

## LIFE GOALS AND BURNOUT IN CROATIAN ELEMENTARY SCHOOL TEACHERS: THE MEDIATING ROLE OF BASIC PSYCHOLOGICAL NEEDS AND FLOW AT WORK

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*It is well known that teaching profession is one of the most stressful professions. In this study, through the lens of Self-Determination Theory, we examined the relationship between teachers' life goals and occupational burnout. Furthermore, it was examined if the work-related basic psychological needs and flow serve as mediators between the previously mentioned variables. The study involved 476 primary school teachers from different parts of Croatia. Participants had an average of 17 years of work experience and were all females. The study results showed that extrinsic life goals led directly to a higher level of burnout. Intrinsic life goals led to a lower level of burnout indirectly through higher basic psychological needs satisfaction and more frequent flow experiences. The contribution of this paper lies in examining the relationship between the Self-Determination Theory variables and the concept of flow. Also, the results can be used to change the working conditions so that they support the teachers' well-being.*

**Keywords:** basic psychological needs; flow; primary school teachers; Self-Determination Theory; well-being

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## 1. Introduction

Research shows that, in comparison with other professions, teachers experience a high level of burnout at work (García-Carmona *et al.*, 2019, 190–203). High levels of professional stress can affect teachers' success in teaching, career decision-making, physical and mental health, and job satisfaction. The teachers' mental state is reflected in the student achievement as well. For example, teachers' happiness has been found to affect students' performance (Briner & Dewberry, 2007, 2–4) and teachers' life satisfaction and perseverance are significant positive predictors of student success (Duckworth *et al.*, 2009, 540–545). Therefore, it is important to know which factors contribute to teacher burnout. Previous studies have shown that life goals have an important role in teachers' well-being. Intrinsic life goals increase well-being by satisfying basic psychological needs and promoting flow experience at work. On the other hand, extrinsic goals do not contribute to satisfaction of basic psychological needs and flow and can be detrimental to teachers' well-being. The aim of this study was to assess whether the same relationship applies to teacher burnout.

### *1.1. Life goals and basic psychological needs within SDT*

According to Self-Determination Theory (SDT) (Kasser & Ryan, 1996, 280; Ryan & Deci, 2022, 4), people differ according to the type of life goals they mostly value and these goals can significantly influence their well-being. According to Kasser & Ryan (1996, 280), extrinsic goals include financial success, social recognition/status, and attractive physical appearance. On the other hand, self-acceptance, significant close relationships, community involvement, and physical health are described as intrinsic goals. These goals contribute to meeting basic and inherent psychological needs that promote personal growth and well-being (e.g., Deci & Ryan, 2000, 227; Davids *et al.*, 2017, 121–129). Individuals who follow them are more in tune with their nature and usually happier (Kasser & Ryan, 1996, 280–286; Olčar *et al.*, 2019, 321). The content of extrinsic goals is strongly shaped by culture, while the content of intrinsic goals is consistent with human nature and needs across cultures. The excessive orientation towards external rewards can distract a person from achieving intrinsic goals, interfere with self-ac-

tualization (Ryan & Deci, 2020, 1-3) and can be related to lower levels of well-being (Unanue *et al.*, 2017, 1–12) and a higher level of burnout (Roche & Haar, 2013, 515–527). Extrinsic life goals require someone else's (external) assessment and therefore do not contribute to, or may even make it difficult to meet basic psychological needs (Dittmar *et al.*, 2014, 879–915). Pursuing extrinsic goals may help the individual to satisfy his/her basic psychological needs, but it will rarely be inherently satisfying.

As mentioned, research shows that basic psychological needs are positively related to intrinsic, and negatively to extrinsic life goals (Bradar *et al.*, 2009, 317–328; Deci & Ryan, 2000, 227–262; Unanue *et al.*, 2017, 2). SDT defines basic psychological needs as internal psychological nutrients necessary for psychological, social, and physical health (Deci *et al.*, 2017, 22; Ryan & Deci, 2022, 2). There are three basic psychological needs: the need for autonomy, the need for competence, and the need for close relationships (Ryan & Deci, 2022, 2; Deci & Ryan, 2000, 228–229; Vansteenkiste *et al.*, 2020, 1). The satisfaction of these three basic psychological needs is necessary for optimal functioning. For example, individuals who experience greater satisfaction of the basic need for close relationships have a safer attachment style and well-being in relationships (Cheon *et al.*, 2019, 685–689; Kormas *et al.*, 2014, 1; Ryan *et al.*, 2006, 817). In addition, thwarting basic psychological needs plays an important role in the development of many psychopathological behaviors, such as personality disorders or depression (Gu *et al.*, 2022, 1–7; Ryan *et al.*, 2006, 828–837). Fulfilling needs at work is associated with job satisfaction and performance, more positive and fewer negative emotions, greater engagement at work (Deci *et al.*, 2017, 19–38; Van den Broeck *et al.*, 2010, 982–986) and higher flow at work (Ilies *et al.*, 2017, 3).

## **1.2. Flow**

When people engage in an activity for which they are intrinsically motivated, and when basic psychological needs are met, especially the need for competence, it is possible to reach a state of complete absorption with this activity called *flow* or *optimal experience* (Csikszentmihalyi *et al.*, 2005, 600; Ilies *et al.*, 2017, 5; Bakker & Van Woerkom,

2017, 47). Flow is a state in which consciousness merges with activity, a person feels complete control over the activity, and loses a sense of time (Csikszentmihalyi *et al.*, 2005, 601–603).

