

The main result of the research was documented presentation of metacognitive skills of students-future teachers regarding their involvement and performance in practical teaching and learning. This competence is essential for their quality professional engagement in all teaching subjects.

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## RÉKA Saáry

### ANALYZING PERCEPTION OF SECURITY FROM A PSYCHOLOGICAL PERSPECTIVE

**Abstract:** The changing nature of the environment has a major impact on an individual's sense of security. The way in how individual perceptions of danger and risk are shaped, and how cognitive and emotional information is processed, plays a key role in the development of subjective perceptions of security. This paper examines perceptions of security from a psychological perspective, with a particular focus on the phenomenon of cognitive vulnerability and exposure as a result of unprecedented information overload. The factors influencing the development of subjective feelings of security are measured through quantitative research. In the light of the results of this research, the factors that threaten psychological security were identified, and using cluster analysis, segments that can be described by individual preferences based on their attitudes towards security were described. Based on the findings, attention is drawn to the educational challenges to reduce society's vulnerability to psychological influence.

**Keywords:** Psychological safety, Cognitive safety, Threat perception, Cognitive and emotional components

## Introduction

For historical and environmental reasons (globalization, digitalization), research related to individual and human security has become a topic of major importance, yet the academic works available in the context of security studies tend to present a traditionally narrow (state-related) approach to security (Owen, 2008). Feeling secure, however, goes beyond the security of individuals as guaranteed by the state; it is in fact the result of a set of interrelated external and internal factors (Blynova et al., 2018) and, as such, it is highly subjective. According to Brauch (2011), security can be understood both in an objective and a subjective sense, from an objective point of view it can be measured by the absence of threats, while subjectively it can be described by the degree of fear of being attacked. Accordingly, not only the absence of objective threats, but also the absence of subjective fear is essential to achieve security.

Examining perceptions of security is difficult for several reasons. Firstly, it is obvious that the development of the perception of security is a dynamic process, and in a given situation, an individual may perceive new threats that change his or her current state. On the other hand, the latent nature of security also raises problems, since security usually becomes important only in its absence. Thirdly, the feeling of being secure is a basic need for a normal human being, so that the individual's behavior is fundamentally guided by the pursuit of a secure state (Zotova, & Karapetyan, 2018).

An individual's perception of security can be examined from several perspectives (e.g. physical security, existential security, social security etc.) and can be interpreted in terms of different roles (e.g. citizen, urban resident, house tenant, customer, employee, student etc.). In this paper, security is examined from a psychological perspective in the context of everyday existence and consumer behavior.

This paper analysis the factors that threaten psychological safety, with a particular focus on the context of individual's consumer behavior. The objectives of the research are defined as follows:

RQ1: Exploration of the factors influencing the general sense of security of individuals/consumers, with a focus on attitudes towards security in relation to purchasing.

RQ2: Identifying individual differences of respondents on the indicated topic.

RQ3: Exploring the relationship between psychological perceptions of security and demographic variables of individuals.

After the introduction of the essential terms and concepts, the study presents research methodology and data collection methods. Following the presentation of the demographic characteristics of the sample, the article presents the quantitative analysis of the individual responses. The results section also discusses the findings and implications while conclusions on the research topic are made in the last section of the paper.

## Literature Review

Psychological security is a fundamental human need, it refers to the sense of control over life which reflects the ability to handle problems, and the faith in the love and acceptance of others (Jia et al., 2018). According to Zotova and Karapetyan (2018) psychological security is the state of person when he or she can satisfy his or her basic needs for self-preservation. Psychological security, as defined by Edmondson (2014), describes perceptions of the consequences of taking interpersonal risks in a given context. As seen earlier, researchers typically measure psychological security by including the perception of potential threats and risks, the likelihood of victimization, as well as by using the cognitive and affective and conative components known from attitude related researches. Overall security in this sense can be described as a state of inner peace, trust, positive attitude, confidence, subjective well-being, openness and relaxation (Zotova, & Karapetyan, 2018).

