

# Effects of word-of-mouth on the behavior of Austrian blood donors: a case study of the Red Cross Blood Donation Service

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## Summary

The procurement of blood is an essential challenge of today's health care. Current studies emphasize the influence of word-of-mouth (WOM) on health care behavior, including blood donation. Still, there exists no study which systematically investigates how WOM affects the behavior of blood donors. Therefore, this paper aims to contribute to this lack of research by focusing on Austrian blood donors as possible receivers and senders of WOM. A survey was distributed to 300 donors of the Austrian Red Cross with a return of 245 surveys. The results highlight the strong influence of WOM on the awareness of the blood service and the willingness to donate blood. Further, structured and organized procedures, friendly employees and respectful interaction were found to be important factors determining willingness to recommend blood donation. Family members as well as friends are the preferred WOM-receivers and the personal face-to-face contact is the favored channel of communication. The results also show that WOM-behavior is strongly influenced by factors such as age, gender and donation frequency. By helping blood bank managers to better understand how WOM affects donation intention and behavior, this study provides a new approach to attract blood donors.

**Key words:** blood donation management, blood drive, blood bank, health communication, word-of-mouth

## INTRODUCTION

Blood is indispensable for life. The procurement of blood can be seen as an essential challenge of today's health care sector (Hogan *et al.*, 2007; Leigh *et al.*, 2007). Neither a shortage nor excess of blood is desirable. A shortage might, for example, postpone scheduled surgeries and therefore increase hospitalization days and health care costs. As blood is perishable, an excess can lead to financial losses due to the expense of collecting, storing and disposing of blood (Aravindakshan *et al.*,

2015). Consequently, a 'blood bank's objective is to maintain the level of collected blood within a range that prevents both shortages and excess' (Aravindakshan *et al.*, 2015, p. 271). In order to achieve this objective, it becomes increasingly important to understand all the substantial determinants influencing the blood donation behavior of current and potential donors (Tscheulin and Lindenmeier, 2005; Leipnitz, 2010; Mews and Boenigk, 2013). Research studies identified existing fears and perceived risk as the main barriers to blood donations

(Andaleeb and Basu, 1995; Beerli-Palacio and Martin-Santana, 2009; Bednall and Bove, 2011), especially the perceived infection risks (Tscheulin and Lindenmeier, 2005; Leigh *et al.*, 2007) and fear of needles (Beerli-Palacio and Martin-Santana, 2009; Leipnitz 2010). Additionally, individuals might be afraid of seeing blood (Leigh *et al.*, 2007; Leipnitz, 2010) or suppose unpleasant feelings after donating, such as fainting (Beerli-Palacio and Martin-Santana, 2009). In contrast, especially altruism (helping others generally; Knight, 1983; Bednall and Bove, 2011), collectivism (helping members of a specific group such as family or friends; Bednall and Bove, 2011), social pressure (Tscheulin and Lindenmeier, 2005; Leipnitz, 2010), convenience (blood donation center nearby with reasonable opening hours; Knight, 1983; Bednall and Bove, 2011), organizational reputation (Bednall and Bove, 2011; Mews and Boenigk, 2013), trust towards the organization (Andaleeb and Basu, 1995; Leigh *et al.*, 2007), perceived need for donations, free infectious disease screening (Leigh *et al.*, 2007; Bednall and Bove, 2011) as well as financial or other tangible rewards (Knight, 1983; Leipnitz, 2010) were determined as the key reasons for making blood donations. Also, the level of information individuals have about blood donations positively influences their donation behavior (Beerli-Palacio and Martin-Santana, 2009; Bednall and Bove, 2011). ‘[I]t is necessary to clarify to society the need for blood donation and to describe the process of donation in greater detail in order to eliminate those inhibitors linked to fear and the perception of the risks associated with donation’ (Beerli-Palacio and Martin-Santana, 2009, p. 211). In this context ‘general advertising has only a limited role to play in stimulating donations’ (Leigh *et al.*, 2007, p. 92). Word-of-mouth (WOM), instead, offers an alternative form of attracting and persuading potential and existing blood donors (Tscheulin and Lindenmeier, 2005; Beerli-Palacio and Martin-Santana, 2009), especially since the internet allows donors an active sharing of experiences with a larger audience (Aravindakshan *et al.*, 2015).

As WOM strongly influences health care behavior (Lipscomb *et al.*, 2004; Bednall and Bove, 2011; Heather *et al.*, 2014), including blood donation (Tscheulin and Lindenmeier, 2005; Beerli-Palacio and Martin-Santana, 2009), a deeper understanding of the effects of WOM towards the behavior of blood donors gains importance. Still, to our knowledge there exists no study which systematically investigates how WOM affects the behavior of Austrian blood donors. Therefore, this paper aims to alleviate this lack of research by investigating Austrian blood donors as possible receivers as well as senders of WOM. When regarding donors as WOM-receivers, relevant research questions focus on

the extent to which WOM affects (i) the awareness of the blood service and (ii) the willingness to donate blood. When donors are seen as potential senders of WOM, the guiding research questions are (iii) to what extent are donors willing to recommend the blood service to other potential donors; (iv) what are the factors influencing the willingness to recommend; (v) who are the preferred WOM-receivers and (vi) what communication channels are used.

To address the research questions, a theoretical framework was used, comprising the theory of perceived risk (Bauer, 1967; Cox, 1967), the theory of cognitive dissonance (Festinger, 1957) and the theory of the strength of weak ties (Granovetter, 1973). The three theories offer various aspects explaining the creation, spread, or impact of healthcare related WOM (Martin, 2016) and therefore seem to be especially suitable for examining blood donors as possible senders as well as receivers of WOM. Besides, the theories are scientifically well established and frequently applied in the current health care literature (e.g. *perceived risk*: Bratucu *et al.*, 2014; Hsieh, 2015; *cognitive dissonance*: Jacob, 2012; de Vries and Timmins, 2016; *strength of weak ties*: Schafer, 2013; Powers *et al.*, 2016).