Salanova *et al.* (2006, 12–18) showed that the belief in one's own competence, or self-efficacy, is one of the prerequisites for flow at work, and that the need for competence is a predictor of flow and well-being (Bakker & Van Woerkom, 2017, 47; Schüler *et al.*, 2013, 480–493). Deci and Ryan (2000, 261) argue that competence alone will not lead to intrinsic motivation or flow, but that it is also necessary for individuals to perceive their behavior as autonomous. Coterón *et al.* (2013, 187–189) showed that autonomy and competence are predictors of flow in basketball training, and Hodge *et al.* (2009, 186–200) obtained the same results on athletes. Furthermore, it has been shown that, in addition to autonomy and competence, meeting the need for relatedness is also associated with more frequent flow experience. Bakker (2005, 26–39) showed that resources at work, more specifically autonomy, feedback, supervision, and social support, contribute to experiencing flow in teaching. All aforementioned research shows that satisfaction of basic psychological needs is necessary for experiencing flow.

### **1.3. Occupational burnout**

People often stay in the job they have because of economic reasons, even though their job contributes more to the ill-being than to the well-being. That can also be the case with teachers. Prolonged exposure to stress at work can lead to the development of negative attitudes and behaviors towards work, also known as occupational burnout (Aust *et al.*, 2022, 2; Schaufeli, 2017, 120). According to the Job Demands-Resources model (JD-R model; Demerouti *et al.*, 2001, 499–510; Lesner *et al.*, 2019, 77–79; Schaufeli, 2017, 120–123), burnout is a result of high demands or poor working conditions that deplete the mental and physical resources of employees and lead to exhaustion and health problems (Demerouti *et al.*, 2001, 509; Lesner *et al.*, 2019, 76–96). At the same time, job resources have motivational potential and lead to job engagement, success, and low cynicism (Schaufeli, 2017, 121–123).

#### **1.4. Present study**

According to Self-Determination Theory (Deci & Ryan, 2000, 244–256; Ryan & Deci, 2022, 5) and the Job Demands-Resources model (Lesner *et al.*, 2019, 77–79; Schaufeli, 2017, 121–123), it is possible that intrinsic life goals are resources that reduce the possibility of burnout. For example, Roche & Haar (2013, 515–527) examined the relationship between life goals and job burnout and showed that extrinsic life goals were positively and extrinsic were negatively associated with burnout at work. Still, it is also important to understand the mechanism of this relationship, i.e., whether they are related directly or indirectly. As possible mediators in this study, basic psychological needs and flow were tested.

According to SDT, employers might be emotionally exhausted or engaged because job demands thwart and job resources encourage the satisfaction of basic needs. Van den Broeck *et al.* (2008, 282–290) found that job demands led to lower satisfaction of basic psychological needs, which resulted in a higher level of emotional exhaustion. On the other hand, job resources led to better satisfaction of basic psychological needs and in turn to higher engagement and lower emotional exhaustion. Further research confirmed those findings, adding that high levels of basic psychological needs were associated with autonomous motivation and a high level of effort (De Cooman *et al.*, 2013, 1342).

Research shows that better basic psychological needs satisfaction is related to a higher flow state during work activities (Bakker & Van Woerkom, 2017, 47; Schüler *et al.*, 2013, 491–493). Furthermore, various studies have shown a positive relationship between flow and greater job commitment and some measures of psychological well-being, such as greater performance at work, greater persistence and lower anxiety, and greater self-confidence (Bakker & Van Woerkom, 2017, 47–61; Csikszentmihalyi *et al.*, 2005, 604; Ilies *et al.*, 2017, 4–20; Salanova *et al.*, 2006, 1–19). Therefore, one of the assumptions in this research is that the satisfaction of basic psychological needs and higher flow act as mediators between life goals and burnout at work.

### *Introduction to research objectives*

The aims of this study were: (1) to examine the relationship between life goals and burnout, and (2) to test whether basic psychological needs and flow act as mediating variables in the relationship between life goals and teacher burnout. Based on that, the following hypotheses were made: (H1) intrinsic life goals are negatively associated with teacher burnout; (H2) extrinsic life goals are positively related to teacher burnout; (H3) basic psychological needs and flow are mediators between intrinsic life goals and burnout. Intrinsic life goals lead to higher satisfaction of basic psychological needs and flow which in turn decreases burnout. (H4) Basic psychological needs and flow are mediators between extrinsic life goals and burnout. Extrinsic life goals lead to lower satisfaction of basic psychological needs and flow, which in turn increase burnout.

## **2. Methodology**

### ***2.1. Procedure and participants***

476 primary school class teachers (1<sup>st</sup> to 4<sup>th</sup> grade) from the Republic of Croatia participated in the research. All participants were females and had an average of 16.9 years of service (minimum = 0.2 years; maximum = 42 years).

The study had been approved by The Ethics Committee of the University of Zagreb. The data were collected during several county meetings for professional development of primary school teachers. According to the recent data from the Croatian Bureau of Statistics, in 2020/2021, there were 13,116 class teachers. We used the Taro Yamane method to calculate the appropriate sample size needed for this size of population. It was calculated that 388 respondents were needed to maintain a 95% confident interval, so we can conclude that our sample is big enough to be representative of this population. The respondents were from 10 different counties in Croatia, but mainly from Zagreb County (31.3%) and the City of Zagreb (26.7%), therefore the sample is not geographically stratified. The teachers were asked to fill out questionnaires in a group setting. They were informed that participation in the research was completely anonymous and voluntary, and that the data

obtained from the research would be used only for scientific purposes. Completing the questionnaire took about 30 minutes. The response rate was 90%. All the questionnaires that were filled out more than 95% and in which data were missing at random were included in study.

