



The Relationship between Attachment Styles, Maladaptive Caregiving Strategies, and Public Prosocial Tendencies toward the LGBTQIA+ Community: A Cross-sectional Study among Slovak Adults



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Abstract:

Background: Attachment and caregiving are two mutually interrelated systems. Attachment is reflected in the behaviour and attitude towards the self and others. Caregiving behaviour focuses on relieving distress and promoting the well-being of others. The question is how these two systems contribute to prosocial tendencies towards minority groups. The primary aim of this research was to explore the relationship and the predictive potential of attachment styles and maladaptive caregiving strategies (hyperactivation and deactivation) in relation to public prosocial tendencies towards sexual and gender minorities in a population of Slovak adults.

Objective: This study aimed to analyze the relationship between attachment styles, maladaptive caregiving strategies, and selected public prosocial tendencies toward the LGBTQIA+ community in the Slovak population.

Methods: The participants were 1,000 Slovak adults with a mean age of 26.58 years (SD = 7.035), taking part in the study via an online questionnaire battery. Respondents completed a questionnaire mapping their attachment style (Lenghart and Čerešník, 2022a), which is used to determine the attachment style (secure, avoidant, anxious, and disorganized). The second method was a scale of the caregiving system (Lenghart and Čerešník, 2022b), based on the original version of The Caregiving System Scale (Shaver *et al.*, 2010). The scale maps two basic types of maladaptive caregiving strategies, hyperactivation and deactivation.

Results: The results have demonstrated secure attachment style to be positively correlated with all prosocial tendencies, and negatively correlated with insecure attachment styles and maladaptive caregiving strategies. Insecure attachment styles positively correlated with maladaptive strategies, and negatively correlated with only some prosocial tendencies. Regression analyses showed that the secure attachment style predicted all of the observed prosocial tendencies, the avoidant attachment style negatively predicted two of the six tendencies, the anxious attachment style positively predicted two of the six tendencies, and the disorganised attachment style did not predict any of the prosocial tendencies. The maladaptive hyperactivation strategy positively predicted four of the six tendencies, and the maladaptive deactivation strategy, in contrast, negatively predicted all six prosocial tendencies.

Conclusion: Based on the results of the study, it can be stated that attachment, or attachment style and maladaptive caregiving strategies have a strong and significant impact on public prosocial tendencies towards the LGBTQIA+ community in the Slovak population.

Keywords: Attachment styles, LGBTQIA, Prosociality, Maladaptive caregiving strategies, Slovak adult population, Public prosocial tendencies.

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1. INTRODUCTION

Attachment refers to the emotional bond that is formed between a caregiver and a child. Four types of attachment styles have been identified in adulthood: secure, fearful-avoidant (disorganised), preoccupied-ambivalent (anxious), and dismissive-avoidant (avoidant) [1, 2].

Individuals with a secure attachment style tend to have a positive view of themselves and believe that they are worthy of love and receiving care [3]. They have a strong sense of self-respect and are comfortable seeking support and intimacy from their partners and other people without fear of rejection or abandonment. This positive self-image allows them to communicate openly and honestly, express their needs and emotions, and create a deep sense of emotional intimacy in a relationship [4]. In addition, people with a secure attachment style have a positive image of others and perceive them as trustworthy and reliable [5]. They believe that others will be available and responsive to their needs, and they can rely on their partners and other people to provide support and reassurance in times of stress or difficulty. This positive image of others enables secure individuals to form close and enduring bonds defined by mutual respect, empathy, and cooperation [4]. They are able to maintain boundaries, while being emotionally available and supportive to other people. Secure attachment style promotes a sense of emotional stability and satisfaction, as people with it feel safe and secure in their relationships [5].