Concerning the theory of perceived risk by Bauer, (1967) and Cox, (1967), goods and services are frequently purchased with some degree of uncertainty. Such uncertainty is experienced in form of perceived risk (Bauer, 1967; Sheth and Venkatesan, 1968; Gemünden, 1985; Su *et al.*, 2015). ‘In a choice situation, risk can be interpreted in terms of possible loss. The loss can be in psycho/social terms or in functional/economic terms, or in some combination of both forms of loss’ (Taylor, 1974, p. 54). Perceived risk is a fundamental aspect of consumer behavior (Bettman, 1973; Taylor, 1974; Gemünden, 1985; Zhang *et al.*, 2012) and can be a main barrier to blood donation (Andaleeb and Basu, 1995; Beerli-Palacio and Martin-Santana, 2009; Bednall and Bove, 2011). If the perceived risk is above an individual’s tolerance limit, the individual will tend to reduce risk (Bauer, 1967; Cox, 1967; Gemünden, 1985; Sheth and Parvatiyar, 1995). Such reduction of risk might focus either on limiting the negative consequences which might occur or on reducing the uncertainty about the likelihood that the consequences could come true (Gemünden, 1985). In the case of blood donating, the possibilities a donor has to reduce negative consequences are limited. Negative consequences, such as infection risks (Leigh *et al.*, 2007), might only be completely avoided by not donating. In contrast, uncertainty about the likelihood that the consequences could occur can be reduced by seeking, processing and storing

information (Gemünden, 1985). Especially WOM-communication is used by current and potential donors to gain somehow authentic information and reduce perceived risk (Roselius, 1971; Sheth and Parvatiyar, 1995; Nießing, 2007; Kim, 2011; Lim, 2015). The 'higher the product risk, the more essential the WOM information is' (Su *et al.*, 2015, p. 433). As WOM is such an essential source of information, regarding the research questions of this study, it is assumed that WOM strongly affects people's awareness of a blood service and their willingness to donate blood.

Whereas the theory of perceived risk by Bauer, (1967) and Cox, (1967) describes the information-seeking behavior of potential WOM-receivers, the theory of cognitive dissonance (Festinger, 1957) contributes important aspects as to why blood donors might be actively engaged as senders of WOM. According to the theory of cognitive dissonance (Festinger, 1957), every 'person has certain cognitive elements which are "knowledges" about himself, his environment, his attitudes, his opinions and his past behavior. If one cognitive element follows logically from another, they are said to be consonant to each other. They are dissonant to each other if one does not follow logically from the other' (Oshikawa, 1969, p. 44). Dissonances lead to a psychologically uncomfortable state of imbalance (Bawa and Kansal, 2008; Kim, 2011). In order to reduce such imbalances, the strategies of selective exposure, changing attitudes, or spreading WOM might be effective. Selective exposure describes a behavior of actively seeking decision-confirming information while, at the same time, information which disconfirms the decision made is ignored. Alternatively, the individual may change his or her attitude. In this case, post-purchase the value of all alternatives to the chosen product or service is downgraded (Wangenheim, 2005). Furthermore, existing dissonances may be reduced by the spread of WOM. In this way, the actual purchaser tries to confirm the decision made by persuading others through WOM and gaining their approval (Dichter, 1966; O'Neill and Palmer, 2004; Shinnar *et al.*, 2004; Wangenheim, 2005). WOM might also be applied to avoid dissonances. If the individual is satisfied and ranks the purchase made as the best alternative, he or she will be likely to recommend the choice to others in order to avoid cognitive dissonances (De Matos and Rossi, 2008). If the individual is not satisfied and, as a result, changes a provider, negative WOM might be spread to explain the provider change to others, gain their approval and reduce existing dissonances (Wangenheim, 2005). Transferring these findings to blood donation,

donors might also be likely to use recommendations in order to avoid or reduce existing dissonances. With the research questions in mind, it is assumed that an essential part of blood donors are actively engaged as senders of WOM.

The described theories emphasize the motivations for seeking and distributing WOM-information. 'The strength of weak ties' theory adds important aspects regarding the flow of WOM-information through interpersonal networks. According to the theory, such information flow is strongly influenced by the strength of ties (Granovetter, 1973). Tie strength is seen as 'a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding) and the reciprocal services which characterize the tie' (Granovetter, 1973, p. 1361). Individuals might be either connected through strong or weak ties (Johnson-Brown and Reingen, 1987; Buchanan, 2002; Capaldo, 2007). Strong ties refer to close relationships between family members or good friends. Weak ties instead frequently exist between acquaintances (Buchanan, 2002). The tie strength impacts the formation of interpersonal networks in a way that close relationships, connected through strong ties, often group together to single clusters (Granovetter, 1973). Information circulates in these clusters. Consequently, individuals connected through strong ties tend to receive the same redundant information (Dubini and Aldrich, 1991; Paniculanga and Pacheco, 2008). The single clusters are connected through weak ties, allowing the spread of non-redundant information across interpersonal networks (Granovetter, 1983; Buchanan, 2002; Janssen and Koenig, 2002; Granovetter, 2005; Goldenberg *et al.*, 2007). As a form of information, WOM is also distributed through strong and weak ties (Goldenberg *et al.*, 2007). 'Whereas weak ties were found to play a crucial role in the flow of WOM information across groups, strong ties were shown to be important at the micro level of referral behavior. When both strong and weak ties were available as sources of information, strong ties were more likely than weak ties to be activated for the flow of information' (Johnson-Brown and Reingen, 1987, p. 360). Therefore information received through strong ties is more likely to influence decision-making than information through weak ties (Johnson-Brown and Reingen, 1987). As highlighted by the theory of perceived risk, individuals seek information in order to reduce uncertainty (Gemünden, 1985). Strong ties, such as connections to family members and close friends, seem to offer access to trustworthy information (Roselius, 1971; Sheth and Parvatiyar, 1995; Nießing, 2007) and consequently seem to directly impact the WOM behavior of current and potential blood donors. Therefore this study especially specially focuses on strong ties.