## 2.2. Instruments

The following scales were used:

*Aspiration Index* (AI, Kasser & Ryan, 1993, 422). The questionnaire consists of 35 items related to seven different life goals (5 items for each goal). Intrinsic goals include personal growth (e.g., personal development and learning new things), close relationships (e.g., having good friends a person can count on), community (e.g., working to improve society), and physical health (e.g., being physically healthy), while extrinsic goals include financial success (e.g., being very wealthy), image (e.g., successfully concealing signs of ageing), and social status (e.g., becoming famous). The respondents assessed how important each goal is to them (1 - not important to me at all; 7 - extremely important to me), on the Likert-type scale. The Cronbach alpha coefficients for the subscales in this study were: 0.62 for personal growth; 0.75 for close relationships; 0.84 for community; 0.73 for health; 0.74 for financial success; 0.87 for social status, and 0.84 for image.

*The Work-Related Basic Need Satisfaction Scale* (W-BPN, Van den Broeck et al., 2010, 1002). The scale measures the basic psychological needs defined by Self-Determination Theory. It includes the following subscales: autonomy (6 items; e.g., Tasks I have to do at work are in line with what I really want to do), competency (4 items; e.g., I do tasks well at work), and relatedness (6 items; e.g., I feel part of a group at work). Some of items in scales are formulated positively and some negatively. The respondents rated all items on a 5-point Likert-type scale (1 – completely disagree; 5 – completely agree). The Cronbach alpha coefficients for the subscales in this study were: 0.81 for autonomy, 0.86 for competence, and 0.74 for relatedness.

*The Work-Related Flow Inventory* (WOLF, Bakker, 2008, 412) measures flow at work. The scale includes three dimensions of flow: absorption (4 items; e.g., When I work, I don't think about anything else), enjoyment (4 items; e.g., I work with a lot of enjoyment) and

intrinsic motivation (5 items; e.g., When I work, I work for myself). Participants estimate how often they experienced flow at work in the previous month, on a 7-point scale (1 – never; 7 – always). The Cronbach alpha coefficients for the subscales in this study were: 0.87 for absorption, 0.95 for work enjoyment, and 0.81 for intrinsic motivation.

*The Oldenburg Burnout Inventory* (OLBI, Demerouti & Bakker, 2008, 77). The questionnaire measures two dimensions of burnout: disengagement (e.g., I am more likely to talk about my job in a negative way) and exhaustion (e.g., During work, I often feel emotionally exhausted). Each subscale contains 8 items, four of which are positively formulated and four are negatively formulated. The participants assessed each item on 4-point Likert-type scale (1 – strongly agree; 4 – strongly disagree). The Cronbach alpha coefficients for the subscales in this study were: 0.73 for exhaustion and 0.72 for disengagement.

### 3. Overview of data analyses

First, data were analyzed using descriptive statistics and the Pearson product moment correlation in order to assess simple relationships between the variables in the model. The measurement and structural models were tested using the Maximum Likelihood method. Several indices of model fit were used: the root mean square error of approximation (RMSEA) values, the Tucker-Lewis Index (TLI), the comparative fit index (CFI), and the normed chi-square ( $\chi^2/df$ ). The recommended values for acceptable fit are above .95 for TLI and CFI, and RMSEA below .08 (Hu & Bentler, 1999, 26); for  $\chi^2/df$ , a value below 5 is considered acceptable (Hair *et al.*, 2014, 579–580; Ljubin-Golub *et al.*, 2020, 151). To assess mediation, a bootstrapping approach with 2000 bootstrap samples was used.

### 4. Results

All variables were examined for missing values and for univariate and multivariate normality (Hair *et al.*, 2014, 69–83). The software used for statistical procedures included IBM SPSS version 21 and IBM Amos version 21. The preliminary analyses showed that all requirements for structural equation modelling were met.



Table 1 (see Appendix) presents the descriptive indicators and intercorrelations between variables. It can be observed that teachers generally strive more for intrinsic than extrinsic goals. Regarding basic psychological needs, teachers show that their psychological needs are satisfied. They show a moderate level of flow and burnout.

#### 4.1. Model verification by structural equation modeling

##### Measurement model testing

A measurement model with six latent variables was tested, each of which had two to four indicators. The latent variables included intrinsic goals (4 indicators), extrinsic goals (3 indicators), basic psychological needs (3 indicators), flow (3 indicators) and burnout (3 indicators). The measurement model had a satisfactory fit ( $\chi^2 = 253,45$ ;  $df = 80$ ;  $p < .001$ ;  $\chi^2/df = 3.19$ ;  $RMSEA = .07$ ;  $IFI = .94$ ;  $TLI = .92$ ;  $CFI = .94$ ).  $\chi^2$  is significant, but this is very common in large samples (Hu *et al.*, 1992) and can be ignored.

**Table 2.** Fit indices of structural models

Model	$\chi^2$	df	$\chi^2/df$	RMSEA	IFI	TLI	CFI
Measurement	253.45**	80	3.19	.07	.94	.92	.94
Structural	297.50**	83	3.58	.07	.92	.90	.92

*Note.* RMSEA - Root Mean Square Error of Approximation; IFI - Incremental Fit Index; TLI - Tucker-Lewis Index; CFI - Comparative Fit Index. \*\* $p < .01$ .

##### Structural model testing

The structural model was tested and it also showed a satisfactory fit ( $\chi^2 = 297,50$ ;  $df = 83$ ;  $p < .001$ ;  $\chi^2/df = 3.19$ ;  $RMSEA = .07$ ;  $IFI = .92$ ;  $TLI = .90$ ;  $CFI = .92$ ). Among the absolute fit indices, the normalized  $\chi^2$  has a ratio lower than 3:1, which is satisfactory, and the RMSEA is lower than 0.08, which is acceptable (Hair *et al.*, 2014, 579). Only the  $\chi^2$  test is statistically significant, which is not adequate, but this is common in large samples (Hair *et al.*, 2014, 580). The incremental fit indices (*IFI*, *TLI*, and *CFI*) are above 0.9 but not above 0.95, indicating a medium fit of the model. The model explained 42.7% of the burnout variance.