Fearful-avoidant attachment, also known as disorganised attachment style, is described by a negative self-image and negative perception of others [1]. Individuals with this attachment style experience a deep-seated fear of intimacy and tend to avoid establishing close relationships [6]. This fear stems from a combination of conflicting desires for closeness and independence, leading to internal confusion and difficulty in forming and maintaining emotional relationships [7]. In the case of fearful-avoidant attachment, individuals often struggle with a negative self-image, perceiving themselves as unworthy or unlovable [8]. They may harbour deep insecurities, feel inadequate, and believe that others will eventually reject or abandon them. Consequently, they may sabotage prospective relationships or avoid getting too close to others as a way of protecting themselves from potential emotional pain [9]. In addition, people with fearful-avoidant attachment also have a negative image of others, perceiving them as untrustworthy or unreliable [10]. This perception may be shaped by past experiences of inconsistent or abusive caregiving, leading to a lack of trust in the reliability and availability of others at times of need [11]. As a result, individuals with a fearful-avoidant attachment style may find it difficult to emotionally open up or rely on the support of others, fearing they will be betrayed or disappointed. The fear of intimacy and avoidance of close relationships experienced by individuals with a fearful-avoidant attachment style can have significant consequences on their overall well-being and relationship satisfaction [4]. Their efforts to form secure and trusting relationships can result in feelings of

loneliness, emotional isolation, and a decreased ability to seek and provide support [12].

People with a preoccupied-ambivalent (anxious) attachment style display higher levels of over-activation. While this can facilitate the extraction of emotional memories, it also causes confusion about these emotions [13]. The over-activation strategy, which triggers a higher level of sensitivity to emotional stimuli leading to both arousal and high sensitivity to emotional changes, is typical for people with this attachment style [14]. According to research by Mikulincer and Shaver [7], anxious individuals are the least effective at managing emotions in threatening situations and have the greatest doubts about their coping skills in emotionally challenging situations, of all the attachment styles. People with anxious attachment style seek reassurance from other people by switching from their negative self-image to a positive one gained through positive feedback from others [15]. They have a more negative view of self, lower self-esteem, and a less complex self-structure [1, 16, 17]. Anxious individuals exhibit a negative, simple, and less integrated self-structure permeated with negative self-attributions and affect. This pattern reflects the underlying insecurity of attachment and their difficulty in regulating distress. They expect conflict and distressing situations to have negative consequences on their relationships [18]. This is based on the notion that anxious individuals who have received inconsistent or inadequate support from their primary caregivers have developed a low threshold for perceiving threat and maintaining closeness, and as a result, are highly concerned with closeness in relationships and avoid any conflict [18, 19].

Dismissive-avoidant attachment (avoidant style) is defined by a positive self-image and a negative image of others, leading to emotional distance and avoidance of intimacy [2, 20]. Fraley *et al.* [21] found that individuals with an avoidant attachment style often experience difficulty recognising and expressing their own emotions. This suppression of emotions can hinder their ability to engage in open and authentic communication within relationships, leading to difficulties in forming and maintaining close relationships. On top of that, Ein-Dor *et al.* [22] also highlighted the link between avoidant attachment style and difficulties in forming close friendships. They found that individuals with an avoidant attachment style may perceive others as less trustworthy and less available for support, leading to lower levels of the quality of friendships and reduced social support. Research by Simpson *et al.* [23] suggests that adults with avoidant attachment style often have difficulty establishing and maintaining satisfying romantic relationships, and relationships in general. They tend to have a heightened fear of intimacy and may act in a distant manner when their partner attempts to get closer. This pattern of behaviour can create a cycle of dissatisfaction and conflict in the relationship, ultimately leading to relationship instability or even end.

These attachment styles can have a significant impact on various aspects of adult life, including mental health,

physical health, and interpersonal relationships [24-29]. It has been found that attachment style can also have a significant impact on prosocial tendencies toward other people. Individuals with a secure attachment style are more likely to engage in prosocial behaviour, and have healthier interpersonal relationships [30, 31]. Individuals with disorganised or avoidant attachment styles may exhibit lower levels of prosocial behaviour, and experience difficulty forming close relationships with other people [32]. Attachment styles can influence how individuals perceive and respond to their environment, which in turn affects their social functioning [33]. For instance, people with an anxious attachment style may have a strong need for reassurance, which may affect their ability to engage in prosocial behaviour. In terms of prosocial behaviour towards minority groups, one research study was conducted in the Czech Republic among a population of adults aged 18 to 64. The research by Lenghart and Čerešník [34] demonstrated significant relationships between public and digital prosocial tendencies and individual attachment styles. Secure and anxious attachment styles were shown as positive predictors of public and digital prosociality toward sexual and gender minorities. Conversely, avoidant attachment style was shown to be a significantly negative predictor of these prosocial tendencies. Disorganised attachment style was not a significant predictor of either public or digital prosociality, which may be related to ambivalence (anxiety and avoidance) in behaviour.

