

Kalenda, Jan; Kocvarová, Ilona

"Why don't they participate?". Reasons for nonparticipation in adult learning and education from the viewpoint of self-determination theory

European journal for Research on the Education and Learning of Adults 13 (2022) 2, S. 193-208



Quellenangabe/ Reference:

Kalenda, Jan; Kocvarová, Ilona: "Why don't they participate?". Reasons for nonparticipation in adult learning and education from the viewpoint of self-determination theory - In: *European journal for Research on the Education and Learning of Adults* 13 (2022) 2, S. 193-208 - URN: urn:nbn:de:0111-pedocs-251770 - DOI: 10.25656/01:25177

<https://nbn-resolving.org/urn:nbn:de:0111-pedocs-251770>

<https://doi.org/10.25656/01:25177>

in Kooperation mit / in cooperation with:



<http://www.ep.liu.se>

Nutzungsbedingungen

Dieses Dokument steht unter folgender Creative Commons-Lizenz: <http://creativecommons.org/licenses/by/4.0/deed.de> - Sie dürfen das Werk bzw. den Inhalt vervielfältigen, verbreiten und öffentlich zugänglich machen sowie Abwandlungen und Bearbeitungen des Werkes bzw. Inhaltes anfertigen, solange Sie den Namen des Autors/Rechteinhabers in der von ihm festgelegten Weise nennen.

Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

Terms of use

This document is published under following Creative Commons-License: <http://creativecommons.org/licenses/by/4.0/deed.en> - You may copy, distribute and render this document accessible, make adaptations of this work or its contents accessible to the public as long as you attribute the work in the manner specified by the author or licensor.

By using this particular document, you accept the above-stated conditions of use.



Kontakt / Contact:

peDOCS
DIPF | Leibniz-Institut für Bildungsforschung und Bildungsinformation
Informationszentrum (IZ) Bildung
E-Mail: pedocs@dipf.de
Internet: www.pedocs.de

Mitglied der


Leibniz-Gemeinschaft

“Why *don't* they participate?” Reasons for nonparticipation in adult learning and education from the viewpoint of self-determination theory

Jan Kalenda

Tomas Baťa University, Czechia (kalenda@utb.cz)

Ilona Kočvarová

Tomas Baťa University, Czechia (kocvarova@utb.cz)

Abstract

The study deals with the perceived reasons for nonparticipation in adult learning and education (ALE), drawing on existing research concerning the motivation for lifelong learning, adult attitudes towards education, and the study of dispositional barriers. The aim of the study is to determine the subjective reasons/motivation of adults not to participate in ALE and what factors influence their nonparticipation. For this purpose, we drew on self-determination theory (SDT). Based on that we have created the research tool “Motivation to Nonparticipation Scale” (MNP-S), which measures three factors: extrinsic motivation, intrinsic motivation, and amotivation. The empirical research was conducted with a representative sample of adults (N = 943, age: 19 to 81 years) who had not participated in ALE. Contrary to theoretical assumptions of SDT, amotivated adults do not predominate among nonparticipants, with the main subjective reasons for nonparticipation based on intrinsic or extrinsic motivations.

Keywords: Attitudes to education, dispositional barriers, lifelong learning, nonparticipation in adult education, self-determination theory



Introduction

One of the traditional questions in research on participation in adult learning and education (ALE) is that of why do adults participate? Since the 1960s many researchers have addressed this question (see, e.g., Boeren, 2016; Boeren et al., 2010, 2012a, 2012b; Blunt & Yang, 2002; Boeren & Holford, 2016; Boshier, 1971, 1977; Houle, 1961; Isaac et al., 2001; Mulenga & Liang, 2008). Within this extensive research, several tools have been validated, with various typologies of participants which can aid in understanding the subjective reasons behind participation in ALE.

Despite this extensive research and the documented benefits of lifelong learning (e.g., Antikainen, 2006; Psacharopoulos, 2006; Regmi, 2015), in most countries non-participants still outnumber participants (Desjardins, 2017). In some cases, they make up the vast majority of adults, a population referred to by Margaret Becker Patterson (2018) as the “forgotten 90%.” In accordance with Sharan Merriam and Lisa Baumgartner (2020, p. 92), we therefore pose the question: Why do adults not participate? This remains one of the “biggest mysteries of adult education” (Merriam & Baumgartner, 2020, p. 96).

This question is typically approached in three different ways. The first one includes socio-psychologically oriented studies (e.g., Baert et al., 2006; Blunt & Yang, 2002; Kyndt et al., 2013a) based on the tradition of valence-instrumentality-expectancy theory (Vroom, 1964), and focusing on the attitudes of adults towards lifelong learning. Attitudes in the form of expectations and the significance of ALE are part of a complex process of decision-making regarding participation (Boeren, 2016, 2017). The scholarly literature comes to a conclusion that if adults do not consider education important or are not interested in it, they tend not to participate (Baert et al., 2006; Kyndt et al., 2013a).

The second approach explains the nonparticipation using the concept of barriers. In this respect, the research tradition initiated by Patricia Cross and her chain-of-response model (1981; see also Courtney, 1992, Darkenwald & Valentine, 1985; Rubenson, 1977; Valentine & Darkenwald, 1990) distinguishes the so-called institutional, situational and dispositional barriers that prevent individuals from participating in ALE. The occurrence of barriers is then linked to various structural factors which affect the unequal rate of these barriers within different social groups or countries (see, e.g., Rubenson, 2011, 2018; Rubenson & Desjardins, 2009; Roosmaa & Saar, 2017 Saar et al., 2013, Saar & Räis, 2017).

Regarding subjective reasons for nonparticipation, the so-called dispositional barriers are particularly important, including attitudes and self-perception (Cross, 1981, p. 98). In the case of these adults, nonparticipation is often related to the lack of motivation, indifference, fear associated with organized learning or insufficient level of skills for further education. According to Maurer et al. (2003, see also Patterson, 2018), individuals with lower levels of self-efficacy may find participation in ALE more difficult.

The third research line includes studies (e.g., Cincinnato et al., 2016; Dämmrich et al., 2014, 2015; Gorard & Selwyn, 2005; Robert, 2012) that address various microsocial factors - especially age, the level of education, gender and economic status. At the same time, microsocial factors are thought to influence both the individual motivation and opportunities for education and training.