**Table 1:** Attention of the blood donor center Linz and blood drives (bdr = blood drives; dcl = the donor center Linz; *n* = number of responding donors)

Attention of the blood donor center Linz and blood drives through...	18–30 years			31–50 years			51–68 years		
	total ( <i>n</i> = 80)	bdr ( <i>n</i> = 64)	dcl ( <i>n</i> = 16)	total ( <i>n</i> = 103)	bdr ( <i>n</i> = 85)	dcl ( <i>n</i> = 18)	total ( <i>n</i> = 58)	bdr ( <i>n</i> = 45)	dcl ( <i>n</i> = 13)
On the recommendations of family and friends	41%	41%	44%	32%	34%	22%	24%	24%	23%
Advertising through posters	15%	16%	13%	25%	26%	22%	21%	24%	8%
Web presence of the Red Cross	14%	6%	44%	6%	5%	11%	5%	4%	8%
Social Media (e.g. Facebook)	10%	8%	19%	4%	5%	0%	0%	0%	0%
On the recommendations of work colleagues	10%	11%	6%	8%	6%	17%	9%	7%	15%
On the recommendations of other individuals	9%	9%	6%	4%	1%	17%	3%	4%	0%
Media coverage	3%	3%	0%	6%	5%	11%	3%	2%	8%
A club	0%	0%	0%	2%	2%	0%	9%	9%	8%
An invitation of the blood donor center Linz	X	44%	X	X	45%	X	X	60%	X
TV-commercials	X	X	6%	X	X	0%	X	X	8%
A promotion of the blood donor center (e.g. World blood donor day)	X	X	25%	X	X	33%	X	X	23%

Source: Own compilation.

## METHODOLOGICAL APPROACH

In June 2015, 300 surveys were distributed to donors of the Austrian Red Cross Blood Donation Service in Upper Austria. Both the donors at blood drives as well as donors at the donor center in Linz were asked to complete the survey. After a period of 3 weeks, 245 completed surveys were returned, including 194 surveys of donors at blood drives and 51 surveys of donors at the donor center in Linz. 43% of the participants were female and 57% male. The average age was 39.1 years. Four-fifths, of those surveyed lived in communities with <10 000 inhabitants (further defined as rural areas) and one-fifth in communities with 10 000 or more inhabitants (further defined as urban areas). 12% of the participants donated blood for the first time, whereas 88% of the donors claimed to be regular donors. Recent research studies point out that WOM behavior might be strongly influenced by age (Geana *et al.*, 2011; Klinkenberg *et al.*, 2011). Therefore the following analysis especially focuses on the potential effects of age on the WOM-behavior of blood donors.

## EMPIRICAL FINDINGS

### The influence of WOM on individuals' awareness of the blood service

Recommendations of family and friends seem to be essential to gain the attention of Upper Austrian blood donors. Two-fifths of the donors between 18 and 30 years became aware of the blood donor center in Linz as well

as the blood drives through such recommendations. This share decreases with age, as only 32% of the donors between 31 and 50 years and 24% of the donors between 51 and 68 years learned about donating through this kind of recommendations. In the case of the donor center in Linz, only a direct invitation gained more attention than recommendations by family and friends. 44% of the donors between 18 and 30 years, 45% between 31 and 50 years as well as 60% of the donors between 51 and 68 years became aware of the center through such an invitation. Compared with invitations and recommendations by family and friends, a much smaller share of donors became aware of the Red Cross blood donation through recommendations by work colleagues or other individuals (Table 1).

Out of the 30 first time donors, 50% were made aware of the Red Cross donations by recommendations of family and friends and 23% by recommendations of colleagues. In contrast, only 31% of the 211 regular donors stated that they were informed by recommendations of family and friends and 7% through recommendations of colleagues. Additionally, the attention of around two-fifths of the 105 women was gained through recommendations of family and friends, whereas only one third of the 135 men got aware through this source of information.

### The influence of WOM on individuals' willingness to donate blood

Thirty-nine percent of the Upper Austrian donors between 18 and 30 years stated that recommendations

**Table 2:** Decision criterions for a blood donation (bdr = blood drives; dcl = the donor center Linz; *n* = number of responding donors)

Deciding factors for a blood donation	18–30 years			31–50 years			51–68 years		
	total	bdr	dcl	total	bdr	dcl	total	bdr	dcl
Recommendations	39% ( <i>n</i> = 80)	41% ( <i>n</i> = 64)	31% ( <i>n</i> = 16)	35% ( <i>n</i> = 105)	38% ( <i>n</i> = 84)	24% ( <i>n</i> = 21)	29% ( <i>n</i> = 56)	31% ( <i>n</i> = 42)	21% ( <i>n</i> = 14)
The brand 'Red Cross'	31% ( <i>n</i> = 80)	25% ( <i>n</i> = 64)	56% ( <i>n</i> = 16)	40% ( <i>n</i> = 105)	33% ( <i>n</i> = 84)	67% ( <i>n</i> = 21)	63% ( <i>n</i> = 56)	67% ( <i>n</i> = 43)	46% ( <i>n</i> = 13)

Source: Own compilation.

were the deciding factor for blood donations at the Red Cross. With increasing age, this share declined to 35% of donors between 31 and 50 years and 29% of the donors between 51 and 68 years. Also a higher percentage of blood drive donors were affected by recommendations than donors at the donor center in Linz. In comparison, almost one third of the donors between 18 and 30 years referred to the brand 'Red Cross' as the deciding factor when making blood donations. This share increases to 40% of the donors between 31 and 50 years and 63% between 51 and 68 years (Table 2).