The attachment system interacts with the so-called caregiving system. The caregiving system is a biologically determined behavioural system [35] that motivates parents to protect, care for, and comfort their children in times of need. It is guided by representations of caregiving, which are mental models of caregiving that include ideas and feelings about the child, the caregiver, and the relationship between them [36]. The behavioural caregiving system is reciprocal with the behavioural attachment system, serving the same adaptive function, which is to ensure the protection of the child and the survival of the species [37]. This system exists independently of the attachment system, but the two are developmentally and behaviourally related [38]. The caregiving system is complex and flexible and forms a cycle with the child's attachment system in order to preserve the child's well-being [39]. It is also linked to representations of maternal caregiving and may be influenced by the mother's own experiences of attachment in childhood [36]. The way in which individuals give care to others is influenced by their previous experiences of interacting with society, which are then reflected in their thoughts and ideas about caregiving [4, 35, 40]. When people activate their caregiving system, their internal beliefs about being a caregiver and being worthy of others' help start influencing their actions. These mental representations play a key role in guiding their caregiving behaviours. These representations also help individuals make necessary adjustments to their caregiving strategies to achieve significant goals [37]. In situations where

people continually face setbacks in achieving the desired outcome in the context of the caregiving system, they may develop negative mental perceptions and representations of caregiving. These perceptions suggest that the primary caregiving system approach needs to be replaced with alternative or maladaptive strategies, such as hyperactivation or deactivation [41].

Hyperactivation involves an intense and anxious approach to seeking closeness and support from the caregiver, often in response to stress or a threat [42]. It is usually observed in individuals with an anxious attachment style and described by intrusive and assiduous behaviours related to caregiving [43]. It involves protest responses that reinforce the primary strategy of the caregiving system, and continually activate the behavioural system until its goal is met [41].

Deactivation refers to the suppression or avoidance of the attachment system, where individuals may downplay their own support needs and distance themselves from seeking caregiving behaviours [44]. Deactivation is often associated with avoidant attachment styles [45]. These secondary strategies can consolidate into dispositional orientations toward caregiving, and influence individuals' overall approach to caregiving [43]. The strategies of hyperactivation and deactivation can impact relationship dynamics, psychological well-being, and health outcomes [46, 47].

In 2010, Shaver and colleagues conducted a series of studies on a population of American and Israeli adults, examining the relationship between secondary (maladaptive) strategies, personality, and prosocial tendencies. Their study found that deactivation correlated negatively with fifteen out of twenty-one tendencies (*e.g.*, empathic concern, willingness to help, communal orientation, empathic response to stories, or values of universalism), while correlating positively with only one (cynicism). In contrast, hyperactivation was found to be linked to only eight out of twenty-one tendencies. Hyperactivation was positively correlated with six tendencies (*e.g.*, fantasizing, communal orientation, or personal stress response to a story), and negatively correlated with only one tendency (*e.g.*, willingness to help).

1.1. Current Study

Although the literature review presented has demonstrated a significant effect of the relationship between attachment styles and maladaptive caregiving system strategies on the level of prosociality, it is unknown to what extent these two systems affect the production of prosocial tendencies towards sexual and gender minorities. The first aim of the present research was to determine what relationships exist between attachment styles, maladaptive caregiving strategies, and prosocial tendencies towards the LGBTQIA+ community. The second aim was to determine the extent to which attachment styles and maladaptive strategies predict individual prosocial tendencies. For the present study, we set out six research questions in relation to our variables of interest:

RQ 1 How does secure attachment style relate to

individual prosocial tendencies towards the LGBTQIA+ community?

RQ 2 How does avoidant attachment style relate to individual prosocial tendencies towards the LGBTQIA+ community?

RQ 3 How does anxious attachment style relate to individual prosocial tendencies towards the LGBTQIA+ community?

RQ 4 How does disorganised attachment style relate to individual prosocial tendencies towards the LGBTQIA+ community?

RQ 5 How does the maladaptive strategy of deactivation relate to individual prosocial tendencies towards the LGBTQIA+ community?

RQ 6. How does the maladaptive strategy of hyperactivation relate to individual prosocial tendencies towards the LGBTQIA+ community?

