&lt; 31</td>
<td>32</td>
<td>27.83%</td>
</tr>
<tr>
<td></td>
<td>31-45</td>
<td>30</td>
<td>26.09%</td>
</tr>
<tr>
<td></td>
<td>46-60</td>
<td>28</td>
<td>24.35%</td>
</tr>
<tr>
<td></td>
<td>&gt; 60</td>
<td>25</td>
<td>21.74%</td>
</tr>
<tr>
<td>Monthly Income</td>
<td>&lt; 1500 €</td>
<td>47</td>
<td>40.87%</td>
</tr>
<tr>
<td></td>
<td>1500-3000 €</td>
<td>42</td>
<td>36.52%</td>
</tr>
<tr>
<td></td>
<td>&gt; 3000 €</td>
<td>26</td>
<td>22.61%</td>
</tr>
</tbody>
</table>

Table 1 Demographics (n=115)

As suggested in Ringle et al. (2012), the sample was analyzed concerning unobserved heterogeneity. Rigdon et al. (2010) as well as Sarstedt et al. (2011) show that AIC, AIC3, BIC and CAIC deliver sufficient values to identify unobserved heterogeneity in the sample by using finite mixture segmentation (FIMIX). To identify unobserved heterogeneity, the segmentation is increased successively (from 1 to 5 in this case). For every segmentation the fit indices are observed and compared.

<table>
<thead>
<tr>
<th></th>
<th>K = 1</th>
<th>K = 2</th>
<th>K = 3</th>
<th>K = 4</th>
<th>K = 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIC (Akaike's Information Criterion)</td>
<td>597.90</td>
<td>582.99</td>
<td>580.60</td>
<td>546.77</td>
<td>550.53</td>
</tr>
<tr>
<td>AIC3 (Modified AIC with Factor 3)</td>
<td>603.90</td>
<td>595.99</td>
<td>600.60</td>
<td>573.77</td>
<td>584.53</td>
</tr>
<tr>
<td>BIC (Bayesian Information Criteria)</td>
<td>614.37</td>
<td>618.68</td>
<td>635.50</td>
<td>620.88</td>
<td>643.86</td>
</tr>
<tr>
<td>CAIC (Consistent AIC)</td>
<td>620.37</td>
<td>631.68</td>
<td>655.50</td>
<td>647.88</td>
<td>677.86</td>
</tr>
<tr>
<td>EN (Entropy Statistic (Normed))</td>
<td>0.68</td>
<td>0.54</td>
<td>0.65</td>
<td>0.68</td>
<td>0.68</td>
</tr>
</tbody>
</table>

Table 2 Fit Indices Finite Mixture Segmentation

According to Rigdon et al. (2010) there is unobserved heterogeneity if the indices showed a minimum of the indices compared to the other number of segmentations. For BIC and CAIC the minimum is at the segmentation of K = 1 (no segmentation), whereas for AIC the minimum is at K = 4, and for AIC3 the minimum is at K = 3. The fit indices suggest that there is no unobserved heterogeneity in the sample.

Results

To evaluate the data, structural equation modelling (SEM) using partial least squares (PLS) was used with the help of SmartPLS (Ringle et al. 2015). The minimum sample size can be assessed with several methods. Hair Jr et al. (2016) propose the “rule of ten” as well as the minimum R-squared method. For the first, only 30 participants would be required. For the estimated minimum R-squared, which is needed for the second method, even if a weak value of 0.10 was assumed, 103 participants are needed. Thus, the sample size of 115 is deemed sufficient. Cronbach's Alpha and composite reliability (CR) were used to assess internal consistency.

<table>
<thead>
<tr>
<th></th>
<th>Cronbach's Alpha</th>
<th>CR</th>
<th>AVE</th>
<th>(1)eWOM Intention</th>
<th>(2)Ability</th>
<th>(3)EC</th>
<th>(4)CC</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)eWOM Intention</td>
<td>0.860</td>
<td>0.914</td>
<td>0.781</td>
<td>0.884</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2)Ability</td>
<td>0.877</td>
<td>0.924</td>
<td>0.803</td>
<td>0.620</td>
<td>0.896</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3)Executional Cost (EC)</td>
<td>0.865</td>
<td>0.917</td>
<td>0.787</td>
<td>-0.119</td>
<td>-0.267</td>
<td>0.887</td>
<td></td>
</tr>
<tr>
<td>(4)Cognitive Cost (CC)</td>
<td>0.894</td>
<td>0.935</td>
<td>0.827</td>
<td>-0.112</td>
<td>-0.034</td>
<td>0.210</td>
<td>0.909</td>
</tr>
</tbody>
</table>

Table 3 Cronbach's Alpha, CR, AVE, Fornell-Larcker Criterion

Cronbach’s Alpha is a conservative criterion which underestimates the internal consistency, whereas composite reliability takes into account the different outer loadings and generally overestimates the internal consistency. Therefore, both can be taken as boundaries for the consistency, since the true consistency
should rely within these boundaries. Values above 0.70 are desirable, whereas values above 0.95 are not desired, since it indicates that all indicators measure the same phenomenon (Hair Jr et al. 2016). Table 3 shows that neither the values of Cronbach’s Alpha nor CR exceed those boundaries. Convergent validity was assessed by the average variance extracted (AVE) and by observing the factor loadings. For the AVE, values of above 0.5 indicate convergent validity (Hair Jr et al. 2016), which is the case as can be seen in Table 3. In addition, Table 4 shows the factor loadings, which are all above the threshold of 0.708 (Chin 1998; Hair Jr et al. 2016) and significant at the 0.001 level. Based on these criteria we conclude convergent validity for this research model.