Psychological security is also widely discussed among theorists of organizational behavior. Authors in this field define the concept at three levels: individual, group and organizational, and typically examine the relationship between psychological safety and the effectiveness of the company. In this context individual's psychological security is essentially the intrinsic motivation and mental state that help the individual to fulfil his/her psychological role (Qi & Wen, 2019).

The subjective perception of security has been studied using both psychological (Brown et al., 1996; Edmondson & Lei, 2014; Baeva & Bordovskaia, 2015; Mahrous et al., 2018; Wang et al., 2019) and ontological approaches (Hiscock et al., 2001), in the context of certain roles of an individual (citizen, urban resident, employee, etc.). The results of the studies using psychological approach are summarized in Table 1.

**Table 1**  
Dimensions of psychological security in the literature

<b>Authors</b>	<b>Research context</b>	<b>Dimensions</b>
<i>Brown &amp; Leigh (1996)</i>	Employee	Workplace climate i.e. supportive management, clarity, opportunity for self-expression
<i>Tynan (2005)</i>	Team members	Self psychological safety (self-perception of others is safe) and others psychological security (communicating with others feel that they are safe)
<i>Edmondson &amp; Lei (2014)</i>	Employee	Individual dimensions: in-role behavior, speaking up voice Organizational dimension: performance, learning Group level dimension: roles of psychological safety
<i>Baeva &amp; Bordovskaia (2015)</i>	Students and teachers	Educational environment, teaching methodology, psychological well-being of students, self confidence
<i>Mahrous et al. (2018)</i>	Urban residents	Personal attributes, social attributes, physical characteristics
<i>Wang et al. (2019)</i>	Residents	Self-psychological dimensions Social environmental dimensions Natural environmental dimensions Social security

Source: Author's own construction

Regardless of context, the threats affecting psychological security have changed a lot in the recent decades. Beck (2011) defines three contemporary characteristics of threats and risks such as de-localization, i.e. the fact that neither the causes nor the consequences are limited to a specific geographical area, unpredictability and non-compensability, which calls attention to the principle of precaution by prevention (Beck, 2011). In addition to the phenomena described above, individuals also need to be prepared for the challenges of the information society, which poses serious challenges to the education system. According to Miljkovic and Pešić (2019), psychological safety from this perspective can be described as a state of mental protection from the impact of negative information factors that threaten to deform consciousness and conduct. The first step is to make individuals aware of the psychological impact of negative information, and then to train them to acquire the tools (even physical ones) and skills that ensure self-protection.

Psychological safety can therefore be examined from various viewpoints and in a wide range of contexts. This study examines the factors that threaten psychological safety in general and in relation to purchasing, and identifies the relevant groups of individuals with different attitudes toward the topic.

## Method

In present study consumer’s general perception of security was analyzed from a psychological perspective using quantitative methods, with the aim of exploring individual’s overall opinion on the subject. Consumers’ perception of several dimension of psychological safety was measured using a 4-point Likert scale, as the use of the four categories helped to ensure that respondents were not neutral about particular statements. However, due to the nature of the topic, the option of selecting “Not applicable” was also available.

Data collection was carried out using structured questionnaires, partly online and partly through face to face interviews. Due to the sampling method (non-probabilistic method, convenience sampling) the sample is not representative. Data were processed and statistically analyzed using SPSS 20.0 software, through the application of descriptive statistics, Chi-square test, and cluster analyses.

## Results and Discussion

The Hungarian population from the age of eighteen, the Hungarian consumers constituted the target group of the research. During the data collection 489 responses were received. The relatively heterogeneous sample allowed to get an insight into the individual opinions of each demographic group. 56% of respondents were female, 44% male and 90% had a high school or college education. Additional demographic characteristics of the sample are presented in Table 2.