In this study, we attempt to build on all three traditions to develop a theoretical and empirical dialogue among them. In this regard, our intention is to analyze three interrelated subjective factors affecting nonparticipation in ALE: (1) specific attitudes of adults (*vis-à-vis* the first approach above), which correspond to (2) dispositional barriers to education (the second approach), and how these factors are influenced by (3)

microsocial factors (the third approach). We believe that the unifying framework for such a dialogue may be self-determination theory, which provides the theoretical basis for our following empirical investigation.

By focusing on the reasons for nonparticipation, we do not deny the influence of structural factors (Desjardins et al., 2006; Rubenson, 2018). Therefore, we also take into account the effect of microsocial variables on the attitudes of adults. However, we also argue that inquiring into the subjective reasons for nonparticipation cannot be avoided, as this approach facilitates an understanding of why some social groups have certain attitudes towards ALE while others have completely different ones (Paldanius, 2007). In this context, the dispositional factors of nonparticipation have often been neglected in main international surveys regarding ALE such as PIAAC and AES. While these instruments are valuable in other ways, they do not contain enough items to provide convincing and detailed results regarding dispositional factors (Hovdhaugen & Opheim, 2018).

The aims and purpose of the study

The main goal of this study is to determine the motivation (reasons) of adults not to participate in ALE. What are their attitudes, which can also act as dispositional barriers to participation in ALE?

1. The first secondary objective is to determine the structure of this motivation on the basis of self-determination theory.
2. The second secondary objective is to determine the structure of nonparticipants on the basis of the prevailing reasons for nonparticipation in ALE.
3. The third secondary objective is to identify the main microsocial factors (age, gender, and highest level of education) that influence the prevailing reasons for nonparticipation in ALE.

Theoretical background and hypotheses

The theoretical basis of the study is self-determination theory (SDT), a concept formed by Edward Deci and Michael Ryan (2013, 2017) (Ryan & Deci, 2019), which today ranks among one of the most widespread theories of motivation. SDT provides conceptual apparatus that allows us to understand the reasons behind nonparticipation in ALE.

Several important arguments can be put forth in favor of the application of SDT in the field of ALE. First, it represents an integrative concept of human motivation which has been successfully used to investigate the involvement of adults in a range of activities which may be considered similar to ALE, such as sports activities, work behavior and health prevention (Deci & Ryan, 2017). Second, SDT has been used successfully for more than three decades to study the learning environment of children and adolescents (Nolen, 2020; Ryan & Deci, 2020). Third, SDT provides a rich set of research tools (e.g., Vallerand et al. 1993, 1994) that can be used to study motivation in ALE, thus complementing and expanding the currently limited number of such tools (Boeren, 2018, 2019). Fourth, a number of researchers (Boeren, 2016, 2017; Merriam & Baumgartner, 2020) in have argued for a more extensive use of SDT not only to understand individual

participation in lifelong learning, but also the relationship between ALE and the fulfillment of basic human needs.

SDT is based on the premise of three basic human needs individuals must fulfil to experience well-being: (1) competence, (2) relatedness, and (3) autonomy. Human behavior is connected with efforts to meet these three needs, or to eliminate the frustration caused by not meeting them for an extended period. The satisfaction of needs is put causally into action through the motivation of individuals (Ryan & Deci, 2000), including what “moves people to action, what energizes and gives direction to behavior” (Deci & Ryan, 2017, p. 13). Motivation is then internally differentiated according to the degree of control and autonomy of individuals. In this regard, a continuum can be plotted between autonomous and highly self-determined motivation, referred to as intrinsic motivation, and weakly self-determined behavior, which is characterized by amotivation and subsequent types of extrinsic motivation with varying degrees of internalization of external control (Howard et al., 2017; Ryan & Deci, 2020).

According to SDT, intrinsic motivation refers to activities that are performed merely for the sheer satisfaction of them. Typically, internally motivated activities are most often games, exploration, and other activities that people engage in to experience a feeling of self-fulfillment and satisfaction (Deci & Ryan, 2013, 2017). Competence and a high degree of internalization regarding the value of a certain activity are the central elements of intrinsic motivation, based on which individuals differ from each other in the degree to which they consider a certain activity to be interesting and internally satisfactory (Deci & Ryan, 2017, p. 117). Due to the high degree of internalization, this type of motivation is highly independent of external conditions.

As has been described by a number of researchers (e.g., Cross, 1981, Darkenwald & Valentine, 1985; Valentine & Darkenwald, 1990), ALE is not seen by many individuals as an activity which could lead to inner satisfaction and fulfillment, or provide a sense of self-competence. According to SDT (Gnambs & Hanfstingl 2016), this phenomenon can be expected especially in adults because a decrease in the intrinsic motivation to learn already begins in adolescence.

Extrinsic motivation is a highly heterogeneous category, one primarily associated with the instrumental orientation of people (Deci & Ryan, 2013, 2017). Therefore, it is usually saturated with external reward, social recognition, or avoidance of punishment. Compared to intrinsic motivation, it is much more dependent on situational conditions and external control. As a result, the various types of extrinsic motivation depend on the degree of internalization by the subject. For this reason, SDT distinguishes four subtypes of extrinsic motivation (Ryan & Deci, 2020): (1) extrinsic motivation with external regulation and the key role of external rewards and punishments; (2) extrinsic motivation with introjected regulation in which the individual places emphasis on being recognized by others; (3) extrinsic motivation with identification, which includes a conscious assessment of an activity, and (4) extrinsic motivation with integration. The last subtype comes closest to intrinsic motivation, since it is characterized by an internalized value of the activity which corresponds to the subject’s own self-concept.

In the case of extrinsic motivation, ALE is not seen as an activity that leads to the fulfillment of the personal goals of adults, i.e., to gain some form of reward, for example in the form of pay increases, improved position in the labor market, or social recognition by friends or co-workers. Furthermore, it does not seem to help them to solve problems in their daily lives. In the context of ALE, these will most often be goals related to the job and are most often associated with the extrinsic motivation to (not) participate in lifelong learning (Desjardins et al., 2006; Ure & Asslid, 2013). Based on the above-mentioned definitions, we formulate the following hypothesis (H1):

H1: Nonparticipants in ALE will show a greater degree of extrinsic motivation for nonparticipation than intrinsic motivation for nonparticipation.

It is typical for amotivation that adults refrain from a certain behavior and show no interest in it. Therefore, amotivation is most often manifested by feeling a lack of competence or a sense that the individual is being controlled by a certain activity (Deci & Ryan, 2013, 2017).