Table 4 Factor loadings and cross-loadings

Discriminant validity was assessed by observing three criteria. Table 3 shows the Fornell-Larcker criterion. In this case the value for the respective constructs exceed the values of all other constructs. Therefore, the Fornell-Larcker criterion supports discriminant validity. In addition, the cross-loadings (Table 4) were observed, to verify that each item correlates with its respective construct the most. For the last criterion, the heterotrait-monotrait ratio was observed, which shows the highest value of 0.706 in Table 5. Values above 0.90 are considered to not show discriminant validity (Hair Jr et al. 2016). A more conservative threshold is the value of 0.85 (Henseler et al. 2015). All criteria presented confirm discriminant validity, therefore we are positive that this is not an issue in the model.

Table 5 Heterotrait-Monotrait Ratio

The results show that the path coefficient between ability and eWOM intention is significant ($\beta=0.635$, $p<0.001$), which supports H1. H2 could not be confirmed, since executional cost was not found as significant ($\beta=0.071$, n.s.). Ability however has a significant effect on the executional cost ($\beta=-0.268$, $p<0.01$) which supports H3. Cognitive cost was not found significant ($\beta=-0.100$, n.s.), which does not support H4. The explanatory power of the model ($R^2$) shows a value of 39.7% for the eWOM intention and 7.1% for the executional cost. $R^2$ values of 0.67 are considered substantial, values of 0.33 moderate and 0.19 weak (Chin 1998). In a post hoc test we also tested the influence of the ability to exchange information on the cognitive cost. However, this path did not show a significant influence ($\beta=-0.041$, n.s.) which suggests that the cognitive cost is disconnected from the ability, in contrast to the executional cost.
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Figure 2 Research Results

Discussion

The results concerning the ability are as expected and in line with prior research (Terlutter et al. 2014; Tong et al. 2007). Ability acts as one main constraint towards the eWOM intention. The absence of the ability restricts the use of PRWs in the first place, which cannot be compensated by other influences. On the other hand, ability can also increase the eWOM intention. The descriptive statistics show that the majority of the participants are digital literate. Results suggest that people with good skills in the world wide web also perceive information contribution as positive. Furthermore, the influence on the executional cost by the ability is as expected. With more confidence and better skills in the digital world, people spent less time and effort to communicate with others. On the other hand, the costs derived by SET were not found significant for the whole sample. Kankanhalli et al. (2005) argue that only in specific circumstances the cost influences the use. The question arises why these costs do not matter in the context of physician rating websites. The medical treatment contains specifics which are different from other services (e.g., going to the barber). Whereas the outcome of a haircut is clearly observable at the end of the service, the medical treatment outcome is not. In fact, the physical condition is rarely improved right after the doctor visit. For patients, medical laymen, outcomes can only be evaluated on a longer time frame. And even then, it is difficult to pin down the improvement in one’s condition to the specific medical treatment. An objective evaluation of the treatment seems impossible in this context. Patients are only able to evaluate the treatment based on interpersonal factors, such as the friendliness of the physician. Therefore, physician ratings only contain information about likeable personalities. Patients may be aware of the information quality of ratings, and therefore executional cost does not influence the intention to rate physicians. The scarce of ratings is therefore no matter to no time or effort spent on the patients’ side, but a matter to the perceived usefulness of their information contribution. The insignificance of the cognitive cost can also be explained by the characteristics of the medical treatment service. For general practitioners, it is rarely the case that patients undergo painful treatment. In most cases symptoms are identified and the physician prescribe the medicine for the treatment. Therefore, the doctor visit does not contain inherent characteristics of unpleasantness for the patient. In fact, with visiting the physician, patients expect relief, or improvement of their condition. This more positive association would be backed by the findings of the research. In contrast, it is not clear how patients with chronic diseases see the doctor visit (potential negative attitude due to bad news). However, this is a case of further research. With the ability, one big factor could be investigated on the eWOM intention. However, it cannot explain the scarce of ratings. The sample showed a relatively high ability. If ability was the only restrictor, there would be more ratings on PRWs as a whole. Since this is not the case, there has to be additional factors which prevent patients from rating their physician.

