

## THE MEDIATING ROLE OF NEED CRAFTING IN THE RELATIONSHIP BETWEEN SELF-AWARENESS AND SATISFACTION OF BASIC PSYCHOLOGICAL NEEDS

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### Abstract

Satisfaction of basic psychological needs is, according to Self-Determination Theory, one of the key predictors for mental health. Its important correlate however, is self-awareness, which—during the period of emerging identity in adolescence—may represent a challenging task often accompanied by negative emotional experiences. A potential mediator between self-awareness and overall satisfaction of the basic needs for autonomy, competence, and relatedness may be need crafting, that is, intentional and proactive adjustments in behavior and thinking through which individuals attempt to fulfill their psychological needs. The aim of this study is to examine the mediating role of need crafting focused on the need for autonomy, competence, and relatedness in the relationship between self-awareness and overall satisfaction of basic psychological needs. The sample consisted of 293 adolescents ( $M_{\text{age}} = 17.69$ ,  $SD = 1.33$ ; 62,5% of women). Data were collected using the Need Crafting Scale, the Basic Psychological Need Satisfaction Scales (BPNS), and the Self-Determination Scale. The results indicate a direct relationship between self-awareness and the fulfillment of basic psychological needs ( $B = 0.093$ ,  $SE = 0.012$ ;  $R^2 = 31.9$ ), as well as an indirect effect through competence-oriented need crafting ( $B = 0.013$ ;  $p < 0.05$ ;  $R^2 = 0.038$ ). The relationship between self-awareness and need crafting in the domain of relatedness was not confirmed. Likewise, no significant relationship was found between autonomy-oriented need crafting and overall need satisfaction. The findings highlight, on a practical level, the importance of fostering self-awareness during adolescence. On a theoretical level, it may be considered that need crafting in the domain of relatedness requires different personality characteristics than other psychological needs. Relatedness-oriented need crafting may be more strongly tied to contextual factors than to self-awareness itself. On the other hand, autonomy-oriented need crafting may focus more on one's own identity rather than one need satisfaction.

**Keywords:** *Awareness of self, satisfaction of basic psychological needs, need crafting, adolescents.*

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### 1. Introduction and aim of research

Adolescence is a period of many changes, including psychological maturation. This manifests itself in the area of self-regulation (goal-oriented behavior and impulse control). Social-cognitive development in adolescence is also related to the relevance of the social context and peer acceptance (Blakemore & Mills, 2014). At the same time, identity develops and becomes more defined. The fulfillment of basic psychological needs is highly relevant for these processes. According to self-determination theory, these needs include autonomy, competence, and relatedness (Deci & Ryan, 2018).

To be able to satisfy psychological needs, a person must be able to identify them, which is an act of self-awareness. In order to fulfill these needs, one must first be able to recognize them — which constitutes an act of self-awareness. Ryan and Deci (2017) also consider self-awareness to be a manifestation of autonomous regulation. Autonomous functioning requires openness and awareness toward internal signals (Ryan, Kuhl & Deci, 1997). Organismic integration presupposes that people are naturally “open” to internal signals, which allows for the continuous integration of experiences.

Neurological development in adolescence forms the basis for increasing self-reflection and, consequently, self-awareness. On the other hand, self-reflection in adolescence is also a source of negative emotional experiences, since abstract thinking is accompanied by an exaggerated perception of one's own negative characteristics. Negatívny interpretatívny bias sa v adolescencii môže týkať aj self (Wang, 2025). Also, adolescents typically experience greater daily emotional fluctuations compared to children and adults (Arnett, 1999; Larson et al., 2002; Maciejewski et al., 2015).

Among the variables that may regulate the extent to which awareness of self becomes a predictor of psychological need satisfaction is need crafting. In line with SDT's organismic dialectical perspective (Ryan & Deci, 2002), adolescents actively shape their experiences and assign meaning to them; they are not merely passive recipients. They can contribute to their own need-based experiences and thereby facilitate the fulfillment of their psychological needs (Laporte et al., 2021).

At the same time, the concept of need crafting is a relatively new and insufficiently explored construct. Although it is assumed that awareness of self is a prerequisite variable for need crafting (Napier et al., 2024), this assumption has not been adequately examined in adolescents. Moreover, self-reflection in adolescence may be associated with negative emotional experiences, which may not necessarily predict the crafting of psychological needs. It is also well established that the satisfaction of psychological needs depends on the context, which varies in the extent to which it supports the needs for autonomy, competence, and relatedness (Ryan & Deci, 2017).