At with 43%, a higher percentage of the 103 women specified recommendations as the deciding factor for a blood donation than men (28% of 137 men). Out of the 30 first-time donors, nearly 50% reported recommendations as the deciding factor for blood donations. In contrast, only one third of the 211 regular donors said recommendations were the deciding factor.

### The influence of WOM on future blood donations

Respondents were asked for aspects which would motivate them to donate blood in the future. The highest share of donors between 18 and 50 years emphasized recommendations by family, friends and colleagues as the most influential for future blood donation. Still, such influence declines with increasing age. Donors between 51 and 68 years are more affected by regular information from the donor center in Linz and poster advertising than by recommendations (Table 3).

Regarding the influence of recommendations by family, friends and colleagues on people's willingness to make future blood donations, the data showed no fundamental differences between men and women or between first-time and regular donors.

### The extent to which donors are willing to recommend the blood service

The majority of donors have already recommended donating blood at the Red Cross Upper Austria to other

individuals. With increasing age, the share rises. Most donors, who have not recommended donating blood, can imagine doing so. Only a minority states no intention to recommend blood donation in future (Table 4).

Eighty-two percent of the 105 women recommended donating blood at the Red Cross, whereas only 73% of the 134 men did so. With a share of 83%, also the 210 regular donors were more likely to recommend blood donations than the 30 first-time blood donors (37%). Additional differences exist between donors living in rural places and those living in urban areas. The 42 donors that live in urban areas were less likely to recommend (69%) than the 191 donors living in rural areas (78%).

### Factors influencing people's willingness to recommend

For the broad majority of donors, the basic requirements for their recommendations are: structured and organized blood donation procedures, friendly employees, respectful interaction with the donors, detailed information about donating blood, short waiting times and an overall positive experience. Regarding the donors between 18 and 30 years, short waiting times seem to be more important for a higher percentage of donors in the donor center in Linz (87%) than for donors at blood drives (78%) (Table 5).

Concerning the basic requirements for a recommendation, the data showed no fundamental differences between first-time and regular donors. Also women and men valued the requirements similarly. The only difference exists with regard to the wish for detailed information about the donation process. For 93% of the 101 female donors, having such information is a basic requirement for a recommendation. In contrast, only 84% of the responding male donors required this kind of information for their recommendation.

### Preferred receivers of WOM

Nearly 90% of the donors between 18 and 30 years are most likely to recommend donating blood at the Red

**Table 3:** Aspects, which animate to donate blood (bdr = blood drives; dcl = the donor center Linz; *n* = number of responding donors)

Aspects, which animate to donate blood	18–30 years			31–50 years			51–68 years		
	total	bdr	dcl	total	bdr	dcl	total	bdr	dcl
On the recommendations of family and friends	96% ( <i>n</i> = 76)	95% ( <i>n</i> = 61)	100% ( <i>n</i> = 15)	91% ( <i>n</i> = 98)	88% ( <i>n</i> = 78)	100% ( <i>n</i> = 20)	74% ( <i>n</i> = 42)	74% ( <i>n</i> = 34)	75% ( <i>n</i> = 8)
On the recommendations of work colleagues	92% ( <i>n</i> = 77)	92% ( <i>n</i> = 62)	93% ( <i>n</i> = 15)	84% ( <i>n</i> = 92)	82% ( <i>n</i> = 73)	89% ( <i>n</i> = 19)	67% ( <i>n</i> = 43)	66% ( <i>n</i> = 35)	75% ( <i>n</i> = 8)
Promotion activities, such as the World blood donor day	79% ( <i>n</i> = 77)	76% ( <i>n</i> = 62)	93% ( <i>n</i> = 15)	60% ( <i>n</i> = 92)	54% ( <i>n</i> = 72)	80% ( <i>n</i> = 20)	63% ( <i>n</i> = 46)	59% ( <i>n</i> = 34)	75% ( <i>n</i> = 12)
Blood donation as a jointly activity of a club	78% ( <i>n</i> = 76)	75% ( <i>n</i> = 61)	87% ( <i>n</i> = 15)	64% ( <i>n</i> = 92)	67% ( <i>n</i> = 72)	55% ( <i>n</i> = 20)	61% ( <i>n</i> = 44)	53% ( <i>n</i> = 34)	90% ( <i>n</i> = 10)
On the recommendations of other individuals	77% ( <i>n</i> = 77)	82% ( <i>n</i> = 62)	53% ( <i>n</i> = 15)	81% ( <i>n</i> = 91)	82% ( <i>n</i> = 72)	79% ( <i>n</i> = 19)	68% ( <i>n</i> = 44)	70% ( <i>n</i> = 37)	57% ( <i>n</i> = 7)
Advertising through posters	72% ( <i>n</i> = 76)	74% ( <i>n</i> = 61)	67% ( <i>n</i> = 15)	71% ( <i>n</i> = 95)	68% ( <i>n</i> = 76)	79% ( <i>n</i> = 19)	82% ( <i>n</i> = 49)	81% ( <i>n</i> = 37)	83% ( <i>n</i> = 12)
Regular notifications through Social Media (e.g. Facebook)	69% ( <i>n</i> = 75)	70% ( <i>n</i> = 60)	67% ( <i>n</i> = 15)	51% ( <i>n</i> = 91)	47% ( <i>n</i> = 72)	63% ( <i>n</i> = 19)	48% ( <i>n</i> = 44)	46% ( <i>n</i> = 35)	56% ( <i>n</i> = 9)
TV-commercials	66% ( <i>n</i> = 74)	68% ( <i>n</i> = 59)	60% ( <i>n</i> = 15)	63% ( <i>n</i> = 91)	60% ( <i>n</i> = 72)	74% ( <i>n</i> = 19)	64% ( <i>n</i> = 47)	63% ( <i>n</i> = 35)	67% ( <i>n</i> = 12)
Regular information of the donor center Linz	66% ( <i>n</i> = 77)	60% ( <i>n</i> = 62)	93% ( <i>n</i> = 15)	73% ( <i>n</i> = 99)	69% ( <i>n</i> = 78)	86% ( <i>n</i> = 21)	94% ( <i>n</i> = 50)	97% ( <i>n</i> = 37)	85% ( <i>n</i> = 13)
Media attention regarding the blood donor center Linz	55% ( <i>n</i> = 76)	52% ( <i>n</i> = 61)	67% ( <i>n</i> = 15)	62% ( <i>n</i> = 86)	58% ( <i>n</i> = 66)	75% ( <i>n</i> = 20)	78% ( <i>n</i> = 51)	79% ( <i>n</i> = 39)	75% ( <i>n</i> = 12)