2. MATERIALS AND METHODS

2.1. Precodure and Participants

The research design was applied in the context of a cross-sectional study. The design for this study was chosen because it focuses on the relationships and potential prediction of adaptive (secure attachment style) and maladaptive phenomena (avoidant, anxious, and disorganized attachment styles; hyperactivating and deactivating caregiving strategies) in relation to prosocial tendencies at the same point of time. The research sample consisted of 1,000 Slovak adults (516 men and 484 women; age: $M = 26.58$, $SD = 7.035$). All participants had Slovak nationality, and no participants were excluded from the study because of incomplete data from the questionnaire battery.

The subjects participated in the study on a completely voluntary basis. The study was promoted through the authors' social media accounts. The authors also reached out to websites and communities to reach out to respondents within the Slovak Republic (e.g., Zomri.sk). The websites shared a poster and a link that was created for the purpose of this study. Before participants could proceed to complete the questionnaire battery, they had to fill out an informed consent form agreeing to participate in the research study and consenting to the processing of personal data. This section defined the provisions and the rights of the respondents during the research study. Participants were assured that the research study was fully anonymous, and they could withdraw their participation at any time during the study. The online questionnaire battery was available to respondents from September 2022 to February 2023. Further descriptive characteristics of the research sample are provided in Table 1.

2.2. Measures

2.2.1. Attachment Styles

A questionnaire of adult attachment styles (Lenghart and Čerešník, 2022a) was used to determine attachment styles. The questionnaire is based on the reactions to

providing a comprehensive psychological picture in the context of experiencing individual attachment styles. It is a self-assessment questionnaire consisting of 20 items with 7 Likert-scale response options ranging from "Does not describe me at all" (-3) to "Completely describes me" (3). Secure attachment style is determined using five items (e.g., "I can overcome new challenges and gain experience from them."). Five items are used to determine avoidant attachment style (e.g. "I am at my best when I do everything myself/alone."), five items are used for anxious attachment style (e.g. "I experience conflicts intensely and even when they are over, I am still in discomfort."), and five items are used to determine disorganised attachment style (e.g., "Disappointment and confusion usually prevail in my experience."). The internal consistency of the subscales ranges from .64 to .81. Questionnaire items were constructed based on research findings in attachment and attachment styles (e.g., Mikulincer and Horesh, 1999; Mikulincer and Shaver, 2007). The inter-correlations between these subscales range between $r = -.539$ to $r = .828$, $p < .001$.

Table 1. Descriptive characteristics of the research sample.

Variable	n	%
Place of Residence	-	-
Rural	380	38.0
City	620	62.0
Sex	-	-
Men	516	51.6
Women	484	48.4
Education	-	-
Primary	39	3.9
High school without matriculation	25	2.5
High school with matriculation	443	44.3
Undergraduate	190	19.0
Graduate	262	26.2
Postgraduate	33	3.3
Higher vocational	8	0.8
Status	-	-
Employed	527	52.7
Unemployed	41	4.1
Student	410	41.0
Parental leave	21	2.1
Retired	1	0.1

2.2.2. Prosocial Tendencies towards the LGBTQIA+ Community

A scale of prosocial tendencies towards the LGBTQIA+ community (Lenghart and Čerešník, 2022c) was used to measure six public prosocial tendencies toward the LGBTQIA+ community. It is a part of the above-mentioned scale, which measures the area of digital prosociality in addition to public prosociality. Six items were used to capture the extent to which participants would: 1) support adoption by same-sex couples, 2) provide moral support to an LGBTQIA+ friend, 3) experience shared joy at the coming-out or transition of an LGBTQIA+ friend, 4)

support LGBTQIA+ rights publicly at a pride parade, 5) intervene in obvious discrimination, and 6) support LGBTQIA+ artists (e.g. at concerts, etc.). Participants were asked to indicate how they would act in each situation on a 4-point Likert scale from 1 (never) to 4 (almost always). When averaging the scores for each domain, the overall internal consistency of the public prosocial tendencies was .88. The inter-correlations between items ranged between $r = .468$ to $r = .616$, $p < .001$.