Therefore, the aim of this study is to examine the mediating role of need crafting focused on the need for autonomy, competence, and relatedness in the relationship between self-awareness and overall satisfaction of basic psychological needs.

## 2. Methods

The sample consisted of 293 adolescents ( $M_{age} = 17.69$ ,  $SD = 1.33$ ; 62,5% of women). Adolescents were invited to participate in the study through university students, who were instructed to approach adolescents aged 15–20 years within their social networks, specifically secondary school students. In addition, the legal guardian of each adolescent completed an informed consent form containing information about the study prior to data collection. To prevent duplicate responses from the same participant, each respondent was asked to provide a unique personal code at the beginning of the questionnaire.

*The Need Crafting Scale* (Laporte et al., 2021) is a 30-item instrument assessing a proactive approach to fulfilling the needs for autonomy, competence, and relatedness. Each need is evaluated through 10 items, of which six capture the awareness component and four measure the action component. Example items include: "It is clear to me ..." and "As much as possible, I try to do things ...". All items are rated on a 5-point Likert scale ranging from 1 (not at all true) to 5 (completely true) (Cronbach  $\alpha=0.866$ ).

The *BMPN – Balanced Measure of Psychological Needs* scale measures the satisfaction and frustration of three basic psychological needs: autonomy, competence, and relatedness. It is based on Self-Determination Theory and enables the assessment of both the fulfilment and the frustration of these needs. Respondents rate the items on a 7-point Likert scale (1 – not at all true; 7 – completely true), with each need represented by a pair of subscales – satisfaction and frustration. Higher overall scores indicate a higher level of overall need satisfaction (Cronbach  $\alpha=0.823$ ).

The *Self-Determination Scale* (Sheldon et al., 1996) measures two subscales: awareness of self and perceived choice. Each subscale is assessed with 5 items. Respondents choose which statement in each pair (A or B) fits them better, with each pair representing a continuum from low to high self-determination. The items are rated on a 5-point scale (1 – only A is true; 5 – only B is true).

Examples of items: (1) A. My emotions sometimes seem alien to me; B. My emotions always feel like they belong to me; (2) A. When I accomplish something, I often feel that it wasn't really me who achieved it; B. When I accomplish something, I always feel that it was truly me who achieved it. (Cronbach's  $\alpha$ : 0.802).

The data were processed using the JAPS program with the SEM module.

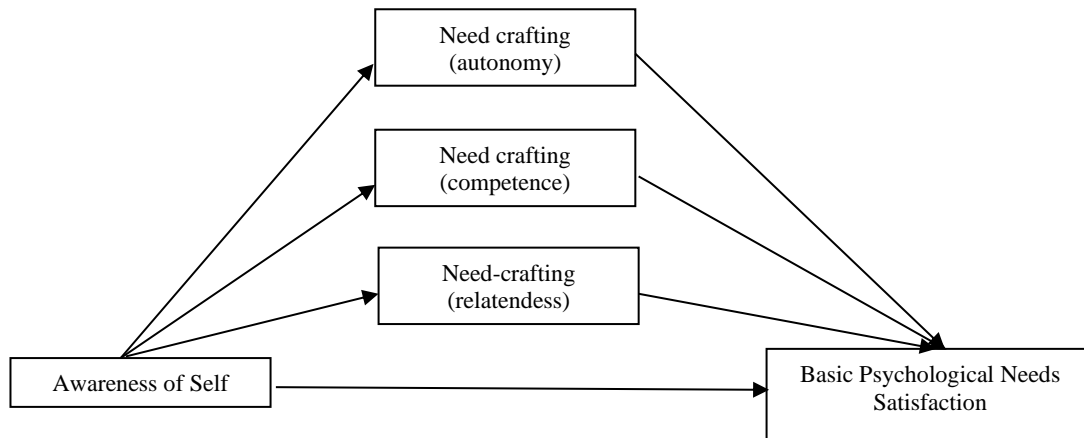
### 3. Results

Table 1. Descriptive statistics of the variables.