Van Petegen et al. (2015) in this context add that what may be considered by some to be the amotivation for a particular behavior may in fact be an expression or behavior in resistance to an activity that undermines individual autonomy, belonging, or a sense of competence. For this reason, Ellen Boeren (2016, p. 71) argues that amotivation is in fact the reason adults do not participate in lifelong learning. According to her, amotivated individuals may feel alienated from ALE due to negative experiences from the past, a conclusion many other authors have also put forth (e.g., Paldanius, 2007).

H2: Amotivation is the strongest factor of nonparticipation in ALE compared to the factors of intrinsic and extrinsic motivation.

The influence of microsocial variables on the motivation not to participate in ALE

A wide consensus has been reached in previous research regarding the influence of a number of microsocial variables on the motivation to not to participate in ALE. In this study, we will focus on the three most relevant variables: age, gender, and level of education.

According to various studies from primary and secondary education (Gillet et al., 2012; Scherer & Preckel, 2019), the intrinsic motivation to learn decreases with age, suggesting that the intrinsic motivation not to participate should increase with the age. This trend has also been depicted in several studies in the field of ALE (Brady & Fowler, 1988; Bynum & Seaman, 1993; Desjardins et al., 2006; Ure & Asslid, 2013). They have documented that in older age cohorts the number of adults who declare extrinsic motivation not to participate considerably decreases. This shift is likely caused by declining expected utility of education in professional life. Based on these findings, we formulate the next hypothesis (H3):

H3: In the dimension of intrinsic motivation not to participate in ALE will decrease in the category of 65+.

Gender-oriented research (Albert Verdú et al., 2010; Blais et al., 1989; Vaculíková et al., 2020) has shown a more frequent tendency of women to engage in learning activities for other than job-related reasons. Women reported more frequently intrinsic motivation for participation, while men indicated the predominance of extrinsic and job-related reasons. Nevertheless, this type of research has so far been primarily focused on the motivation to participation, and has not always provided unambiguous conclusions about the influence of gender (Dämmrich et al. 2014, 2015). On this basis, we formulate the following hypothesis (H4):

H4: In the dimension of intrinsic motivation not to participate in ALE, women will score higher than men, while in the dimension of extrinsic motivation, men will score higher than women.

Adults with higher level of education declare that they participate in ALE due to intrinsic motivation more often than subjects with lower level of education (Dæhlen & Ure, 2009; Illeris, 2006; Ure & Asslid, 2013). According to some researchers (Boeren, 2016; Paldanius, 2007; Rubenson, 2011, 2018), less educated adults consider any form of postformal education to be a “necessary evil,” or are not interested in it at all. On the

other hand, highly educated adults see it more often as an “opportunity” for their self-fulfillment. Regarding these findings, we formulate the following hypothesis (H5) concerning the influence of education:

H5: In the dimension of intrinsic motivation not to participate in ALE, adults with lower education (up to ISCED3c) will achieve a higher score, while in the dimension of extrinsic motivation we assume a higher score in adults with higher education (ISCED3ab, ISCED5,6).

Methodology

Samples and procedures

To test the above-stated hypotheses (H1 to H5), we conducted empirical research that included data collection with a representative sample of adults from the Czech Republic. The data collection for the purposes of the survey occurred during August to October of 2018, and was carried out with the Computer Assisted Interview technique through a specialized agency. The final data set includes 943 persons who declared nonparticipation in ALE (in formal and nonformal education) in the last 12 months before the survey. The age of the respondents ranged from 18 to 81 years (average 51, SD=19). The structure of the respondents was as follows: 466 men (49%) and 477 women (51%). Out of these individuals, 177 (19%) had achieved basic education (ISCED2); 346 (37%) vocational education (ISCED3c); 275 (29%) secondary school education (ISCED3ab), and 145 (15%) higher education (ISCED5, 6).

Research tool

We used our newly developed research tool “Motivation to Nonparticipation Scale” (MNP-S), which was developed on the basis of a modified version of the Academic Motivation Scale - College version (AMS-C-28) questionnaire, introduced by Vallerand et al. (1993) to research the motivation for nonparticipation in ALE. This tool was originally used to examine motivation to participate in formal education. We were inspired by AMS because it works with all subtypes of motivation described by SDT, and because it is closest to the area of ALE in terms of the focus of its items. As part of the modification of AMS-C-28 for the purposes of our research, we maintained the structure of individual factors in accordance with SDT. However, we changed the wording of the items to fit better to ALE. At the same time, we reformulated all the items to focus on the reasons for not participation. The applied questionnaire contains a total of 29 items (see Annex 1), which in connection with SDT focus on the key dimensions of motivation.

Motivation not to participate in ALE was measured by answers on a 7-point scale, where 1 = *statement does not describe the respondent's reason at all*, and 7 = *statement fully corresponds to the respondent's reason for nonparticipation*. The controlled independent variables for testing our hypotheses related to microsocial factors (H4 to H6) were gender (0 = *male*; 1 = *female*), 3 age categories (0 = *18 - 30 years*; 1 = *31 - 64 years*; 2 = *65 - 90 years*) and 3 categories of education, where 0 = *elementary or secondary not allowing entry to tertiary education (ISCED 2 - ISCED 3c)*; 1 = *upper secondary allowing entry to tertiary education (ISCED 3ab)*, 3 = *tertiary (ISCED 5, 6)*.

Data analysis

Regarding our initial secondary aim, we examined the item structure of the tool using exploratory factor analysis (EFA). As we assumed an interconnection of factors, we applied oblimin rotation. As a statistically and substantively satisfactory procedure, we adopted a three-factor solution, the structure and parameters of which, including reliability, are contained in Appendix 2. We also focused on a descriptive analysis of the resulting factors and their mutual correlations. Based on the findings, we performed a cluster analysis using the K-Means Cluster procedure, by means of which we managed to define three specific clusters of ALE nonparticipants. Finally, we focused on modeling the relationships among the variables using regression analysis in which the dependent variables were the factors of intrinsic and extrinsic motivation for nonparticipation in ALE while the predictors included microsocial variables listed above. EFA was performed in JASP version 14.1, other analyses using IBM SPSS software version 25.