Implications for Theory

Social exchange theory was partly applied with the concept of the cost which prevent people from performing an action. This research has shown that costs are not fully accountable for people who do not
rate physicians. Complementary theories need to be applied to explain this phenomenon. With the introduction of the ability this is a first step to better understand the attitude of people towards rating websites. This can be combined with the concept of the digital literacy in the next steps. The insignificance of the costs also gave insights on why patients do not rate. Not only the attitude towards rating websites, but also the attitude towards the own information contribution can be a determinant for the rating behavior. The medical treatment is a matter of interpersonal factors, as already described, therefore in contrast to other information contribution (SET was already applied to contexts of eWOM in movie ratings) it is possible that people do not perceive their contribution behavior as a weighting of benefits and costs but are influenced way more emotionally when it comes to physician ratings. This can be the case since patients need to provide more personal information to receive medical treatment than it is the case in other services. Therefore, the information contribution is more a matter of feelings, which calls for a different theory of human behavior.

**Practical Implication**

The research provides practical implications for physicians as well as for rating websites. The strongest determinant for the eWOM intention was found to be the ability. The ability to provide experiences online shows to be one of the biggest barriers, especially for older people, which tend to be not as digital literate as younger people (Prensky 2001). In addition, older people tend to visit the doctor more often than younger people. Therefore, a lot of information towards the physician experience is lost for the group of people who need it the most: elderly people. The suggestion for rating websites is to apply interfaces which are intuitive and easy to use for older patients. On the other hand, it would also be feasible if patients could get an introduction on how to rate the experience, by also providing information about how important physician ratings are for the office. This way, physicians gain reputation due to high volume of ratings, patients get better information about the physician and the traffic of physician rating websites increases.

**Limitations and Further Research**

The study was limited to the region of southern Germany. In addition, the sample size was relatively low, so a generalization is limited. Since the context is not yet researched, this research attempts identify possible factors which prevent patients from rating. For further research alternative theories have to be applied to the context with the findings of the presented research in mind. Especially the focus of the attitudes on PRWs, the rating itself and the specifics of the medical treatment service should be criteria on which theories should be tested. This can happen on the basis of a study with two groups: physician raters and non-raters. This way inherent differences of the participants can be investigated and motivators or restrictors to rate physicians can be found. Kankanhalli et al. (2005) suggest that trust can also play a moderating role in the context of information contribution. Moderating variables in general were not observed in this sample. Further research should also focus on different groups of patients. Women and men as part of a multigroup analysis could yield insights on gender differences, since men have a different attitude towards doctor visits than women (women visit physicians more often than men) (Galdas et al. 2005; Tudiver and Talbot 1999). Men tend to refuse help, when they think they are stigmatized for their behavior, which can explain this phenomenon (Addis and Mahalik 2003). In addition, the online behavior of elderly people, who would be helped especially with physician ratings, should be investigated in comparison to younger patients.

**Conclusion**

The research could investigate a major constraint to the active participation on physician rating websites: the ability. However, other suggested constraints could not be identified to significantly changing the eWOM contribution behavior. The findings towards the ability are in line with prior research. Especially people who use the internet to communicate show a positive attitude towards new ways of spreading information. The results suggest that patients do have time and would spent effort on the contribution of their ratings, however the main question on the scarce of ratings remains unanswered and needs more research of the topic.
Appendix

<table>
<thead>
<tr>
<th>Construct</th>
<th>Indicator</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>eWOM Intention</td>
<td>eWOMInt_1</td>
<td>I would encourage my friends to visit physician rating websites (Shih et al. 2013)</td>
</tr>
<tr>
<td></td>
<td>eWOMInt_2</td>
<td>I would say positive things about online ratings.</td>
</tr>
<tr>
<td></td>
<td>eWOMInt_3</td>
<td>I would recommend people to use physician rating platforms to get informed.</td>
</tr>
<tr>
<td>Ability</td>
<td>ability_1</td>
<td>In general, I find it easy to exchange experiences with others via the internet. (Shih et al. 2013)</td>
</tr>
<tr>
<td></td>
<td>ability_2</td>
<td>I can communicate with others via the internet.</td>
</tr>
<tr>
<td></td>
<td>ability_3</td>
<td>I am generally good at using the internet to obtain information about products and services.</td>
</tr>
<tr>
<td>Cognitive Cost</td>
<td>CC_1</td>
<td>It is annoying to recall every detailed aspect of the treatment to write a review. (Tong et al. 2007)</td>
</tr>
<tr>
<td></td>
<td>CC_2</td>
<td>It is hard for me to recollect the doctor experience into a review.</td>
</tr>
<tr>
<td></td>
<td>CC_3</td>
<td>It is not enjoyable to recall my experience with my doctor in order to write a review.</td>
</tr>
<tr>
<td>Executional Cost</td>
<td>EC_1</td>
<td>I can’t seem to find the time to input my doctor reviews on rating platforms. (Tong et al. 2007)</td>
</tr>
<tr>
<td></td>
<td>EC_2</td>
<td>It is laborious to enter my doctor reviews on rating websites.</td>
</tr>
<tr>
<td></td>
<td>EC_3</td>
<td>It takes too much time to write a review.</td>
</tr>
</tbody>
</table>

Table 6 Items

REFERENCES