2.2.3. Maladaptive Caregiving Strategies

A scale of the caregiving system (Lenghart and Čerešník, 2022b), a Slovak modification of the original Caregiving System Scale (Shaver *et al.*, 2010), was used to measure maladaptive caregiving strategies. In this scale, ten items focus on the identification of the hyperactivation strategy (e.g., “When I’m unable to help a person who is in distress, I feel worthless” or “When I decide to help someone, I worry that I won’t be able to solve the problem or ease the person’s distress.”), and ten items focus on the identification of the deactivation strategy (e.g., “I don’t invest a lot of energy trying to help others” or “When I notice or realize that someone seems to need help, I often prefer not to get involved.”). The scale is a self-report measure where participants rate on a 7-point Likert scale the extent to which they are willing or unwilling to help. The internal consistency of the questionnaire sub-scales ranges between .74 (for the deactivation scale) and .75 (for the hyperactivation scale). The inter-correlations between the sub-scales are $r = .226$, $p < .001$.

2.3. Data Analysis

The IBM SPSS Statistics 23 software was used for data analysis. Spearman’s rho coefficient was used to describe relationships between the variables. Linear regression models were used to detect the effect on individual prosocial tendencies. Attachment styles (secure, avoidant, anxious, and disorganized) and maladaptive caregiving strategies (hyperactivation and deactivation) were chosen as the independent variables. Six public prosocial tendencies towards the LGBTQIA+ community were chosen as the dependent variables. We accepted the standard significance level of $\alpha < .05$.

3. RESULTS

The first aim of the present research was to analyse the relationships between attachment styles, maladaptive caregiving strategies, and prosocial tendencies toward the LGBTQIA+ community. Correlations between the variables are presented in Table 2. Overall, the findings indicated significant relationships, both negative and positive. Positive relationships were identified between secure attachment style and all six prosocial tendencies. In contrast, five out of six negative relationships were identified for avoidant attachment style. Three out of six negative relationships were identified for anxious attachment style, and four out of six negative relationships were identified for disorganised attachment style. In terms of the relationship with the maladaptive strategies, hyperactivation was found to be negatively correlated with only one of the six prosocial tendencies, and deactivation was found to be negatively correlated with all of the prosocial tendencies.

The final aim of the present research was to identify which factors predict individual prosocial tendencies towards the LGBTQIA+ community, and to what extent. Linear regression models were constructed using these variables: secure attachment style, avoidant attachment style, anxious attachment style, disorganised attachment style, deactivation strategy, and hyperactivation strategy.

Attachment styles and maladaptive caregiving strategies significantly explained 6% of the variance in support for adoption by same-sex couples ($F(6, 1000) = 10.607$, $p < .001$). Results showed that secure attachment style ($\beta = .113$, $p < .001$) and hyperactivation ($\beta = .118$, $p < .001$) positively predicted this support, while conversely, deactivation was a negative predictor for this support ($\beta = -.154$, $p < .001$).

In the case of providing moral support, the independent variables explained 5.6% of the variance in the full model ($F(6, 1000) = 9.815$, $p < .001$). Results showed that secure attachment style ($\beta = .146$, $p < .001$) and anxious attachment style ($\beta = .139$, $p = .012$) positively predicted providing moral support to an LGBTQIA+ friend. In contrast, the deactivation strategy appeared to be the only negative predictor for this tendency ($\beta = -.153$, $p < .001$).

Table 2. Relationships between attachment styles, maladaptive caregiving strategies, and public prosocial tendencies toward the LGBTQIA+ community.

Variable	SA	AvA	AxA	DA	DCS	HCS
AS	.179***	-.089**	-.096**	-.110***	-.197***	.019
MS	.158***	-.078*	-.032	-.087**	-.212***	-.031
ESJ	.167***	-.076*	-.033	-.079*	-.243***	-.039
PPS	.177***	-.069*	-.014	-.039	-.195***	-.057
IOD	.231***	-.113***	-.070*	-.099**	-.201***	-.062*
S-LGBT-A	.168***	-.016	-.096**	-.110***	-.170***	-.014

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; SA = Secure attachment; AvA = Avoidant attachment; AxA = Anxious attachment; DA = Disorganized attachment; DCS = Deactivation caregiving strategy; HCS = Hyperactivation caregiving strategy; AS = Adoption support; MS = Moral support; ESJ = Experiencing shared joy; PPS = Pride parade support; IOD = Intervention in obvious discrimination; S-LGBT-A = Support of LGBTQIA+ artists.

The model predicting the experience of shared joy was statistically significant [$F(6, 1000) = 8.925, p < .001$], and the dependent variables explained 5.1% of the variance. Secure attachment style ($\beta = .096, p = .010$) and anxious attachment style ($\beta = .115, p = .038$) were identified as significant positive predictors. The deactivation strategy was shown to be the only negative predictor of experiencing shared joy ($\beta = -.183, p < .001$).