Results

Based on the EFA results, we created a three-factor model of reasons for nonparticipation in ALE which encompasses intrinsic motivation, extrinsic motivation, and amotivation. We reduced the number of items originally included in the questionnaire from 29 to 13, which led to the purification of the final solution and the achievement of reliable factors explaining the high percentage of variability (see Appendix 2). The strongest factor (F1 - intrinsic motivation) is saturated with 5 items and explains 41% of the variance. The next factor (F2 - extrinsic motivation) is also saturated with 5 items and explains 27% of the variance, while the third factor (F3 - amotivation) is saturated with 3 items and explains 19% of the variance. The overall rate of the explained variance is 87%. The resulting scales have good internal consistency for all factors, with Cronbach’s α ranging between 0.839 and 0.993.

The correlation between the factors and the basic descriptive statistics is shown in Table 1. We identified a strong negative relationship between amotivation and the extrinsic motivation not to participate ($r_p = -0.629$), as well as a negative correlation between intrinsic and extrinsic motivations ($r_p = -0.197$). Conversely, the correlation between amotivation and intrinsic motivation is essentially zero ($r_p = -0.042$). From the descriptive results, it is clear that in the case of nonparticipants in ALE the extrinsic motivation is the strongest, the intrinsic motivation is slightly weaker, and amotivation is the weakest.

Table 1: *Correlation and the basic statistics of the factors*

	F1	F2	F3	Mean	SD
F1 – Intrinsic motivation not to participate	1	-.197**	-.042	4.803	2.391
F2 – Extrinsic motivation not to participate	-.197**	1	-.629**	5.106	2.007
F3 - Amotivation	-.042	-.629**	1	3.886	1.939

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the results presented so far, we were able to verify the hypotheses H1 and H2. Hypothesis H1 is accepted on the basis of a paired t-test ($t = -2.728$; $df = 942$; $sig = 0.006$), with the difference between the extrinsic and intrinsic motivations showing as statistically

significant. Nevertheless, the applied measure of substantive significance (Cohen's d , -0.089), which indicates a substantively weak difference. On the other hand, H2 must be rejected, as respondents manifested amotivation with the weakest intensity compared to the intrinsic and extrinsic motivations. We reject the hypothesis without applying inferential statistics, as the descriptive results are completely in contrary to the hypothesis.

Based on the cluster analysis, we identified three groups of nonparticipants according to the predominant type of motivation not to participate in ALE. Summarized in Table 2, the results show the proportions of the clusters and the average values achieved in the three monitored factors.

Table 2: *Clusters of nonparticipants in ALE according to the prevailing type of motivation*

Factors of motivation	Cluster		
	C1 – Rejectors (n = 413, 44%)	C2 - Opportunists (n = 322, 34%)	C3 – Doubters (n = 208, 22%)
Intrinsic motivation for nonparticipation	6.49	1.54	6.50
Extrinsic motivation for nonparticipation	6.37	5.77	1.56
Amotivation	2.35	4.15	6.53

The first cluster (C1 - Rejectors) includes the largest group of nonparticipants who showed a strong level of intrinsic and extrinsic motivation for nonparticipation in ALE, and a very weak level of motivation. The next cluster (C2 - Opportunists) is composed of adults with weak intrinsic motivation, strong extrinsic motivation, and a medium level of amotivation. The last and smallest cluster (C3 - Doubters) includes respondents who possess a strong level of amotivation and intrinsic motivation as well as, conversely, a very weak extrinsic motivation not to participate in ALE.

Table 3: *A model for intrinsic motivation not to participate*

Predictors		B	Std. Error	Beta	t	Sig.	VIF
(Constant)		4.729	0.160		29.641	0.000	
Gender	female vs male	-0.028	0.114	-0.006	-0.245	0.807	1.000
Education	ISCED3ab vs ISCED3c or lower	0.418	0.131	0.079	3.199	0.001	1.081
	ISCED5,6 vs ISCED3c or lower	0.045	0.165	0.007	0.275	0.784	1.087
Age	31-64 vs 18-30	1.375	0.163	0.288	8.451	0.000	2.030
	65-90 vs 18-30	-2.261	0.173	-0.444	-13.074	0.000	2.022

To achieve the last partial goal while also verifying hypotheses H4 to H6, we performed a regression analysis focused on the intrinsic and extrinsic motivation not to participate. In both cases, a check of multicollinearity was included (VIF <5, i.e., in accordance with the general recommendations for all predictors). The results of the analysis are included in Tables 3 and 4.

Table 4: *A model for extrinsic motivation*

Predictors		B	Std. Error	Beta	t	Sig.	VIF
(Constant)		5.026	0.180		28.000	0.000	
Gender	female vs male	0.053	0.128	0.013	0.416	0.677	1.000
Education	ISCED3ab vs ISCED3c or lower	0.409	0.147	0.093	2.781	0.006	1.081
	ISCED5,6 vs ISCED3c or lower	0.411	0.186	0.074	2.212	0.027	1.087
Age	31-64 vs 18-30	-0.458	0.183	-0.114	-2.500	0.013	2.030
	65-90 vs 18-30	0.315	0.195	0.074	1.620	0.106	2.022

The model for intrinsic motivation ($F = 163.376$; $df = 5$; $p < 0.005$; $R^2 = 47\%$) shows that the respondent's age has the most fundamental influence. The respondents aged 18 to 30 years are the reference category. Compared to this category, middle-aged adults (31 to 64 years) show a higher level of intrinsic motivation by about 1.4 points on a seven-point scale. On the contrary, older people (65 to 90 years) indicate a significantly lower level of intrinsic motivation, by about 2.3 points, compared to the reference group. Another difference was found in the comparison of educational groups, in which respondents with secondary level of education (ISCED3ab) manifest 0.4 points more than the reference group of participants with lower level of education (ISCED3c or lower). At the significance level of 0.01, the other results appear statistically insignificant.

The model of extrinsic motivation ($F = 7.744$; $df = 5$; $p < 0.005$; $R^2 = 4\%$) explains the weak proportion of variability, which may be due to the nature of this type of motivation, for which other external variables probably may play a role. The results show that the level of education is statistically significant. Individuals with education at the ISCED3ab level show a 0.4 point higher level of extrinsic motivation not to participate than adults with a lower level (ISCED3c or lower). In the case of the other predictors, the results are statistically and substantively insignificant.

Based on this analysis, we accept H4, as the score regarding the intrinsic motivation not to participate in ALE decreases significantly in the category 65+. H5 was rejected because gender difference are not statistically and substantively significant. Finally, we reject H6, as no statistically significant differences are shown between groups of people with low (ISCED3c or lower) or high (ISCED5,6) education in intrinsic and extrinsic motivation.