	BMPN	AS	NCM_C	NCM_A	NCM_R
M	48.857	18.406	25.297	25.116	25.628
SD	9.198	4.578	3.845	3.820	4.022
Skewness	-1.060	-0.423	-0.730	-0.854	-0.975
SE	0.142	0.142	0.142	0.142	0.142
Min	9.000	6.000	7.000	7.000	9.000
Max	63.000	25.000	35.000	35.000	35.000
P25	44.000	15.000	23.000	23.000	24.000
P50	50.000	19.000	25.000	25.000	26.000
P75	56.000	22.000	28.000	27.000	28.000

Notes: BMPN – balanced measure of basic needs – satisfaction; AS=awareness of self; NCM\_C – need crafting (competence), NCM\_A – need crafting (autonomy), NCM\_R – need crafting (relatedness)

Figure 2. Need Crafting as a mediator between Awareness of Self and Basic Psychological needs Satisfaction.



The structural equation model was estimated using the robust maximum likelihood estimator (MLR), which adjusts standard errors and confidence intervals for deviations from normality. This approach ensured stable parameter estimates despite the presence of a pronounced ceiling effect in the variable representing overall need satisfaction. The model explained 31.9% of the variance in overall need satisfaction,

Awareness of self significantly and positively predicted overall psychological need satisfaction ( $\beta = 0.083$ ,  $SE = 0.012$ ,  $z = 6.587$ ,  $p < .001$ , 95% CI [0.056, 0.104]). Awareness of self was also significantly associated with all three need crafting components: competence ( $\beta = 0.046$ ,  $p = .001$ ), relatedness ( $\beta = 0.027$ ,  $p = .046$ ), and autonomy ( $\beta = 0.033$ ,  $p = .007$ ).

Among the mediators, both competence-related need crafting ( $\beta = 0.176$ ,  $SE = 0.077$ ,  $p = .022$ ) and relatedness-related need crafting ( $\beta = 0.138$ ,  $SE = 0.072$ ,  $p = .012$ ) significantly predicted overall need satisfaction. The autonomy-related NCM component was not a significant predictor ( $\beta = 0.063$ ,  $p = .469$ ).

Of the three tested mediation pathways, only a very small but statistically significant indirect effect emerged: autonomy related need crafting mediated relationship between awareness of self and overall need satisfaction ( $\beta = 0.002$ ,  $SE = 0.001$ ,  $z = 2.103$ ,  $p = .035$ , 95% CI [0.000, 0.007]).

The indirect effects through competence-related NCM ( $\beta = 0.007$ ,  $p = .069$ ) and relatedness-related NCM ( $\beta = 0.004$ ,  $p = .148$ ) were not statistically significant.

These findings indicate that the effect of Awareness of Self on overall need satisfaction is predominantly direct, with only a marginal contribution of the need crafting.

The total effect of Awareness of self on overall need satisfaction was significant and positive ( $\beta = 0.089$ ,  $SE = 0.012$ ,  $z = 7.025$ ,  $p < .001$ , 95% CI [0.068, 0.118]).

Although the total indirect effect reached statistical significance ( $\beta = 0.013$ ,  $p = .037$ ), its magnitude was very small, confirming the minimal mediating role of need crafting components.

#### 4. Discussion

The aim of the present paper was to examine the mediating role of need crafting in the three basic psychological needs—autonomy, competence, and relatedness—in the relationship between self-awareness and basic need satisfaction in a sample of adolescents aged 15–20 years.

The findings demonstrate that awareness of self contributes to psychological need satisfaction, and this effect is primarily direct. The use of the robust MLR estimator ensured reliable estimation despite the ceiling effect. Need crafting played only a minor mediating role, with a significant mediation emerging solely in the autonomy dimension.

The results highlight several patterns: self-awareness increases need crafting across all three psychological needs. Although self-awareness in adolescence may sometimes be associated with negative emotional experiences, our findings contribute to the literature by suggesting that awareness of self appears to function as a variable that supports a proactive approach to psychological needs. In this sense, awareness of self may be considered a contributing factor to self-regulation, as suggested in theoretical frameworks by Carver and Scheier (1998).