**Table 2**

Demographic composition of the sample

Type of residence	Frequency	Percentage (%)	Age	Frequency	Percentage (%)
<i>Budapest (capital)</i>	229	46.8	<b>18-25</b>	179	36.6
<i>Large city, county seat</i>	68	13.9	<b>26-39</b>	114	23.3
<i>Small town</i>	118	24.1	<b>40-59</b>	150	30.7
<i>Village</i>	74	15.1	<b>60-</b>	46	9.4

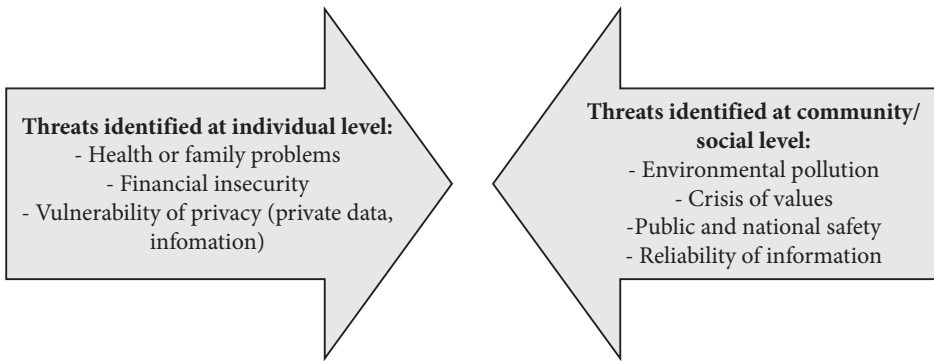
Source: Author’s own construction

The overall sense of security was measured using a metric scale, where participants were asked to indicate how safe they felt on a 1-to-100 scale. The most frequently given rating was 80, with an overall mean of 74.18 and a standard deviation of 19.23. The results indicate that respondents generally feel safe.

Factors that threaten the perception of safety were assessed using an open-ended question. According to the answers provided by the participants, two categories emerged. Based on the frequency of mentions, personal factors in the micro-environment of the respondents, such as health and family problems, financial insecurity and the vulnerability of privacy, appear to be of high importance. At the same time, concern about environmental pollution was surprisingly frequently mentioned in the responses, and the value crisis, information insecurity and fears about public safety and national security were also highlighted as macro-environmental elements. (Figure 1.)

**Figure 1**

Factors threatening the sense of security

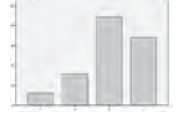

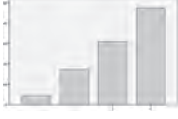
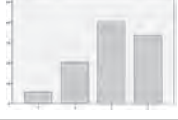
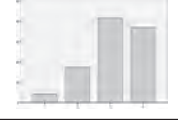
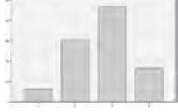


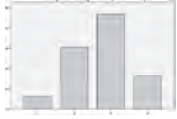
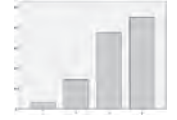
Source: Author's own construction

Homogeneous responses were received on overall attitude toward security and the safety aspects of everyday purchasing situations. (Table 3.)

**Table 3**

Results on statements related to perceived security

Statements	N	Mean	Std. Deviation	Distribution of responses
<i>When buying a product/service security is a priority for me</i>	489	3.06	.860	
<i>I am willing to pay more for a service/product I consider safer</i>	489	3.15	.881	
<i>I am concerned about the privacy of my data and the information about me</i>	489	3.21	.881	
<i>I do a lot to protect my data and privacy</i>	489	3.02	.879	
<i>I am aware of my immediate physical environment</i>	489	3.11	.834	
<i>I can influence the things that determine my security</i>	489	2.73	.809	

<i>It is important for me to be well informed about the risk around me</i>	489	3.24	.817	
<i>I often think about the factors that reduce my sense of security</i>	489	2.51	1.000	