Discussion

Motives for nonparticipation in ALE

This study aimed to examine reasons for not participating in ALE. Consistently with premises of SDT, we found that adults do not participate due to three basic motives: (1) intrinsic, (2) extrinsic motivation, and (3) amotivation. All types function as strong dispositional factors for nonparticipation.

As for the autonomy of these factors, the starting points of SDT (Deci & Ryan, 2017; Ryan & Deci, 2019, 2020) were partially confirmed, as we found a negative correlation between intrinsic and extrinsic motivation and amotivation and extrinsic motivation. In contrast, the correlation between amotivation and intrinsic motivation was zero. The likeable cause of this empirical proximity is that these factors are empirically measured

by items that dominantly focus on the meaningfulness of ALE (see Appendix 2). In the case of amotivation, adults question the meaningfulness of ALE as such (e.g., “I don’t know what it could bring me.”). In the case of intrinsic motivation, the reasons for nonparticipation are lack of self-fulfillment and self-satisfaction (“The offered further education does not allow me to learn things that really interest me.”). Although the degree of internalization of control is different in each of the factors, the respondents do not perceive them as important, as they both refer to the meaningfulness of organized learning.

Furthermore, we did not find significant differences in extrinsic motivation based on the degree of internalization of control. The factor analysis did not show that the different subtypes of extrinsic motivation were separate factors. Respondents understand them as a set of external reasons for not participating in ALE. To sum up, these reasons are seen as a totality indicating the absence of external pressure, whether it be pressure from the labor market, the employer, or the family, or whether it is their own self-concept and internalization of the value of ALE. In the light of the current literature on SDT, these findings are not surprising, as the assumptions regarding the autonomy of individual motivation has already been pointed out by some studies (Gagné et al., 2014; Kyndt et al., 2013b; Van den Broeck et al., 2013).

Contrary to what could be expected according to some authors (Boeren, 2016), it turned out that the strongest reason for nonparticipation is not amotivation, but extrinsic motivation. In this regard, we confirm the evidence provided by the numerous researchers (Boeren & Holford, 2016, Desjardins, 2017; Rubenson, 2018; Ure & Asslid, 2013) who stressed that adults do not participate in ALE mainly because it does not bring benefits to them in terms of goals fulfillment or the affirmation of their own self-conception.

Typology of nonparticipants

We also dealt with the typology of nonparticipants, which allows us to address the question of why adults are not motivated to participate in ALE based on their subjective attitudes. Through a cluster analysis, we identified three main groups:

1. *ALE rejectors*. These adults have both very strong intrinsic and extrinsic motivation. The group has the most negative attitudes towards ALE and is also the most numerous (44% of the respondents). Respondents in this group are convinced that ALE is an activity in which they do not find self-realization, and it does not help them to realize their goals and meet the expectations of others.
2. *Opportunists*. This is the second largest group (34% of the respondents). These are actors who do not participate predominantly due to extrinsic motivation. ALE is not perceived as a means to improve or secure their job position. At the same time, they consider organized lifelong learning to be an activity that either threatens their self-conception, as it may reveal deficiencies in their knowledge and skills, or it is not required of them by their family or employers.
3. *Doubters*. This group includes adults who have not only a strong intrinsic motivation not to participate, but also the strongest amotivation. This is the smallest portion of the respondents (22%). It is characteristic for them that they doubt the meaningfulness of further education, both for their self-development and in terms of the importance of ALE itself, which explains their indifference to it.

In terms of microsocial characteristics of individual groups, it is interesting that the “rejectors” include mainly people with higher education (ISCED 4-6) aged 30 to 64. According to the assumptions of the existing literature (Boeren, 2016; Desjardins et al., 2006; Rubenson, 2018), most of these adults should want to be involved in ALE, i.e., due to a higher level of education and a more positive experience with it, more educated people have a better predisposition for ALE. However, in the case of highly educated nonparticipants, we can see a sharp refusal to participate. In the social context of our respondents, this is probably due to the mismatch between their qualification requirements and current requirements in the Czech labor market. This is also evidenced by the fact that more than 30% of university graduates feel overqualified for the work they perform (Koucký et al., 2014). In addition, according to the results of the AES2016, the share of people who previously participated in ALE but do not plan to continue their education fell sharply (Kalenda & Kočvarová, 2019).

The “opportunists” mostly include adults over the age of 60, with lower secondary education (ISCED 3). The opportunistic therefore correspond to the older age groups of the Czech population, in which people with a secondary level of education predominate. The high incidence of extrinsic motivation not to participate is logical for them, as ALE cannot effectively help them to improve and/secure their job position. In addition, adults in the older age groups show a higher level of apprehension to education and a lower level of expectation by others that they should continue to be educated (Merriam & Baumgartner, 2020).

Finally, the cluster of “doubters” is dominated by middle-aged adults with a lower level of education (ISCED 2-3). The high incidence of actors with these attitudes towards ALE is in line with previous findings (Boeren, 2016; Desjardins, 2017; Illeris, 2006; Rubenson, 2011, 2018) showing that low-educated adults very often describe feelings that ALE is meaningless in their lives as well as sense of alienation associated with it.

To conclude, our analysis offers a different typology of nonparticipants as compared to that previously presented by Valentine and Darkenwald (1990, see also Darkenwald & Valentine 1985), who formulated a typology of five groups of nonparticipants based on: (1) personal problems; (2) lack of self-confidence; (3) price of education offered; (4) lack of interest in organized education, and (5) lack of interest in available courses. Our three-factor typology focusing on the dispositional factors of nonparticipation partially overlaps with the Valentine and Darkenwald’s typology in terms of the lack of self-confidence and the use of a cluster of subjects who are not involve due to lack of interest in organized education and available courses. While the factor of lack of self-confidence partly coincides with the extrinsic motivation not to participate, the factor of lack of interest in organized education is related to our concept of intrinsic motivation and amotivation. Despite these similarities, our typology not only shows that individuals have more varied motives influencing their reasons for not participating, but also points out the social determinants of their decision-making.

The role of structural factors

The last secondary objective was to identify key microsocial factors influencing the prevailing reasons for not participating in ALE. In the case of the influence of age, we confirm certain findings from previous studies (Brady & Fowler, 1988; Bynum & Seaman, 1993; Ure & Asslid, 2013). In this regard, we found that intrinsic motivation decreases significantly among people aged 65+. The decisions of adults in older age cohorts about participation in further education are determined by extrinsic reasons.