**Table 3.** Structural coefficients for tested models

Effect	ILG→WBPN→ →Flow→BO	<i>p</i>	ELG→WBPN→ →Flow→BO	<i>p</i>
Total	-.22	0.004	.15	0.03
Direct	-.03	0.67	.10	0.05
Indirect	-.19	0.001	.05	.13

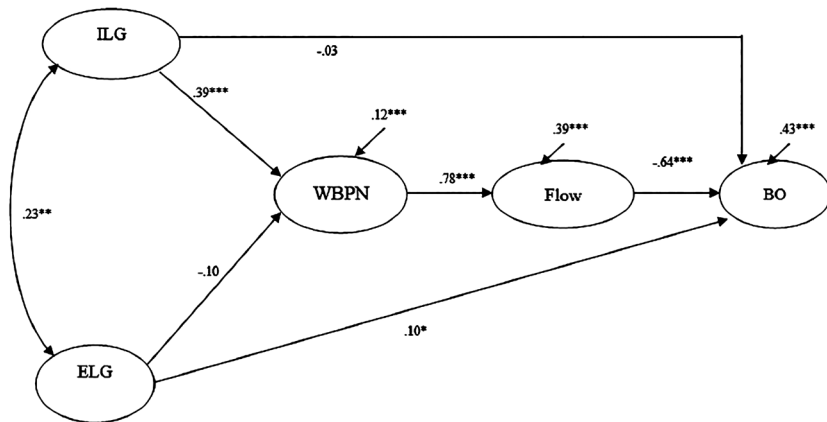
*Note.* ILC - intrinsic life goals; WBPN – Work-related basic psychological needs; ELG - extrinsic life goals; BO – burnout.

According to Hypothesis 1, it was expected that prior to the introduction of mediators, intrinsic life goals would be negatively associated with burnout. As it can be seen from Table 3, the results confirmed this hypothesis, i.e., intrinsic life goals are negatively related to burnout ( $\beta = -.22, p = .04$ ).

Hypothesis 2 stated that extrinsic life goals would be associated positively with burnout. This hypothesis was also confirmed, i.e., extrinsic life goals are related positively to burnout ( $\beta = .15, p = .03$ ).

The final structural model can be seen in Figure 1.

**Figure 1.** The final structural model



*Note.* ILC - Intrinsic life goals; ELG - extrinsic life goals; WBPN – Work-related basic psychological needs; BO – Burnout.  $*p < .05$ .  $**p < .01$ .  $***p < .001$ .

## 4.2. Mediating effects

The second aim was to examine whether basic psychological needs and flow act as mediating variables between life goals and burnout. In this study, mediation effects were tested by the bootstrapping method. The number of samples in the bootstrapping method was 2,000 and the confidence interval was 95%. Mediation was tested on the final structural model.

According to Hypothesis 3, basic psychological needs and flow are mediators between intrinsic life goals and burnout. Intrinsic life goals lead to higher satisfaction of basic psychological needs and flow, which in turn decreases burnout.

This hypothesis has been confirmed. As can be seen from Table 3, after the introduction of mediators, the direct effect of intrinsic goals on burnout is insignificant ( $\beta = -.03, p = 0.69$ ), and the indirect effect is negative and significant ( $\beta = -.19, p = .001$ ). This showed that intrinsic life goals have a negative effect on burnout indirectly, through basic psychological needs and flow. This is known as a full mediation.

According to Hypothesis 4, it was expected that extrinsic life goals would be indirectly positively related to burnout. This hypothesis has not been confirmed. After the inclusion of the mediators basic psychological needs and flow, the direct effect of extrinsic goals on burnout was significant ( $\beta = .10, p = 0.05$ ), but the indirect effect was insignificant ( $\beta = -.05, p = .13$ ). It can be concluded that basic psychological needs and flow do not mediate relationship between extrinsic life goals and burnout, but rather that extrinsic life goals and burnout are related directly.

## 5. Discussion

### 5.1. The relationship between life goals and burnout

Previous research has shown that pursuing intrinsic goals more than the extrinsic ones is positively associated with a variety of well-being indicators, including positive emotions, vitality, and self-fulfillment, and negatively associated with indicators of ill-being, such as depression, anxiety, and physical symptoms (Dittmar *et al.*, 2014, 879–915; Kasser & Ryan, 1996, 280; Ryan & Deci, 2022, 4; Unanue *et al.*, 2017,

2). Our results expand these previously obtained results by showing that valuing intrinsic life goals is related to a lower level of burnout while valuing extrinsic life goals is related to a higher level of burnout. There are more reasons why intrinsic goals contribute to well-being, while extrinsic goals decrease it or are not related to it (Kasser & Ryan, 1996, 280–286; Dittmar *et al.*, 2014, 879–915; Unanue *et al.*, 2017, 1–13). First of all, people who value extrinsic life goals actually base their sense of self-worth on someone else's assessment, which makes it difficult to achieve self-satisfaction and can lead to frustration. Secondly, according to SDT, intrinsic life goals contribute to the satisfaction of basic psychological needs, while focusing on extrinsic life goals distracts us from them and thus makes it more difficult to satisfy them. Thirdly, extrinsic life goals can be harder to achieve than intrinsic goals and this can lead to greater dissatisfaction in people who value them.

## 5.2. Indirect effect

After the introduction of basic psychological needs and flow as mediators, there has been a significant indirect effect between intrinsic life goals and burnout. This is full mediation, i.e., intrinsic life goals contribute to a lower level of burnout through higher WBPB satisfaction and higher flow experience, and direct relationship is no longer significant. According to SDT, intrinsic life goals contribute to the satisfaction of fundamental and inherent basic psychological needs that are in harmony with human nature and therefore contribute to personal growth, development, and well-being. Furthermore, research has shown that a sense of satisfaction of basic psychological needs is associated with flow experience (Coterón *et al.*, 2013, 187–189; Hodge *et al.*, 2009, 186). When our needs are met, the entire capacity of consciousness can be occupied by the task because we do not have to think about how to meet them and it is easier to get into a state of flow. Then these more frequent states of flow in which we feel comfortable, competent, and develop our knowledge and skills, contribute to overall well-being and a lower level of burnout (Aust *et al.*, 2022, 1; Olčar *et al.*, 2021, 912; Salanova *et al.*, 2006, 1–18).