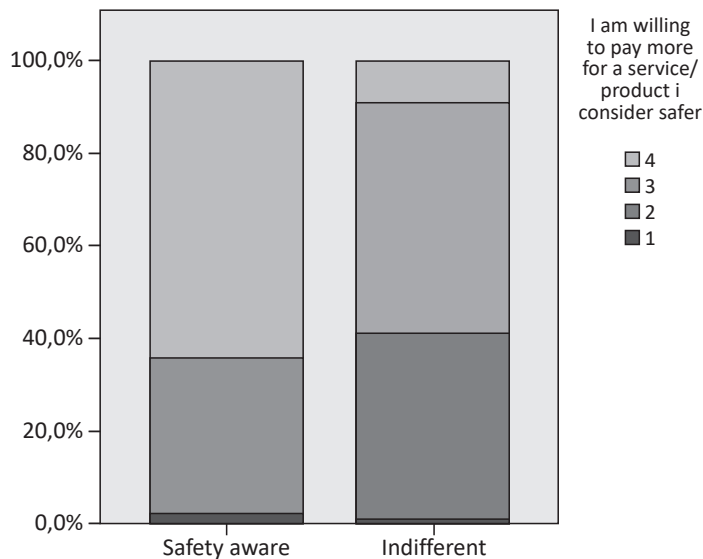
Source: Author's own construction

The results reflect the importance of awareness of risk factors (AVG=3.24, SD=0.817) and respondent's concerns about the security of private information and data (AVG=3.21, SD=0.881). However, we also see that worries about safety and security are not necessarily a part of everyday life (AVG=2.51, SD=1.000), perhaps because respondents feel they have little control over the factors that determine their sense of security (AVG=2.73, SD=0.809)

Further analysis was carried out for the statements in the question block, but prior to statistical analysis sample items with incomplete responses were excluded as a result of data cleaning. Based on the cluster analysis, using centroid method, two respondent segments emerged, which can be named as the group of Security aware (n=261) and the Indifferent (n=102) according to the member's perceptions on security related issues. While those who were Security aware typically said that they do a lot to protect their privacy and data and that security is important to them when buying products, both groups had similar views on the measures they take to protect their physical environment. The most significant difference between the two groups was in their attitudes towards buying safe products. Well over 50% of Security aware fully agreed with the statement that they would be willing to pay more for a product they perceived to be safer. This mentality is way less common among the Indifferent respondents (Figure 2).

**Figure 2**

Differences of opinion between clusters



Source: Author's own construction

The relationship between demographic characteristics and cluster membership was tested using Chi-square test. The results showed that gender ( $p=0.978$ ) and place of residence ( $p=0.257$ ) did not affect the respondent's attitudes towards security, while a significant but weak relationship was found between age ( $p=0.021$ , Cramer  $V=0.164$ ) and education level of the participants ( $p=0.007$ , Cramer  $V=0.184$ ) and their opinion on security related questions.

## Conclusion

This paper examined perceptions of safety and safety aspects of purchasing decision using a psychological approach. The preliminary research objectives were met as follows. After a brief literature review of the dimensions of psychological security, the primary research examined respondents' perceptions of security. It was found that the research participants considered security issues to be fundamentally important, however, concerns about threats were not common among them, since they believed that they had little control over the factors that influence their perceived security.

Respondents can be basically described by two main attitudes in the light of the survey results. The majority of them are conscious of security and are even ready to make sacrifices in order to achieve a greater sense of security. However, there are also some (typically older and less educated participants) who are less concerned about how their security is evolving and are not willing to change either their physical environment or their exposure to information threats.

The analysis suggests that education and good communication can play a key role in creating a society with a positive perception of security. It should be noted, however, that attitudes towards security always reflect a current state of affairs, and therefore the perception of security can only be measured with limitations. The generalizability of the results of this study is also affected by the sampling method used in the research and the intuitive nature of the scale design. Further research and a more detailed overview of the dimensions of the perception of safety is therefore needed in order to gain a more detailed picture of the issue.

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