Source: Own compilation.

**Table 4:** Recommendation of blood donations at the Red Cross (bdr = blood drives; dcl = the donor center Linz; *n* = number of responding donors)

Recommendation of blood donations at the Red Cross	18–30 years			31–50 years			51–68 years		
	total ( <i>n</i> = 79) (%)	bdr ( <i>n</i> = 63) (%)	dcl ( <i>n</i> = 16) (%)	total ( <i>n</i> = 103) (%)	bdr ( <i>n</i> = 82) (%)	dcl ( <i>n</i> = 21) (%)	total ( <i>n</i> = 58) (%)	bdr ( <i>n</i> = 44) (%)	dcl ( <i>n</i> = 14) (%)
Yes	70	68	75	80	79	81	83	86	71
No, but I could image to do so	30	32	25	15	17	10	10	5	29
No, and I do not intend to do so	0	0	0	5	4	9	7	9	0

Source: Own compilation.

Cross to family members or friends. With increasing age, this share declines to around 85% of the donors between 31 and 50 years. Regarding donors between 51 and 68 years, 84% would recommend the donation service to family members and 70% to friends. Additionally, a relatively high percentage of donors at the donor center in Linz (around 70%) are likely to recommend the service to work colleagues (Table 6).

Compared to around 80% of the 131 male respondents, a higher share of nearly 90% of the female respondents prefers family members and friends as recipients of recommendations. 56% of the male respondents prefer to provide recommendations to work colleagues (compared to 44% of woman) and 43% to club colleagues (compared to 18% of woman). Additional differences seem to exist between donors living in rural places



**Table 5:** Reasons for recommendations (bdr = blood drives; dcl = the donor center Linz; *n* = number of responding donors)

Basic require- ments for a recommendation	18–30 years			31–50 years			51–68 years		
	total	bdr	dcl	total	bdr	dcl	total	bdr	dcl
Blood donation procedures are structured and organized	100% ( <i>n</i> = 79)	100% ( <i>n</i> = 63)	100% ( <i>n</i> = 16)	98% ( <i>n</i> = 104)	98% ( <i>n</i> = 83)	100% ( <i>n</i> = 21)	100% ( <i>n</i> = 54)	100% ( <i>n</i> = 41)	100% ( <i>n</i> = 13)
Friendly employees	99% ( <i>n</i> = 79)	98% ( <i>n</i> = 63)	100% ( <i>n</i> = 16)	99% ( <i>n</i> = 104)	100% ( <i>n</i> = 83)	95% ( <i>n</i> = 21)	96% ( <i>n</i> = 54)	95% ( <i>n</i> = 41)	100% ( <i>n</i> = 13)
Respect-based interaction	99% ( <i>n</i> = 79)	98% ( <i>n</i> = 63)	100% ( <i>n</i> = 16)	96% ( <i>n</i> = 102)	96% ( <i>n</i> = 81)	95% ( <i>n</i> = 21)	98% ( <i>n</i> = 52)	97% ( <i>n</i> = 39)	100% ( <i>n</i> = 13)
Blood donation has been a posi- tive experience	96% ( <i>n</i> = 80)	95% ( <i>n</i> = 64)	100% ( <i>n</i> = 16)	100% ( <i>n</i> = 102)	100% ( <i>n</i> = 81)	100% ( <i>n</i> = 21)	98% ( <i>n</i> = 56)	98% ( <i>n</i> = 42)	100% ( <i>n</i> = 14)
Detailed information	86% ( <i>n</i> = 80)	88% ( <i>n</i> = 64)	81% ( <i>n</i> = 16)	89% ( <i>n</i> = 101)	89% ( <i>n</i> = 80)	90% ( <i>n</i> = 21)	89% ( <i>n</i> = 54)	88% ( <i>n</i> = 41)	92% ( <i>n</i> = 13)
Short waiting times	80% ( <i>n</i> = 79)	78% ( <i>n</i> = 64)	87% ( <i>n</i> = 15)	93% ( <i>n</i> = 102)	93% ( <i>n</i> = 81)	95% ( <i>n</i> = 21)	96% ( <i>n</i> = 56)	98% ( <i>n</i> = 43)	92% ( <i>n</i> = 13)

Source: Own compilation.