Attachment styles and maladaptive caregiving strategies significantly explained 7.1% of the variance in support at a pride parade ($F(6, 1000) = 12.633, p < .001$). Results showed that secure attachment style ($\beta = .172, p < .001$) and hyperactivation strategy ($\beta = .123, p < .001$) positively predicted support at a pride parade. Significantly negative predictors constituted only avoidant attachment style ($\beta = -.076, p = .026$) and deactivation strategy ($\beta = -.158, p < .001$).

In terms of intervening in obvious discrimination, the independent variables explained 9% of the variance in the model ($F(6, 1000) = 16.453, p < .001$). Results showed that secure attachment style ($\beta = .207, p < .001$) and

hyperactivation strategy ($\beta = .138, p < .001$) significantly and positively predicted intervening in obvious discrimination against an LGBTQIA+ person. Conversely, avoidant attachment style ($\beta = -.095, p = .005$) and deactivation strategy ($\beta = -.147, p < .001$) significantly and negatively predicted intervention in obvious discrimination.

With regards to supporting LGBTQIA+ artists, the model also proved statistically significant ($F(6, 1000) = 8.140, p < .001$). The independent variables explained 4.7% of the variance. Secure attachment style ($\beta = .103, p = .006$) and hyperactivation strategy ($\beta = .111, p = .001$) positively predicted support for LGBTQIA+ artists, whereas deactivation strategy was the only negative predictor for this support ($\beta = -.127, p < .001$).

We have reported all the information on the linear regression models in Table 3. The table includes significance levels, standard deviations, and beta coefficients. It also reports the coefficients and significance levels of predictors that have not been significant for individual prosocial tendencies.

Table 3. Regression models predicting public prosocial tendencies toward the LGBTQIA+ community.

Adoption Support	R²	F	df	p
-	.060	10.607	6	<.001
Predictors	β	SE	t	p
Secure attachment	.113	.009	3.062	.002
Avoidant attachment	-.053	.008	-1.562	.119
Anxious attachment	-.018	.009	-.321	.748
Disorganized attachment	-.006	.009	-.109	.913
Deactivation strategy	-.154	.004	-4.647	<.001
Hyperactivation strategy	.118	.004	3.564	<.001
Moral Support	R²	F	df	p
-	.056	9.815	5	<.001
Predictors	β	SE	t	p
Secure attachment	.146	.007	3.971	<.001
Avoidant attachment	-.063	.007	-1.846	.065
Anxious attachment	.139	.007	2.527	.012
Disorganized attachment	-.045	.007	-.786	.432
Deactivation strategy	-.153	.003	-4.587	<.001
Hyperactivation strategy	.035	.003	1.045	.296
Experiencing Shared Joy	R²	F	df	p
-	.051	8.925	6	<.001
Predictors	β	SE	t	p
Secure attachment	.096	.008	2.591	.010
Avoidant attachment	-.063	.007	-1.842	.066
Anxious attachment	.115	.008	2.081	.038
Disorganized attachment	-.019	.008	-.336	.737
Deactivation strategy	-.183	.003	-5.478	<.001
Hyperactivation strategy	.020	.003	.602	.548
Pride Parade Support	R²	F	df	p
-	.071	12.633	6	<.001
Predictors	β	SE	t	p
Secure attachment	.172	.009	4.701	<.001
Avoidant attachment	-.076	.009	-2.225	.026
Anxious attachment	.044	.009	.804	.422

(Table 3) contd....

Adoption Support	R²	F	df	p
Disorganized attachment	.049	.009	.852	.394
Deactivation strategy	-.158	.004	-4.787	<.001
Hyperactivation strategy	.123	.004	3.736	<.001
Intervention in Obvious Discrimination	R²	F	df	p
-	.090	16.453	6	<.001
Predictors	β	SE	t	p
Secure attachment	.207	.007	5.729	<.001
Avoidant attachment	-.095	.006	-2.816	.005
Anxious attachment	-.060	.007	1.116	.265
Disorganized attachment	-.001	.007	-.010	.992
Deactivation strategy	-.147	.003	-4.488	<.001
Hyperactivation strategy	.138	.003	4.224	<.001
Support for LGBTQIA+ Artists	R²	F	df	p
-	.047	8.140	6	<.001
Predictors	β	SE	t	p
Secure attachment	.103	.009	2.779	.006
Avoidant attachment	.023	.008	.671	.503
Anxious attachment	-.039	.009	-.706	.480
Disorganized attachment	-.025	.009	-.439	.661
Deactivation strategy	-.127	.004	-3.790	<.001
Hyperactivation strategy	.111	.003	3.311	.001

Note: R² = the coefficient of determination; F = the result of F test; df = degrees of freedom; p = significance; β = standardised regression coefficient; SE = standard error; t = t-test.