The indirect effect of extrinsic goals on burnout over W-BPN satisfaction and flow is not significant. Figure 3 illustrates that this is so

because extrinsic goals are not significantly related to satisfaction of basic psychological needs. Previous research has also shown that extrinsic life goals are not directly related to meeting basic psychological needs and that pursuing them may even make it difficult to meet basic psychological needs and therefore lead to lower levels of well-being or higher levels of ill-being (Deci & Ryan, 2000, 244–256; Kasser & Ryan, 1996, 284–286; Unanue *et al.*, 2017, 2–12). This is an interesting finding because usually it is considered that life goals contribute to well-being/ill-being through basic needs satisfaction, as it is the case here with intrinsic life goals. On the other hand, it seems that extrinsic goals contribute to burnout directly, but not through basic needs satisfaction. Recent studies have shown that this may be a result of need frustration (Ryan & Deci, 2022, 4; Unanue *et al.*, 2017, 13). According to Bartholomew *et al.* (2011, 77), need frustration is a negative experiential state that occurs when a person perceives that their basic psychological needs are being actively undermined or thwarted. Several studies (Haerens *et al.*, 2015, 26–34; Olafsen *et al.*, 2021, 1; Unanue *et al.*, 2017, 1–13) have demonstrated that need frustration is a construct different from low need satisfaction. It can occur to such an extent that, instead of feeling autonomous, competent, and related, a person feels actively pressured, ineffective or rejected. Studies show that need frustration is more likely to predict negative outcomes and ill-being, while need satisfaction is more strongly related to positive outcomes and well-being (Haerens *et al.*, 2015, 26–34; Unanue *et al.*, 2017, 1; Vansteenkiste *et al.*, 2020, 1–20). This is an addition to an old discussion in psychology that it is always good to examine ill-being and well-being indicators. Previous studies have shown that psychological constructs do not relate the same way to ill-being as to well-being and that well-being and ill-being are not two opposite poles of the same dimension. Ill-being and well-being are rather separate constructs that correlate highly negatively with each other (e.g., Keyes, 2002, 207–220; Zhao & Tay, 2023, 649). The results of biological, psychological, and socioeconomic studies have shown that different indicators correlate differently with measures of well-being and ill-being and that this can therefore not be taken as one dimension but two separate and still related constructs (Ryff *et al.*, 2006, 85–93; Zhao & Tay, 2023, 649).

Still, there is a direct effect of extrinsic life goals on burnout, while intrinsic life goals contribute to burnout only indirectly. Research shows that in less affluent countries having extrinsic goals can even be beneficial (Brdar *et al.*, 2009, 317–327; Spasovski, 2013, 71–79; Unanue *et al.*, 2017, 13), because it can help a person to avoid poverty and enable them to engage in activities in which they are intrinsically interested. Also, maybe when one does not achieve extrinsic life goals (financial success, social status, and image), it can be more easily detectable than seeing that intrinsic life goals are not achieved (personal growth, close relationships, community, and health), so it can be said that extrinsic life goals are more strongly related to burnout.

### **5.3. Conclusions, implications, and limitations**

This paper theoretically connects SDT theory (Deci & Ryan, 2000, 244–256; Ryan & Deci, 2022, 4), the construct of flow (Csikszentmihalyi *et al.*, 2005, 600; Aust *et al.*, 2022, 1) and burnout in a new way. It has also confirmed the importance of teachers' life goals, the importance of meeting basic psychological needs and experiencing flow during work for teachers' well-being. Therefore, principals, professional associates and curriculum creators should be instructed on how to create opportunities that would enable teachers to satisfy basic psychological needs and experience flow. In practical terms, the results of this research suggest that, although some things are beyond our control, the choice of goals and values we will pursue also affects our well-being. The study was conducted in Croatia on the sample of teachers, so it is an addition to research of the same topic in more affluent countries, and it broadens the results relating to this profession.

As the research is correlational, it is not possible to draw cause-and-effect conclusions based on it. Therefore, the results obtained in this study should be verified by longitudinal or experimental research. Also, the sample was composed only of female class teachers and the results cannot be fully generalized to men and to other professions. In the future, it would be good to check the results obtained on samples that would include participants of both genders and other occupations. Also, although the sample was large enough, it was more focused on the

central part of Croatia, so in the following studies it would be recommended to use more geographically stratified sample.

#### **5.4. Acknowledgments**

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#### **5.5. Compliance with Ethical Standards**

*Conflict of Interest.* On behalf of all the authors, the corresponding author states that there is no conflict of interest.

*Data Availability.* The data that support the findings of this study are available from the corresponding author on request.