**Table 6:** Receiver of recommendations (bdr = blood drives; dcl = the donor center Linz; *n* = number of responding donors)

Most likely receivers of recommendations	18–30 years			31–50 years			51–68 years		
	total ( <i>n</i> = 79) (%)	bdr ( <i>n</i> = 63) (%)	dcl ( <i>n</i> = 16) (%)	total ( <i>n</i> = 102) (%)	bdr ( <i>n</i> = 82) (%)	dcl ( <i>n</i> = 20) (%)	total ( <i>n</i> = 56) (%)	bdr ( <i>n</i> = 42) (%)	dcl ( <i>n</i> = 14) (%)
Family members	87	89	81	86	91	65	84	88	71
Friends	92	92	94	83	87	70	70	67	79
Work colleagues	54	49	75	52	48	70	43	36	64
Club colleagues	42	46	25	24	23	25	32	31	36
Other individuals	13	13	13	8	6	15	9	7	14

Source: Own compilation.

and those living in urban areas. In rural areas a higher share of donors favors recommendations to family members (89% of 189 inhabitants) than in urban areas (68% of 41 inhabitants). In contrast, donors living in urban areas are more likely to recommend the blood donors service to working colleagues (66%) than in rural areas (47%). With a share of 63%, the 30 first-time blood donors are also more likely to recommend the service to working colleagues than the 207 regular donors (49%).

### Communication channels for recommendations

The broad majority of donors select the personal face-to-face contact as their channel of choice when making recommendations (Table 7).

For a higher percentage of the 102 women, the telephone or mobile phone is the preferred channel of

recommendation (31%) than for the 128 men (16%). Further, the internet and e-mail is a more important recommendation channel for donors living in urban areas (22% of 41 inhabitants) than for donors living in the rural areas (12% of 183 inhabitants). Regarding donation frequency, a higher share of 37% of the 30 first-time donors would spread recommendations through social media, whereas only 13% of the 201 regular donors would choose this communication channel.

### DISCUSSION

Perceived risk can be the main barrier to blood donation (Beerli-Palacio and Martin-Santana, 2009; Bednall and Bove, 2011). Various authors state that especially WOM-communication might be used to reduce such

**Table 7:** Channels for recommendations (bdr = blood drives; dcl = the donor center Linz; *n* = number of responding donors)

Channels for recommendations	18–30 years			31–50 years			51–68 years		
	total ( <i>n</i> = 79) (%)	bdr ( <i>n</i> = 63) (%)	dcl ( <i>n</i> = 16) (%)	total ( <i>n</i> = 97) (%)	bdr ( <i>n</i> = 78) (%)	dcl ( <i>n</i> = 19) (%)	total ( <i>n</i> = 55) (%)	bdr ( <i>n</i> = 41) (%)	dcl ( <i>n</i> = 14) (%)
Personal contacts (face-to-face)	85	83	94	86	86	84	80	80	79
Telephone/Mobile phone	32	35	19	18	18	16	20	17	29
Social Media (e.g. Facebook)	30	30	31	12	13	11	4	2	7
Internet/e-mail	11	13	6	15	13	26	16	20	7

Source: Own compilation.

risk (Kim, 2011; Lim, 2015). The empirical results confirm the importance of WOM as a source of information for current blood donors in Upper Austria. A high share of donors was made aware of the blood center and blood drives through WOM. Furthermore, the results highlight recommendations as a decisive factor for people's willingness to donate blood. The influence of WOM on the awareness and individual's willingness to donate blood is more essential for first-time donors than for regular donors and decreases with age. It can be argued that regular donors have already experienced the procedure of donating blood. They might need less risk-reducing information than first time donors who are not familiar with the donation procedure and consequently have a higher perceived risk. In addition, with increasing age, donors might have already collected the information necessary to reduce their perceived risk. Therefore, with growing age, the need for new risk-reducing WOM-information could decrease. Still, a high share of donors between 51 and 68 relies on the brand 'Red Cross' as a deciding factor for their blood donation. In this way, it can be contrarily argued that donors at all ages require information for risk reduction. Just the preferred source of such information seems to change depending on the donor's age.

The majority of donors have already recommended donating blood to other individuals. In particular, regular donors are much more likely to recommend than first time donors. With the theory of cognitive dissonance in mind, it could be reasoned that regular donors might have had a longer period of time to gain positive experiences donating blood. Cognitive dissonances would appear if these positive experiences are not shared through WOM. The same argument could explain the fact that the share of donors which recommended the donation service increases with age. The effect of age on the

willingness to recommend is similar to the findings of a study of US hospital inpatients by Klinkenberg *et al.*, (2011). 'Persons over age 65 years were more likely to respond 'definitely yes' for willingness to recommend than were persons under age 65 years' (Klinkenberg *et al.*, 2011, p. 354). For both studies it might be argued that with increasing age donors or patients are able to progressively collect experiences which they like to share through WOM-communication. The willingness to recommend blood donation is further benefited by factors such as structured and organized blood donation procedures, friendly employees, respectful interaction, detailed information, short waiting times and a positive overall experience.

The empirical data confirms the importance of strong ties, as especially family and friends are the preferred sources and receivers of WOM. In this way, family and friends have a strong influence on decision making of current and potential blood donors. In addition to family and friends, colleagues also count among the preferred WOM-receivers of donors at the blood donation center. In comparison to women, a higher share of men is also likely to recommend to working colleagues. An explanation of this could be that in Austria a higher percentage of men are employed full-time (Statista, 2016). As they spend more time with their working colleagues, men could be more likely to share their blood donation experience. Furthermore, a higher share of donors living in rural areas favors recommendations to family members than donors living in urban areas. In contrast, donors in urban areas are more likely to recommend donating blood to working colleagues than donors in rural areas. Therefore, the place of residence strongly affects the WOM behavior. This somehow confirms a study by Jha *et al.*, (2008) who found that the geographical location of a hospital in the USA influences the



WOM behavior of patients. Blood donors prefer to spread WOM by using face-to-face communication. As senders and their favored receivers are connected by strong ties and these kinds of ties are often characterized by a high contact frequency, such close relationship might benefit such face-to-face communication.