4. DISCUSSION

In recent months, a series of discriminatory actions targeting gender and sexual orientation minorities have taken place both in Slovakia and globally. This global discrimination, which can result in tragic events, such as those that have taken place in Slovakia, can lead to a series of prosocial or altruistic actions aimed at improving the well-being of gender and sexual orientation minorities. However, these prosocial and altruistic actions may vary depending on the social and demographic characteristics of a given country. Based on these ideas, we decided to conduct a study to learn more about the differences in the context of social and demographic characteristics in prosocial behaviors and tendencies toward the LGBTQIA+ community in a cohort of Slovak adults.

The results of our study identified significant relationships between attachment styles, maladaptive caregiving strategies, as well as their ability to predict prosocial tendencies toward the LGBTQIA+ community. These findings shed light on factors influencing individuals' propensity to engage in prosocial behaviour in the context of sexual and gender minorities.

In terms of attachment styles, our results are consistent with previous research suggesting that individuals with secure attachment style exhibit higher levels of prosocial behaviour [30, 31]. We found positive correlations between secure attachment style and all six prosocial tendencies examined in our study (adoption support, moral support, experiencing shared joy, pride parade support, intervention in obvious discrimination, support for LGBTQIA+ artists). Similarly, secure relationship style was found to predict all six prosocial tendencies significantly and positively towards the

LGBTQIA+ community. These results suggest that individuals who have developed a secure relationship bond, and those who have a positive self-image and a positive image of others, are more likely to engage in supportive and prosocial behaviours toward sexual and gender minorities. In addition to the fact that people with a secure attachment style have developed positive internal working models, another possible reason for this is that they also show higher levels of perspective-taking [48], a key factor in altruistic and prosocial behaviour.

In contrast to that, our findings have revealed negative correlations between avoidant attachment style and five prosocial tendencies. This is consistent with previous research highlighting the difficulties that individuals with avoidant attachment style may experience in forming close relationships and displaying prosocial behaviours [32]. We have also reported some interesting findings in the context of predicting individual prosocial tendencies. Avoidant attachment style was shown to negatively predict only two out of six prosocial tendencies (support at a pride parade and intervening in obvious discrimination). People with avoidant attachment style, defined by a positive self-image and a negative image of others, may exhibit emotional distance and intimacy avoidance, which could hinder their willingness to engage in supportive, public acts toward sexual and gender minorities. However, a previous research study [49] suggested that empathic concern may be able to override the bystander effect. The authors found that individuals who experienced higher levels of empathy were more likely to intervene and help in emergency situations. Reduced levels of empathic concern may, therefore, be a potential reason people with avoidant attachment style are reluctant to help others being discriminated against directly in front of them.

Anxious attachment style was also negatively correlated

with some prosocial tendencies in our study, specifically adoption support, intervention in obvious discrimination, and support for artists with LGBTQIA+ identities. This is consistent with the argument that individuals with an anxious attachment style, defined by a negative self-image and a positive image of others, may exhibit clingy behaviours and a constant need for reassurance [2, 20]. These tendencies may affect their ability to engage in certain prosocial behaviours, potentially due to fears of rejection or negative evaluation. These clingy behaviours coupled with the constant need for reassurance from others may be some of the potential factors that positively predict moral support and experiencing shared joy with LGBTQIA+ friends.