Competence-related need crafting and relatedness-related need crafting predicted overall psychological need satisfaction, whereas autonomy-related need crafting did not. A possible explanation is that competence and relatedness are more directly linked to concrete behaviors that can enhance them (school engagement, forming relationships), whereas the need for autonomy—and its crafting—is tied to internal characteristics of personality. These are more difficult to articulate and, in adolescence, are still in the process of development alongside identity formation. At the same time, a mediating effect of autonomy-related need crafting appeared in the relationship between awareness of self and overall need satisfaction. This may have practical implications—supporting awareness of self through self-reflection-based interventions, such as youth mentoring, could enhance autonomy-related processes.

Awareness of self was associated with a higher overall level of psychological need satisfaction. Individuals with higher self-awareness are better able to recognize their own needs and to choose environments and activities that help them satisfy those needs. This supports the relevance of the need-crafting concept and its investigation in adolescence. Acting autonomously means acting with a sense of choice and personal endorsement, which presupposes a certain level of self-understanding (Ryan & Deci, 2022).

However, the findings must be interpreted with caution due to a notable limitation: the variable “overall psychological need satisfaction” showed a strong ceiling effect, with most respondents reporting high levels of need satisfaction—an effect commonly observed in non-clinical samples.

Moreover, the authors of the Balanced Measure of Psychological Needs Scale note that the needs for autonomy, competence, and relatedness should not be treated as a single overall indicator of psychological need satisfaction, but rather examined separately. Conversely, Ryan and Deci (2017) argue that the three psychological needs are interdependent and mutually reinforcing; for example, supporting relatedness may foster competence and autonomy satisfaction. Future research could therefore focus on exploring specific ways in which psychological needs are satisfied and the degree to which these strategies are adaptive.

#### References

- Arnett, J. J. (1999). *Adolescent storm and stress, reconsidered*. *American Psychologist*, 54(5), 317–326.
- Carver, C. S., & Scheier, M. F. (1998). *On the Self-Regulation of Behavior*. Cambridge University Press.
- Džuka, J. (2019). *Factor structure of the Balanced Measure of Psychological Needs Scale (BMPN) among persons with incomes below the ‘at-risk-of-poverty threshold’*. *Československá psychologie*, 63(5), 544–557.
- Laporte, N., Soenens, B., Flamant, N., Vansteenkiste, M., Mabbe, E., & Brenning, K. (2021). The role of daily need crafting in daily fluctuations in adolescents’ need-based and affective experiences. *Motivation and Emotion*, 46(2), 137–149. <https://doi.org/10.1007/s11031-021-09921-2>
- Larson, R. W., Moneta, G., Richards, M. H., & Wilson, S. (2002). Continuity, stability, and change in daily emotional experience across adolescence. *Child Development*, 73(4), 1151–1165.

- Maciejewski, D. F., van Lier, P. A. C., Branje, S. J. T., Meeus, W. H. J., & Koot, H. M. (2015). A five-year longitudinal study on mood variability across adolescence using daily diaries. *Child Development, 86*(6), 1908–1921.
- Napier, A. D., Slempp, G. R., & Vella-Brodrick, D. A. (2024). Crafting One's Life and its Relationship with Psychological Needs: A Scoping Review. *Applied Research Quality Life, 19*, 2063–2101. <https://doi.org/10.1007/s11482-024-10322-z>
- Neubauer, A. B., & Voss, A. (2016). Validation and Revision of a German Version of the Balanced Measure of Psychological Needs Scale. *Journal of Individual Differences, 37*(1), 56–72. <https://doi.org/10.1027/1614-0001/a000188>
- Ryan, R. M., & Deci, E. L. (2017). *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York: Guilford Press.
- Ryan, R. M., & Deci, E. L. (2022). Self-Determination Theory. In F. Maggino (Ed.) *Encyclopedia of Quality of Life and Well-Being Research*. Springer, Cham. [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, R. M., Kuhl, J., & Deci, E. L. (1997). *Nature and autonomy: An organizational view of social and neurobiological aspects of self-regulation*. In R. S. Wyer (Ed.), *Advances in social cognition* (Vol. 10, pp. 191–207). Mahwah, NJ: Erlbaum.
- Sheldon, K. M., & Hilpert, J. (2012). The balanced measure of psychological needs (BMPN) scale: An alternative domain-general measure of need satisfaction. *Motivation and Emotion, 36*(4), 439–451.
- Sheldon, K. M., Ryan, R. M., & Reis, H. (1996). What makes for a good day? Competence and autonomy in the day and in the person. *Personality and Social Psychology Bulletin, 22*, 1270-1279.