In summary, the empirical results confirm an essential impact of WOM on the behavior of blood donors and therefore offer new insights to both scholars as well as practitioners. Still, this study is subject to some limitations. The work only emphasizes blood donors in the Upper Austrian region. Therefore, as the place of residence can affect the WOM behavior of an individual (Jha *et al.*, 2008), the empirical results may not be generalized to other cultural settings. An additional limitation of this study can be defined by its focus on blood donors. WOM in the context of, for example, hospitals, physiotherapy, dentists or dermatologists may differ. Conclusively, the empirical results may need to be verified for other health care settings. Besides these limitations, the three theories of the framework seem to explain substantial aspects of the empirically observed behavior of Upper Austrian blood donors. As the usage of the strong ties, the perceived risk as well as cognitive dissonances may vary in different healthcare and cultural settings, the framework offers a good starting point for future research. It would be interesting to closer investigate how, regarding these three aspects, different cultural and health care settings influence the WOM behavior.

## CONCLUSION: PROGRESS AND PROSPECTS

WOM has a fundamental influence on the behavior of blood donors. Therefore, blood bank managers should actively try to encourage donors to recommend the donation service to their family, friends, club and working colleagues. Particularly donors between 18 and 30 years seem to be an interesting group to target. The results highlight that nearly one-third of these donors currently does not recommend donating blood, but could imagine doing so. After donating, for example, donors of this group could actively be asked for their support with a recommendation. Face-to-face communication is the preferred communication channel of WOM. Still, around one third of these young donors additionally use mobile phones and social media to spread their recommendations. Especially WOM through social media seems to be interesting for blood bank managers, as this kind of communication allows an active sharing of experiences with a much larger audience. Future studies could more closely investigate the impact social media

based recommendations may have on the individuals' donation willingness. As blood donation behavior is strongly affected by the donor's age, gender, donation frequency and the population of the donor's place of residence, these aspects should be included in future research. Moreover, as noted above this study is limited to Upper Austrian blood donors. Future research should additionally investigate the influence of WOM on blood donation in other regions.

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## REFERENCES

- Andaleeb, S. S. and Basu, A. K. (1995) Explaining blood donation: the trust factor. attitudes, personality, and demographics differentiate donors from nondonors. *Journal of Health Care Marketing*, 15, 42–48.
- Aravindakshan, A., Rubel, O. and Rutz, O. (2015) Managing blood donations with marketing. *Marketing Science*, 34, 269–280.
- Bauer R. A. (1967). Consumer behavior as risk taking. In Cox D. F. (ed), *Risk Taking and Information Handling in Consumer Behavior*. Harvard Business School, Boston, pp. 23–33.
- Bawa, A. and Kansal, P. (2008) Cognitive dissonance and the marketing of services: some issues. *Journal of Services Research*, 8, 31–51.
- Bednall, T. C. and Bove, L. L. (2011) Donating blood: a meta-analytic review of self-reported motivators and deterrents. *Transfusion Medicine Review*, 25, 317–334.
- Beerli-Palacio, A. and Martin-Santana, J. D. (2009) Model explaining the predisposition to donate blood from the social marketing perspective. *International Journal of Nonprofit and Voluntary Sector Marketing*, 14, 205–214.
- Bettman, J. R. (1973) Perceived risk and its components: a model and empirical test. *Journal of Marketing Research*, 10, 184–190.
- Bratucu, R., Gheorghe, I. R., Purcarea, R. M., Gheorghe, C. M., Popa Velea, O. and Purcarea, V. L. (2014) Cause and effect: the linkage between the health information seeking behavior and the online environment: a review. *Journal of Medicine and Life*, 7, 310–316.
- Buchanan, M. (2002). *Nexus. Small Worlds and the Groundbreaking Science of Networks*, W. W. Norton and Company, New York.
- Capaldo, A. (2007) Network structure and innovation: the leveraging of a dual network as a distinctive relational capability. *Strategic Management Journal*, 28, 585–608.