Regarding maladaptive caregiving strategies, our results suggested that hyperactivation and deactivation are associated with distinct patterns of prosocial tendencies. Hyperactivation, observed predominantly in individuals with anxious attachment style, showed a negative correlation with only one of the six prosocial tendencies examined, intervention in obvious discrimination. These results suggest that individuals who use intense and anxious attachment strategies to seek closeness and support may be less likely to intervene in situations of discrimination, potentially due to their heightened emotional reactions or fears of negative consequences. However, one interesting finding showed hyperactivation strategy to be a significant positive predictor of public but not intimate prosocial tendencies (moral support and experiencing shared joy). The fact that hyperactivation inhibits support in dyadic interactions has been established in research by Shaver and colleagues [41]. In contrast, the fact that hyperactivation predicted public prosocial tendencies, *i.e.*, providing care to others in a public space, may be seen as an egoistic strategy in order to gain desired attention [50]. These people are also likely to experience anxiety when another person needs their help, which may interfere with providing sensitive caregiving, as reported by Mikulincer *et al.* [51].

Deactivation, on the other hand, commonly observed in individuals with avoidant attachment style, showed negative correlations with all six prosocial tendencies. This is consistent with the idea that individuals using deactivation strategies tend to downplay their own support needs and distance themselves from caregiving behaviours [44]. As a result, they may be less likely to engage in various forms of support [51, 52] for sexual and gender minorities. They are unable to help others and respond compassionately to their needs because of the strong desire to be independent and autonomous, where such a response would require greater proximity to others [50].

5. STRENGTHS AND LIMITATIONS OF THE STUDY

The present study has several significant strengths that contribute to its overall quality and reliability. First, we used a representative sample of 1,000 Slovak adults, both men and women, which increases our ability to generalise the findings to the wider Slovak adult population. This large sample size increases the robustness of the research conclusions and bolsters the external validity. The voluntary participation approach adopted in this study is another strength, reducing selection bias and ensuring that participants took part in the research on the basis of their own free will. By actively recruiting individuals using a variety of strategies, including

the use of social media profiles and engagement with influencers and communities within the Slovak Republic, the present study may be likely to have captured a more diverse group of participants, thereby increasing the external validity of its findings. The comprehensive questionnaire battery used in the present research is another significant advantage. By measuring attachment styles, maladaptive caregiving strategies, and prosocial tendencies toward the LGBTQIA+ community, the present study provides a multifaceted analysis of its research objectives. Such a comprehensive approach can allow for a more nuanced understanding of the relationships between these variables.

Despite the strengths, the present study has a couple of limitations that need to be addressed. One limitation is the reliance on self-report measures, which may introduce bias due to social desirability and potential inaccuracies caused by the subjective nature of the participants' perception and memories. Future research would benefit from incorporating alternative methodologies (*e.g.*, qualitative methods) to supplement data from self-assessment questionnaires. In addition, these findings may have limited generalisability beyond the specific context of Slovak adults holding Slovak nationality. Although efforts have been made to diversify the participant pool through different recruitment strategies, the composition of the present research sample may not fully represent other cultural contexts, or other (minority) populations. Replicating the study in different settings and with more diverse samples could increase the external validity of these findings. On top of that, the cross-sectional design of the present study limits the ability to establish causal relationships between attachment styles, maladaptive caregiving strategies, and prosocial tendencies. Longitudinal or experimental studies could provide more reliable evidence regarding causality and help make stronger predictions about future behaviours. Finally, the regression models used in this study explained a relatively low percentage of variance in the dependent variables, suggesting that other unexplored factors may play a role in prosocial tendencies toward the LGBTQIA+ community. Future research should consider examining additional variables to provide a more comprehensive understanding of this phenomenon.

These strengths and limitations should be carefully considered when interpreting the findings and implications of the present study. While the strengths boost the credibility of the study, the limitations highlight areas that require further research and identify potential opportunities for improvement in future studies.

CONCLUSION

Based on the results of the study, it can be stated that attachment styles and maladaptive caregiving strategies have a strong and significant impact on public prosocial tendencies toward the LGBTQIA+ community in the Slovak population.

ETHICAL STATEMENT

The ethics committee approval was not sought for the study. The research was conducted entirely within an online environment, ensuring the anonymity and confidentiality of all participants. Given that no personally identifiable information was collected or released, and the study posed minimal risk to individuals, seeking approval from the ethics

committee was not deemed necessary by the authors. Additionally, the research did not involve direct interaction with individuals from the LGBT community or any other individuals but rather analyzed anonymized data.

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants.

STANDARDS OF REPORTING

STROBE guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data supporting the findings of the article is available in the Zenodo at <https://zenodo.org/records/10663211>, reference number 10.5281/zenodo.10663210.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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