According to the data, women do not manifest differences in intrinsic or extrinsic motivation in comparison to men. Thus, the differences in reasons for participation in ALE that other studies have revealed (Albert Verdú et al., 2010; Blais et al., 1989; Vaculíková et al., 2020) do not express the same logic regarding the motivation not to participate. One reason for this result may be that nonparticipants see in ALE opportunities for self-realization and satisfaction to a much lesser extent as compared to participants. We should add that other studies using gender as a variable also show inconsistent results (Dämmrich et al., 2014). In this case, the impacts of this variable is mediated by both the structure of the welfare state and the gender culture in a particular country (Dämmrich et al., 2015).

Contrary to theoretical assumptions (Dæhlen & Ure, 2009; Illeris, 2006; Ure & Asslid, 2013), we did not find the significance of education on reasons for not participating in ALE. This is probably because in highly educated adults external reasons for nonparticipation are very often associated with internal reasons for nonparticipation. In the Czech Republic, the reasons go hand in hand with skill mismatches, as mentioned above. In low-educated respondents, the reasons are accompanied by a significant effect of amotivation, which plays a vital role in this social group and reduces the influence of the purely intrinsic motivation.

Implications for practice

In addition to the theoretical conclusions, our findings also have interesting implications for policy in this area. Beyond the recommendations formulated by other authors and international policy papers (Desjardins, 2017; UNESCO, 2019, 2020), we believe that the motivation of nonparticipants should not be understood uniformly, as motivation is much more differentiated both in its sources and in terms of social occurrence. We should therefore individualize measures to support motivation for ALE regarding the motivational profiles of nonparticipants.

In the case of “doubters” about the meaningfulness of ALE, it is necessary to promote further education more as a valuable activity that can significantly enrich adults and bring them benefit not only in the job-related but also non-job-related areas.

In increasing the interest of “opportunists” in ALE, policy measures should be designed towards creating rewarding possibilities to motive adults to engage in further education. These may not only be opportunities for vocational training, but also for free-time, civic activities and community education, which may be particularly relevant and useful for older adults.

Limitations and directions of future research

One of the main limitations of the presented study is its exclusive focus on subjective attitudes towards ALE. Factors involved in the final decision to participate are much more complex and operate on several levels (Baert et al., 2006; Boeren, 2016, 2017), including situational and institutional factors (Cross, 1981; Darkenwald & Valentine, 1985; Rubenson, 2018; Rubenson & Desjardins, 2009). It is necessary to take into account other types of obstacles in the form of situational, institutional barriers, or various models of the welfare state and skill-production regime, all of which directly and indirectly affect the formation of the cluster of nonparticipants in the case of ALE “rejectors.”

While our results may seem to challenge some claims of the proponents of SDT (Deci & Ryan, 2017, 2019, 2020) regarding the cultural universality of sources of

motivation, the findings were undoubtedly influenced significantly by the unique socio-cultural environment of the Czech Republic, where the empirical research was conducted. We know from comparative surveys that the Czech Republic, together with other post-Communist countries and the countries of southern Europe, form one of the regions with the highest occurrence of dispositional barriers (Roosmaa & Saar, 2017). As a result, these barriers may be felt much more strongly.

Two directions for future studies might follow from these limits: a more detailed examination of the interaction of reasons for nonparticipation in ALE and their situational and institutional determinants, and an international comparison of the motivation for nonparticipation. Either or both research tracks would shed light on socio-cultural factors of reasons both for and against participation.

Declaration of Conflicting Interests

The author declares no potential conflicts of interest with respect to the research, authorship or publication of this article.

Funding

This work was supported by the Czech Science Foundation (GACR) through the project Blind Spots of Nonformal Education in the Czech Republic: Non-participants and their Social Worlds, GA_19-00987S.

References

- Albert Verdú, C., García-Serrano, C., & Hernanz, V. (2010). On-the-job training in Europe: Determinants and wage returns. *International Labour Review*, 149(3), 315-341. <https://doi.org/10.1111/j.1564-913X.2010.00089.x>
- Antikainen, A. (2006). In search of the Nordic model in education. *Scandinavian Journal of Educational Research*, 50(3), 229-243. <https://doi.org/10.1080/00313830600743258>
- Baert, H., De Rick, K., & Van Valckenborgh, K. (2006). Towards the conceptualisation of learning climate. In R. Vieira de Castro, A. V. Sancho, & V. Guimaraes (Eds.), *Adult education: new routes new landscapes* (pp. 87-111). Braga: University de Minho.
- Blais, J.-G., Duqueite, A., & Painchaud, G. (1989). Deterrents to women's participation in work-related educational activities. *Adult Education Quarterly*, 39(4), 224-234. <https://doi.org/10.1177/0001848189039004004>
- Blunt, A., & Yang, B. (2002). Factor structure of the adult attitudes toward adult and continuing education scale and its capacity to predict participation behaviour: Evidence for adoption of a revised scale. *Adult Education Quarterly*, 52(4), 299-314. <https://doi.org/10.1177/074171302400448627>
- Boeren, E. (2016). *Lifelong Learning Participation in a Changing Policy Context. An Interdisciplinary Theory*. London: Palgrave Macmillan.
- Boeren, E. (2017). Understanding adult lifelong learning participation as a layered problem. *Studies in Continuing Education*, 39(2), 161-175. <https://doi.org/10.1080/0158037X.2017.1310096>
- Boeren, E. (2018). The methodological underdog: A review of quantitative research in the key adult education journals. *Adult Education Quarterly*, 68(1), 63-79. <https://doi.org/10.1177/0741713617739347>
- Boeren, E. (2019). Quantitative Research in Research on the Education and Learning of Adults. In A. Fejes, & E. Nylander. (Eds.), *Mapping out the Research Field of Adult Education and Learning* (pp. 139-155). Cham: Springer.