- Cox, D. F. (1967). Risk handling in consumer behavior: an intensive study of two cases. In Cox, D. F. (ed), *Risk Taking and Information Handling in Consumer Behavior*, Harvard Business School, Boston, pp. 34–81.
- De Matos, C. A. and Rossi, C. A. (2008) Word-of-mouth communications in marketing: a meta-analytic review of the antecedents and moderators. *The Journal of the Academy of Marketing Science*, 36, 578–596.
- de Vries, J. and Timmins, F. (2016) Care erosion in hospitals: problems in reflective nursing practice and the role of cognitive dissonance. *Nurse Education Today*, 38, 5–8.
- Dichter E. (1966) How Word-of-Mouth Advertising Works. *Harvard Business Review* 44, 147–166.
- Dubini, P. and Aldrich, H. (1991) Personal and extended networks are central to the entrepreneurial process. *Journal of Business Venturing*, 6, 305–313.
- Festinger, L. (1957). *A Theory of Cognitive Dissonance*, Stanford University Press, Stanford.
- Geana, M. V., Kimminau, K. S. and Greiner, K. A. (2011) Sources of health information in a multiethnic, underserved, urban community: does ethnicity matter?. *Journal of Health Communication: International Perspectives*, 16, 583–594.
- Gemünden, H. G. (1985) Wahrgenommenes Risiko und Informationsnachfrage: Eine systematische Bestandsaufnahme der empirischen Befunde. *Marketing: Zeitschrift Für Forschung Und Praxis*, 7, 27–38.
- Goldenberg, J., Libai, B., Moldovan, S. and Muller, E. (2007) The NPV of bas news. *International Journal of Research in Marketing*, 24, 186–200.
- Granovetter, M. (1973) The strength of weak ties. *American Journal of Sociology*, 78, 1360–1380.
- Granovetter, M. (1983) The strength of weak ties: a network theory revisited. *Sociological Theory*, 1, 201–233.
- Granovetter, M. (2005) The impact of social structure on economic outcomes. *Journal of Economic Perspectives*, 19, 33–50.
- Heather, J., Murphy, S. T. and Valente, T. W. (2014) It's better to give than to receive: the role of social support, trust, and participation on health-related social networking sites. *Journal of Health Communication. International Perspectives*, 19, 1424–1439.
- Hogan, B., Hershey, L., Hogan, R. and Callum, C. (2007) Using sponsorship to improve the success of blood drive donations. *Health Marketing Quarterly*, 24, 51–61.
- Hsieh, P.-J. (2015) Physicians' acceptance of electronic medical records exchange: an extension of the decomposed TPB model with institutional trust and perceived risk. *International Journal of Medical Informatics*, 84, 1–14.
- Jacob, J. D. (2012) The rhetoric of therapy in forensic psychiatric nursing. *Journal of Forensic Nursing*, 8, 178–187.
- Jenssen, J. I. and Koenig, H. F. (2002) The effect of social networks on resource access and business startups. *European Planning Studies*, 10, 1039–1046.
- Jha, A. K., Orav, J. E., Zheng, J. and Epstein, A. M. (2008) Patients' perception of hospital care in the United States. *New England Journal of Medicine*, 359, 1921–1931.
- Johnson-Brown, J. and Reingen, P. H. (1987) Social ties and word-of-mouth referral behavior. *Journal of Consumer Research*, 14, 350–362.
- Kim, Y. (2011) Application of the cognitive dissonance theory to the service industry. *Services Marketing Quarterly*, 32, 96–112.
- Klinkenberg, W. D., Boslaugh, S., Waterman, B. M., Otani, K., Inguanzo, J. M., Gnida, J. C. et al., (2011) Inpatients' willingness to recommend: a multilevel analysis. *Health Care Management Review*, 36, 349–358.
- Knight, R. J. (1983) The stimulation and planning of blood donation. *European Journal of Marketing*, 17, 65–73.
- Leigh, L., Bist, M. and Alexe R. (2007) Marketing blood drives to students: a case study. *International Journal of Health Care*, 20, 84–95.
- Leipnitz, S. (2010). Forschungsstand zum Thema Blutspendemarketing. Diskussionspapiere des Schwerpunktes Unternehmensführung am Fachbereich BWL der Universität Hamburg. Nr. 9/2010.
- Lim, W. M. (2015) The influence of internet advertising and electronic word of mouth on consumer perceptions and intention: some evidence from online group buying. *Journal of Computer Information Systems*, 55, 81–89.
- Lipscomb, T. J., Root, T. and Shelley, K. (2004) Strategies for seeking mental health services. *Services Marketing Quarterly*, 25, 1–12.
- Martin, S. (2016). Towards a model of word-of-mouth in the health care sector. *Working paper presented at the European Academy of Management (EURAM) 2016 conference*, Paris, France.
- Mews, M. and Boenigk, S. (2013) Does organizational reputation influence the willingness to donate blood. *International Review of Public Nonprofit Marketing*, 10, 49–64.
- Nießing, D. (2007). *Kunden-werben-Kunden-Kampagnen, Eine empirische Analyse von Sender-Empfänger-Dyaden zur Gestaltung des Weiterempfehlungsmanagements*. Deutscher Universitäts-Verlag, Wiesbaden.
- O'Neill, M. and Palmer, A. (2004) Cognitive dissonance and the stability of service quality perceptions. *Journal of Services Marketing*, 18, 433–449.
- Oshikawa, S. (1969) Can cognitive dissonance theory explain consumer behavior. *Journal of Marketing*, 33, 44–49.
- Paniculanga, J. and Pacheco, B. (2008) Effects of tie strength and tie valence on consumer word-of-mouth communication and altruistic intentions. *Advances in Consumer Research*, 8, 324–325.
- Powers, B. W., Jha, A. K. and Jain, S. H. (2016) Remembering the strength of weak ties. *The American Journal of Managed Care*, 22, 202–203.
- Roselius, T. (1971) Consumer rankings of risk reduction methods. *Journal of Marketing*, 35, 56–61.
- Schafer, M. H. (2013) Discussion networks, physician visits, and non-conventional medicine: Probing the relational correlates of health care utilization. *Social Science and Medicine*, 87, 176–184.

- Sheth J. N and Venkatesan M. (1968) Risk-reduction processes in repetitive consumer behavior. *Journal of Marketing Research*, **5**, 307–310.
- Sheth, J. N. and Parvatiyar A. (1995) Relationship marketing in consumer markets: antecedents and consequences. *Journal of the Academy of Marketing Science*, **23**, 255–271.
- Shinnar, R. S., Young, C. A. and Meana, M. (2004) The motivations for and outcomes of employee referrals. *Journal of Business and Psychology*, **19**, 271–283.
- Statista (2016). *Erwerbstätigenquote in Österreich nach Geschlechtern von 2003 bis 2013*. <http://de.statista.com/statistik/daten/studie/292889/umfrage/erwerbstaetigenquote-in-oessterreich-nach-geschlechtern> (last accessed 27 February 2016).
- Su, Y.-L., Lin, T. M. Y. and Chang, S.-T. (2015) Exploring the impact factor of positive word-of-mouth influences satisfied customers. *Total Quality Management*, **26**, 430–444.
- Taylor, J. (1974) The Role of Risk in Consumer Behavior. *Journal of Marketing*, **38**, 54–60.
- Tscheulin, D. K. and Lindenmeier, J. (2005) The willingness to donate blood: an empirical analysis of socio-demographic and motivation-related determinants. *Health Services Management Research*, **18**, 165–174.
- Wangenheim, F. V. (2005) Postswitching negative word of mouth. *Journal of Service Research*, **8**, 67–78.
- Zhang, L., Tan, W., Xu, Y. and Tan, G. (2012) Dimensions of consumers' perceived risk and their influences on on-line consumers' purchasing behavior. *Communications in Information Science and Management Engineering*, **2**, 8–14.