#### **References**

- Aust, Fabienne; Beneke, Theresa; Peifer, Corinna, and Wekenborg, Magdalena (2022), “The relationship between flow experience and burnout symptoms: A systematic Review”, *International Journal of Environmental Research and Public Health*, 19(7), p. 3865. <https://doi.org/10.3390/ijerph19073865>
- Bakker, Arnold B. (2005), “Flow among music teachers and their students: The crossover of peak experiences”, *Journal of Vocational Behavior*, 66(1), pp. 26–44. <https://doi.org/10.1016/j.jvb.2003.11.001>
- Bakker, Arnold B. (2008), “The work-related flow inventory: Construction and initial validation of the WOLF”, *Journal of Vocational Behavior*, 72(3), pp. 400–414. <https://doi.org/10.1016/j.jvb.2007.11.007>
- Bakker, Arnold B., & Van Woerkom, Mariane, (2017), “Flow at work: A self-determination perspective”, *Occupational Health Science*, 1, pp. 47–65. <https://doi.org/10.1007/s41542-017-0003-3>
- Bartholomew, Kimberly; Ntoumanis, Nikos; Ryan, M. Richard, & Thøgersen-Ntoumani, Cecilie (2011), “Psychological need thwarting in the sport context: Assessing the darker side of athletic experience”, *Journal of Sport and Exercise Psychology*, 33(1), pp. 75–102. <https://doi.org/10.1123/jsep.33.1.75>
- Brdar, Ingrid; Rijavec, Majda, & Miljkovic, Dubravka (2009), “Life goals and well-being: Are extrinsic aspirations always detrimental to well-being?”, *Psychological Topics*, 18(2), pp. 303–316. <https://doaj.org/article/3241b1190a-8949ed918239cd9c76745d>

- Briner, Rob. B. & Dewberry, Chris (2007), *Staff well-being is key to school success: A research study into the links between staff well-being and school performance*, London: University of London and Worklife support. <http://worklifesupport.com/sites/default/files/uploadeddocuments/5902BirkbeckWBPerfSummaryFinal.pdf>
- Cheon, Sung Hyeon; Reeve, Johnmarshall; Lee, Youngsun; Ntoumanis, Nikos; Gillet, Nikolas; Kim, Bo Ram, & Song, Yong-Gwan (2019), “Expanding autonomy psychological need states from two (satisfaction, frustration) to three (dissatisfaction): A classroom-based intervention study”, *Journal of Educational Psychology*, 111(4), pp. 685–702. <https://doi.org/10.1037/edu0000306>
- Coterón, Javier; Sampedro, Javier; Franco, Evelia; Pérez-Tejero, Javier, & Refoyo, Ignacio (2013), “The role of basic psychological needs in predicting dispositional flow of basketball players in training. Differences by sex”, *Revista de Psicología del Deporte*, 22(1), pp. 187-190.
- Csikszentmihalyi, Mihaly; Abuhamdeh, Sami, & Nakamura, Jeanne (2005), “Flow”, in: Elliot, Andrew; Dweck, Carol S., and Yeager, David S. (eds.), *Handbook of competence and motivation*, New York: The Guilford Press, pp. 598–608.
- Davids, Eugene Lee; Roman, Nicolette Vanessa, & Kerchhoff, Lyn Joy J. (2017), “Adolescent goals and aspirations in search of psychological well-being: From the perspective of self-determination theory”, *South African Journal of Psychology*, 47(1), pp. 121–132. <https://doi.org/10.1177/0081246316653744>
- De Cooman, Rain; Stynen, Dave; Van den Broeck, Anja; Sels, Luc, & De Witte, Hans (2013), “How job characteristics relate to need satisfaction and autonomous motivation: Implications for work effort”, *Journal of Applied Social Psychology*, 43(6), pp. 1342–1352. <https://doi.org/10.1111/jasp.12143>
- Deci, Edward L.; Olafsen, Anja H., & Ryan, Richard M. (2017), “Self-determination theory in work organizations: The state of a science”, *Annual Review of Organizational Psychology and Organizational Behavior*, 4(1), pp. 19–43. <https://doi.org/10.1146/annurev-orgpsych-032516-113108>
- Deci, Edward L., & Ryan, Richard M. (2000), “The ‘what’ and ‘why’ of goal pursuits: Human needs and the self-determination of behavior”, *Psychological Inquiry*, 11(4), pp. 227–268. [https://doi.org/10.1207/s15327965pli1104\\_01](https://doi.org/10.1207/s15327965pli1104_01)
- Demerouti, Evangelia; Bakker, Arnold B.; Nachreiner, Friedhelm, & Schaufeli, Wilmar. B. (2001), Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001), “The job demands-resources model of burnout”, *Journal of Applied Psychology*, 86(3), pp. 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
- Demerouti, Evangelia, & Bakker, Arnold B. (2008), “The Oldenburg Burnout Inventory: A good alternative to measure burnout and engagement”, in: Halbesleben, J. (ed.), *Handbook of Stress and Burnout in Health Care*, Hauppauge, NY: Nova Science Publishers, pp. 65–78.
- Dittmar, Helda; Bond, Rod; Hurst, Megan, & Kasser, Tim (2014), “The relationship between materialism and personal well-being: A meta-analysis”, *Jour-*