- Boeren, E., & Holford, J. (2016). Vocationalism varies (a lot): A 12-country multivariate analysis of participation in formal adult learning. *Adult Education Quarterly*, 66(2), 120-142. <https://doi.org/10.1177/0741713615624207>
- Boeren, E., Nicaise, I., & Baert, H. (2010). Theoretical models of participation in adult education: The need for an integrated model. *International Journal of Lifelong Education*, 29, 45—61. <https://doi.org/10.1080/02601370903471270>
- Boeren, E., Holford, J., Nicaise, I., Baert, H. (2012a). Why do adults learn? Developing motivational typology across twelve European countries. *Globalisation, Societies and Education*, 10, 247-269. <https://doi.org/10.1080/14767724.2012.678764>
- Boeren, E., Nicaise, I., Roosmaa, E. L., Saar, E. (2012b). Formal Adult Education in the spotlight: Profiles, motivation, and experiences of participants in 12 countries. In S. Riddel, J. Markowitsch, & E. Weeden (Eds.), *Lifelong learning in Europe: Equality and efficiency in balance* (pp. 63-86). Bristol: Polity Press.
- Boshier, R. (1971). Motivational orientations of adult education participants: a factor analytic exploration of Houle's typology. *Adult Education*, 21(2), 3-26. <https://doi.org/10.1177/074171367102100201>
- Boshier, R. (1977). Motivational Orientations Re-Visited: Life-Space Motives and the Education Participation Scale. *Adult Education Quarterly*, 27(2), 89-115. <https://doi.org/10.1177/074171367702700202>
- Brady, E. M., & Fowler, M. L. (1988). Participation motives and learning outcomes of older learners. *Educational Gerontology*, 14, 45–56. <https://doi.org/10.1080/0380127880140104>
- Bynum, L. L., & Seaman, M. A. (1993). Motivations of third-age students in Learning in Retirement institutes. *Continuing Higher Education Review*, 57(1), 12-22.
- Cincinnati, S., De Wever, B., Van Keer, H., & Valcke, M. (2016). The Influence of Social Background on Participation in Adult Education: Applying the Cultural Capital Framework. *Adult Education Quarterly*, 66(2), 143-168. <https://doi.org/10.1177/0741713615626714>
- Courtney, S. (1992). *Why do adults learn? Towards a theory of participation in adult education*. London: Routledge.
- Cross, P. K. (1981). *Adults as Learners. Increasing Participation and Facilitating Learning*. San Francisco: Jossey-Bass.
- Darkenwald, G. G., & Valentine, T. (1985). Factor of deterrents to public participation in adult education. *Adult Education Quarterly*, 35(4), 177-193. <https://doi.org/10.1177/0001848185035004001>
- Dämmrich, J., de Vilhena, D. V., & Reichart, E. (2014). Participation in adult learning in Europe: The impact of country-level and individual characteristics. In H. P. Blossfeld, E. Kilpi-Jakonen, D. V. de Vilhena & S. Buchholz (Eds.), *Adult learning in modern societies: An international comparison from a life-course perspective* (pp. 29-55). Cheltenham and Northampton: Edward Elgar.
- Dämmrich, J., Kosyakova, Y., & Blossfeld, H-P. (2015). Gender and job-related non-formal training: A comparison of 20 countries. *International Journal of Comparative Sociology*, 56(6), 433-459. <https://doi.org/10.1177/0020715215626769>
- Dæhlen, M., & Ure, O. B. (2009). Low-Skilled Adults in Formal Continuig Education: Does Their Motivation Differ from Other Learners? *International Journal of Lifelong Education*, 28(5), 661-674. <https://doi.org/10.1080/02601370903189948>
- Deci, E. L., & Ryan, R. M. (2013). *Handbook of self-determination research*. Rochester: University of Rochester Press.
- Deci, E. L., & Ryan, R. M. (2017). *Self-Determination Theory. Basic Psychological Needs in Motivation, Development nad Wellness*. New York: The Guilford Press.
- Desjardins, R. (2017). *Political Economy of Adult Learning Systems. Comparative Study of Strategies, Policies, and Constraints*. London: Bloomsbury.
- Desjardins, R., Rubenson, K., & Milana, M. (2006). *Unequal Chances to Participate in Adult Learning: International Perspectives*. Paris: UNESCO.
- Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., Van den Broeck, A., Aspel, A., ... Westbye, C. (2014). The multidimensional work motivation scale: Validation evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology*. <http://dx.doi.org/10.1080/1359432X.2013.877892>.
- Gillet, N., Vallerand, R. J., & Lafreniere, M. K. (2012). Intrinsic and extrinsic school motivation as a function of age: The mediating role of autonomy support. *Social Psychology of Education*, 15, 77-95. <https://doi.org/10.1007/s11218-011-9170-2>
- Gnambs, T., & Hanfstingl, B. (2016). The decline of academic motivation during adolescence: An accelerated longitudinal cohort analysis on the effect of psychological need satisfaction. *Educational Psychology*, 36(9), 1691-1705. <https://doi.org/10.1080/01443410.2015.1113236>