- nal of Personality and Social Psychology*, 107(5), pp. 879–924. <https://doi.org/10.1037/a0037409>
- Duckworth, Angela Lee; Quinn, Patrick D., & Seligman, Martin E. P. (2009), “Positive predictors of teacher effectiveness”, *The Journal of Positive Psychology*, 4(6), pp. 540–547. <https://doi.org/10.1080/17439760903157232>
- García-Carmona, M., Marín, M. D., & Aguayo, R. (2018), “Burnout syndrome in secondary school teachers: A systematic review and meta-analysis”, *Social Psychology of Education*, 22(1), pp. 189–208. <https://doi.org/10.1007/s11218-018-9471-9>
- Gu, Honglei; Bao, Xiucong, & Xia, Tiansheng (2022), “Basic psychological need frustration and adolescent non-suicidal self-injury: Testing a moderated mediation model of depression and self-compassion”, *Current Psychology*, 42(30) pp. 1–9. <https://doi.org/10.1007/s12144-022-03758-9>
- Haerens, Leen; Aelterman, Nathalie; Vansteenkiste, Maarten; Soenens, Bart, & Van Petegem, Stijn (2015), “Do perceived autonomy-supportive and controlling teaching relate to physical education students’ motivational experiences through unique pathways? Distinguishing between the bright and dark side of motivation”, *Psychology of Sport and Exercise*, 16(1), pp. 26–36. <https://doi.org/10.1016/j.psychsport.2014.08.013>
- Hair, Joseph; Black, William C., Babin, Barry, & Anderson, Rolph E. (2014), *Multivariate data analysis* (seventh edition), Pearson Education International, pp. 579–580.
- Hodge, Ken; Lonsdale, Chris, & Jackson, Susan A. (2009), “Athlete engagement in elite sport: An exploratory investigation of antecedents and consequences”, *The Sport Psychologist*, 23(2), pp. 186–202. <https://doi.org/10.1123/tsp.23.2.186>
- Hu, Li-tze., & Bentler, Peter M. (1999), “Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives”, *Structural Equation Modeling*, 6(1), pp. 1–55.
- Ilies, R., Wagner, D., Wilson, K., Ceja, L., Johnson, M., DeRue, S., & Ilgen, D. (2017), “Flow at work and basic psychological needs: Effects on well-being”, *Applied Psychology*, 66(1), pp. 3–24. <https://doi.org/10.1111/apps.12075>
- Kasser, Tim, & Ryan, Richard M. (1993), “A dark side of the American dream: Correlates of financial success as a central life aspiration”, *Journal of Personality and Social Psychology*, 65(2), pp. 410–422. <https://doi.org/10.1037/0022-3514.65.2.410>
- Kasser, Tim, & Ryan, Richard M. (1996), “Further examining the American dream: Well-being correlates of intrinsic and extrinsic goals”, *Personality and Social Psychology Bulletin*, 22, pp. 281–288.
- Keyes, Corey L. M. (2002), “The mental health continuum: From languishing to flourishing in life”, *Journal of Health and Social Behavior*, 43(2), p. 207. <https://doi.org/10.2307/3090197>
- Kormas, Constantinis; Karamali, Georgia, & Anagnostopoulos, Fotinos (2014), “Attachment anxiety, basic psychological needs satisfaction and depressive

- symptoms in university students: A mediation analysis approach”, *International Journal of Psychological Studies*, 6(2), p. 1. <https://doi.org/10.5539/ijps.v6n2p1>
- Lesener, Tino; Gusy, Burkhard, & Wolter, Christine (2019), “The job demands-resources model: A meta-analytic review of longitudinal studies”, *Work & Stress*, 33(1), pp. 76–103. <https://doi.org/10.1080/02678373.2018.1529065>
- Ljubin-Golub, Tajana; Rijavec, Majda, & Olčar, Diana (2020), “Student flow and burnout: The role of teacher autonomy support and student autonomous motivation”, *Psychological Studies*, 65(2), pp. 145–156. <https://doi.org/10.1007/s12646-019-00539-6>
- Olafsen, Anja; Halvari, Halgeir, & Frølund, Claus Wiemann (2021), “The basic psychological need satisfaction and need frustration at work scale: A validation study”, *Frontiers in Psychology*, 12(1), p. 1. <https://doi.org/10.3389/fpsyg.2021.697306>
- Olčar, Diana; Ljubin Golub, Tajana, & Rijavec, Majda (2021), “The role of academic flow in students’ achievement and well-being”, *Problems of Education in the 21st Century*, 79(6), p. 912. <https://doi.org/10.33225/pec/21.79.912>
- Olčar, Diana; Rijavec, Majda, & Ljubin Golub, Tajana (2019), “Primary school teachers’ life satisfaction: The role of life goals, basic psychological needs and flow at work”, *Current Psychology*, 38, pp. 320–329. <https://doi.org/10.1007/s12144-017-9611-y>
- Roche, Maree, & Haar, Jarrod M. (2013), “Leaders’ life aspirations and job burnout: A self-determination theory approach”, *Leadership & Organization Development Journal*, 34(6), pp. 515–531. <https://doi.org/10.1108/lodj-10-2011-0103>
- Ryan, Richard M., & Deci, Edward L. (2022), “Self-Determination Theory”, in: Maggino, Filomena (ed.), *Encyclopedia of Quality of Life and Well-Being Research*, Cham: Springer, p. 4. [https://doi.org/10.1007/978-3-319-69909-7\\_2630-2](https://doi.org/10.1007/978-3-319-69909-7_2630-2)
- Ryan, Richard M., & Deci, Edward L. (2020), “Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions”, *Contemporary Educational Psychology*, 61, pp. 1–3. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Ryan, Richard M.; Deci, Edward L.; Grolnick, Wendy S., & La Guardia, Jennifer G. (2006), “The significance of autonomy and autonomy support in psychological development and psychopathology”, in: Cicchetti, Dante, & Cohen, Donald J. (eds.), *Developmental psychopathology: Theory and method*, John Wiley & Sons, pp. 795–849.
- Ryff, Carol D.; Dienberg Love, Gayle; Urry, Heather L.; Muller, Daniel; Rosenkranz, Melissa A.; Friedman, Elliot M.; Davidson, Richard J., & Singer, Burton (2006), “Psychological well-being and ill-being: Do they have distinct or mirrored biological correlates?”, *Psychotherapy and Psychosomatics*, 75(2), pp. 85–95. <https://doi.org/10.1159/000090892>

- Salanova, Marisa; Bakker, Arnold B., & Llorens, Susana (2006), “Flow at work: Evidence for an upward spiral of personal and organizational resources”, *Journal of Happiness Studies*, 7(1), pp. 1–22. <https://doi.org/10.1007/s10902-005-8854-8>
- Schaufeli, Wilmar B. (2017), “Applying the job demands-resources model”, *Organizational Dynamics*, 46(2), pp. 120–132. <https://doi.org/10.1016/j.orgdyn.2017.04.008>
- Schüler, Julia; Brandstätter, Veronica, & Sheldon, Kenon M. (2013), “Do implicit motives and basic psychological needs interact to predict well-being and flow? Testing a universal hypothesis and a matching hypothesis”, *Motivation and Emotion*, 37(3), pp. 480–495. <https://doi.org/10.1007/s11031-012-9317-2>
- Spasovski, Ognen (2013), “The relation of basic psychological needs, intrinsic and extrinsic life goals, and collectivism with subjective well-being: A case in Macedonia”, in: Knoop, Hans Henrik, & Delle Fave, Antonella (eds.), *Well-being and Cultures*, Cham: Springer, pp. 71–81.
- Unanue, Wenceslao; Rempel, Konrad; Gómez, Marcos E., & Van den Broeck, Anja (2017), “When and why does materialism relate to employees’ attitudes and well-being: The mediational role of need satisfaction and need frustration”, *Frontiers in Psychology*, 8, pp. 1–13. <https://doi.org/10.3389/fpsyg.2017.01755>
- Van den Broeck, Anja; Vansteenkiste, Maarten, De Witte, Hans, & Lens, Willy (2008), “Explaining the relationships between job characteristics, burnout and engagement: The role of basic psychological need satisfaction”, *Work and Stress*, 22, pp. 277–294. <https://doi.org/10.1080/02678370802393672>
- Van den Broeck, Anja; Vansteenkiste, Maarten, De Witte, Hans, Soenens, Bart, & Lens, Willy (2010), “Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the work-related basic need satisfaction scale”, *Journal of Occupational and Organizational Psychology*, 83(4), pp. 981–1002. <https://doi.org/10.1348/096317909x481382>
- Vansteenkiste, Maartin; Ryan, Richard M., & Soenens, Bart (2020), “Basic psychological need theory: Advancements, critical themes, and future directions”, *Motivation and emotion*, 44, pp. 1–31. <https://doi.org/10.1007/s11031-019-09818-1>
- Zhao, Maggie Yue, & Tay, Luise (2023), “From ill-being to well-being: Bipolar or bivariate?”, *The Journal of Positive Psychology*, 18(5), pp. 649–659. <https://doi.org/10.1080/17439760.2022.2109204>

## ŽIVOTNI CILJEVI I IZGARANJE KOD HRVATSKIH OSNOVNOŠKOLSKIH UČITELJA: POSREDNIČKA ULOGA OSNOVNIH PSIHOLOŠKIH POTREBA I ZANESENOSTI NA POSLU

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*Dobro je poznato da je učiteljska profesija jedna od najstresnijih. U ovom istraživanju smo, unutar Teorije samoodređenja, ispitivali odnos između životnih ciljeva i izgaranja. Također, se ispitivalo služe li temeljne psihološke potrebe povezane s poslom i zanesenost kao medijatori između životnih ciljeva i izgaranja. U istraživanju je sudjelovalo 480 učiteljica osnovnih škola iz različitih dijelova Hrvatske. Sudionice su imale prosječno 17 godina radnog iskustva. Rezultati istraživanja su pokazali da su ekstrinzični životni ciljevi izravno doveli do većeg izgaranja. Intrinzični životni ciljevi dovode do višeg zadovoljenja temeljnih psiholoških potreba i češćih iskustava zanesenosti te tim putem neizravno smanjuju izgaranje na poslu. Doprinos ovog rada leži u objašnjavanju veze između varijabli iz Teorije samoodređenja i koncepta zanesenosti. Također, rezultati se mogu koristiti u poboljšanju uvjeta na poslu tako da potiču dobrobit nastavnika.*

**Ključne riječi:** dobrobit; Teorija samoodređenja; učitelji razredne nastave; temeljne psihološke potrebe; zanesenost

## Appendix

**Table 1.** Descriptive indicators and intercorrelations between variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Personal growth	1	.55**	.50**	.47**	.24**	.10*	.17**	.08	.25**	-.02	.21**	.22**	.24**	-.08	-.18**
2. Close relationships		1	.47**	.44**	.09	-.03	.10*	.18**	.19**	.03	.12*	.21**	.23**	-.05	-.11*
3. Community			1	.42**	.09	.14**	.13**	.15**	.25**	.05	.21**	.29**	.26**	-.11*	-.19**
4. Health				1	.16**	.02	.18**	.12**	.18**	-.06	.12*	.15**	.14**	.03	-.06
5. Financial success					1	.58**	.64**	-.00	.10*	-.12*	-.03	.00	-.07	.06	.08
6. Social status						1	.61**	-.05	.10*	-.08	.04	.07	.06	.05	-.01
7. Image							1	.02	.06	-.11*	.00	-.01	-.05	.11*	.09*
8. Autonomy								1	.30**	.41**	.13**	.30**	.25**	-.30**	-.33**
9. Competence									1	.32**	.35**	.44**	.41**	-.28**	-.28**
10. Relatedness										1	.29**	.43**	.37**	-.43**	-.44**
11. Absorption											1	.66**	.59**	-.25**	-.30**
12. Work enjoyment												1	.76**	-.42**	-.52**
13. Intrinsic motivation													1	-.37**	-.52**
14. Exhaustion														1	.64**
15. Disengagement															1
Range	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-5	1-5	1-5	1-7	1-7	1-7	1-4	1-4
Mean	5.89	6.38	5.66	6.42	3.41	2.15	3.30	3.89	4.15	3.60	5.17	5.65	4.96	2.29	2.02
Standard deviation	0.76	0.65	0.92	0.61	1.12	1.07	1.21	0.77	0.60	0.66	1.17	1.09	1.18	0.45	0.45
Crombach alpha	.624	.748	.837	.828	.734	.873	.836	.81	.86	.74	.87	.95	.81	.73	.72

Note. \*\*  $p < 0.01$ ; \*  $p < 0.05$