- Gorard, S., & Selwyn, N. (2005). What makes a lifelong learner? *Teacher College Record*, 107(6), 1193–1216. <https://doi.org/10.1111/j.1467-9620.2005.00510.x>
- Houle, C. O. (1961). *The Inquiring Mind*. Madison: The University of Wisconsin Press.
- Hovdhaugen, E., & Opheim, V. (2018). Participation in adult education and training in countries with high and low participation rates: demand and barriers. *International Journal of Lifelong Education*, 37(5), 560–577.
- Howard, J. L., Gagné, M., & Bureua, J. S. (2017). Testing a continuum structure of self-determined motivation A meta-analysis. *Psychological Bulletin*, 143(2), 1343-1377. <https://doi.org/10.1037/bul0000125>
- Illeris, K. (2006). Lifelong Learning and Low-Skilled. *International Journal of Lifelong Education*, 25(1), 15-28. <https://doi.org/10.1080/02601370500309451>
- Isaac, E., Guy, T., & Valentine, T. (2001). Understanding African American learners’ motivations to learn in church-based adult education. *Adult Education Quarterly*, 52(1), 23-38. <https://doi.org/10.1177/07417130122087377>
- Kalenda, J., & Kočvarová, I. (2019). Approaching Limits of Participation? Trends in demand for Non-formal Education in the Czech Republic. *European Proceeding of Social and Behavioural Sciences* 72, 611–624.
- Koucký, J.; Ryška, R. & Zelenka, M. (2014). *Reflexe vzdělávání a uplatnění absolventů vysokých škol. Výsledky šetření REFLEX 2013*. Praha: Univerzita Karlova v Praze, Pedagogická fakulta.
- Kyndt, E., Govaerts, N., Keunen, L., & Dochy, F. (2013a). Examining the learning intentions of low-qualified employees: a mixed method study. *Journal of Workplace Learning*, 25(3), 178-197. <https://doi.org/10.1108/13665621311306556>
- Kyndt, E., Raes, E., Dochy, F., & Janssens, E. (2013b). Approaches to learning at work: Investigating work motivation, workload and choice independence. *Journal of Career Development*, 40(4), 271–291.
- Maurer, T. J., Weiss, E., Bacheite, F. (2003). A model of Involvement in work-related learning and development activity. The effects of industrial, situational motivational, and age variables. *Journal of Applied Psychology*, 88(4), 707-724. <https://doi.org/10.1037/0021-9010.88.4.707>
- Merriam, S. B., & Baumgartner, L. M. (2020). *Learning in Adulthood. A Comprehensive Guide*, Fourth Edition. Hoboken, NJ: Jossey-Bass.
- Mulenga, D., & Liang, J. S. (2008). Motivations for older adults’ participation in distance education: A study at the National Open University of Taiwan. *International Journal of Lifelong Education*, 27(3), 289-314. <https://doi.org/10.1080/02601370802047791>
- Nolen, S. (2020). A situative turn in the conversation on motivation theories. *Contemporary Educational Psychology*, 61. <https://doi.org/10.1016/j.cedpsych.2020.101866>
- Paldanius, S. (2007). The rationality of reluctance and indifference toward adult education. In L. Servage, & T. Fenwick (Eds.), *Proceedings of the 48th Annual American Adult Education Research Conference* (pp. 471-476). Minneapolis: University of Minnesota.
- Patterson, M. B. (2018). The Forgotten 90%: Adult Nonparticipation in Education. *Adult Education Quarterly*, 68(1), 41-62. <https://doi.org/10.1177/0741713617731810>
- Psacharopoulos, G. P. (2006). The value of investment in education: Theory, evidence and policy. *Journal of Education Finance*, 32, 113-126. https://doi.org/10.1007/978-94-6209-794-0_8
- Regmi, K. D. (2015). Lifelong learning: Foundational models, underlying assumptions and critiques. *International Review of Education*, 61(1), 133-151, <https://doi.org/10.1007/s11159-015-9480-2>
- Robert, P. (2012). The sociodemographic obstacles to participation in lifelong learning across Europe. In S. Riddell, J. Markowitsch & E. Weedon (Eds.), *Lifelong learning in Europe: equity and efficiency in the balance* (pp. 87-101). Bristol: Policy Press.
- Rubenson, K. (1977). *Participation in recurrent education: a research review. Meeting of National delegates on Developments in Recurrent Education*. Toronto: Canada
- Rubenson, K. (2011). Barriers to Participation in Adult Education. In K. Rubenson (Ed.), *Adult Learning and Education* (pp. 216-224). London: Elsevier.
- Rubenson, K. (2018). Conceptualizing Participation in Adult Learning and Education. Equity Issues. In M. Milana, S. Webb, J. Holford, R. Waller, & P. Jarvis, (Eds.), *The Palgrave International Handbook on Adult and Lifelong Education and Learning*. Palgrave (pp. 337-357). London: Palgrave Macmillan.
- Rubenson, K., & Desjardins, R. (2009). The Impact of Welfare State Requirements on Barriers to Participation in Adult Education: A Bounded agency model. *Adult Education Quarterly*, 59(3), 187-207. <https://doi.org/10.1177/0741713609331548>

- Ryan, R. M., & Deci, E. L. (2019). Brick by brick: The origins, development, and the future of self-determination theory. In A. J. Elliot (Ed.), *Advances in motivation science* (pp. 111-156). Cambridge: MA Elsevier Inc.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67. <https://doi.org/10.1006/ceps.1999.1020>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Roosmaa, E-L., & Saar, E. (2017). Adults who do not want to participate in learning: a cross-national European analysis of their barriers. *International Journal of Lifelong Education*, 36(3), 254-277. <https://doi.org/10.1080/02601370.2016.1246485>
- Saar, E., & Räs, M. L. (2017). Participation in job-related training in European countries: the impact of skill supply and demand characteristics. *Journal of Education and Work*, 30(5), 531-551. <https://doi.org/10.1080/13639080.2016.1243229>
- Saar, E., Ure, O. B., & Desjardins, R. (2013). The Role of Diverse Institutions in Framing Adult Learning Systems. *European Journal of Education*, 48(2), 213-232. <https://doi.org/10.1111/ejed.12026>
- Scherrer, V., & Preckel, F. (2019). Development of motivational variables and self-esteem during the school career: A meta-analysis of longitudinal studies. *Review of Educational Research*, 89(2), 211-258. <https://doi.org/10.3102/0034654318819127>
- UNESCO. (2019). *GRALE IV. 4th Global Report on Adult Learning and Education. Leave no one Behind: Participation, Equity and Inclusion*. Hamburg: UNESCO Institute for Lifelong Learning.
- UNESCO. (2020). *Embracing a culture of lifelong learning. Contribution to the Futures of Education initiative*. Hamburg: UNESCO Institute for Lifelong Learning.
- Vaculíková, J., Kalenda, J., & Kočvarová, I. (2020). Hidden gender differences in formal and non-formal adult education. *Studies in Continuing Education*. <https://doi.org/10.1080/0158037X.2020.1732334>
- Valentine, T., & Darkenwald, G. G. (1990). Deterrents to participation in adult education: Profiles of Potential learners. *Adult Education Quarterly*, 41(1), 29-42. <https://doi.org/10.1177/0001848190041001003>
- Vallerand, R. J., Gagné, F., Senécal, C., & Pelletier, L. G. (1994). A comparison of the school intrinsic and perceived competence of gifted and regular students. *Gifted Child Quarterly*, 38(4), 172-175. <https://doi.org/10.1177/001698629403800403>
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senécal, C., & Valliers, E. F. (1993) On the assessment of intrinsic, extrinsic, and amotivation in education: Evidence on the concurrent and construct validity of the Academic Motivation Scale. *Educational and Psychological Measurement*, 53(1), 159-172. <https://doi.org/10.1177/0013164493053001018>
- Van den Broeck, A., Lens, W., De Witte, H., & Van Coillie, H. (2013). Unraveling the importance of the quantity and the quality of workers' motivation for well-being: A person-centered perspective. *Journal of Vocational Behavior*, 82(1), 69-78. <http://dx.doi.org/10.1016/j.jvb.2012.11.005>
- Van Petegem, S., Vansteenkiste, M., Soenens, B., Beyers, W., & Aelterman, N. (2015). Examining the longitudinal association between oppositional defiance and autonomy in adolescence. *Developmental Psychology*, 51(1), 67-74. <https://doi.org/10.1037/a0038374>
- Vroom, V. H. (1964). *Work and motivation*. Hoboken, NJ: Wiley.