The longitudinal influence of hedonic and eudaimonic entertainment preferences on psychological resilience and wellbeing

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Narratives and media entertainment are central sources of meaningful experiences in everyday life and provide role models and learning opportunities for coping with adversity and life challenges. Though a growing body of research demonstrates beneficial short-term effects of entertainment use on recovery and stress coping, a test of longitudinal effects on positive adaptation to adversity is largely missing. The present study aims at providing a salutogenic perspective on the mental health effects of entertainment use by addressing the longitudinal relationship between hedonic and eudaimonic entertainment preferences (i.e., the individual entertainment diet) and three indicators of psychological resilience: hope, meaning in life, and trait resilience. Pre-registered hypotheses and research questions were tested based on data from a longitudinal panel study with two waves over a 6-month time period and $N = 2,561$ participants from Germany. The findings demonstrate that only meaning in life at T2 was significantly albeit weakly predicted by eudaimonic entertainment preferences at T1, providing limited support for prospective effects of entertainment use on resilience. In contrast, the data demonstrate selective exposure effects of hope and trait resilience at T1 on eudaimonic and hedonic entertainment preferences at T2. All three resilience indicators were significant predictors of mental health and psychological wellbeing. We discuss implications of our findings for future research on salutary mental health effects of narratives and media entertainment.

KEYWORDS

entertainment, resilience, mental health, wellbeing, eudaimonic experience, longitudinal effects, pre-registered study

Introduction

Media entertainment and mediated narratives are a vital part of our everyday experiences. With a steep rise in media use and a strong demand for entertaining content (Grady et al., 2022; Sigre-Leirós et al., 2022), the COVID-19 pandemic marks a culmination point emphasizing the centrality of entertainment in people's lives. For the majority of users, the large amount of time spent with media entertainment and

narratives provides much more than just a mundane past-time and distraction from daily hassles or adversity. Narratives and entertaining content are a central source of meaningful experiences and important life lessons (Greenwood and Long, 2015), allowing viewers to follow protagonists through critical life events and to vicariously experience their perseverance and coping in the face of adversity (Slater et al., 2018, 2019). At the same time, media entertainment can be uplifting, helping people to regulate their current moods (Zillmann, 1988) and may be a source of positive feelings and emotion-focused coping, both in everyday life and in times of crisis (Eden et al., 2020; Nabi et al., 2022).

Given these important psychological functions of stories and narratives and the ubiquity of entertaining media, their relationship with psychological health and wellbeing is of great interest (Prestin and Nabi, 2020; Khoo et al., 2021). In fact, considerable evidence points at beneficial *short-term* effects of entertainment, such as recovery or stress coping (Reinecke et al., 2011; Rieger et al., 2014; Nabi et al., 2017). In contrast, research addressing the *long-term* effects of narratives and media entertainment on psychological health and wellbeing is very limited (Reinecke and Rieger, 2021). It thus remains largely unclear whether the beneficial effects of entertaining media are short-lived, or transfer to more stable prospective gains in psychological health.

We thus propose that a *salutogenic* perspective on media entertainment provides an important extension of previous research on the effects of narratives and entertaining media content by systematically investigating the long-term potential of media use to promote and protect health and wellbeing (Schneider et al., 2018). The present study thus aims at extending previous research on the effects of media entertainment by exploring the prospective effects of hedonic and eudaimonic entertainment preferences (i.e., the repeated exposure to hedonic and eudaimonic media content)[1] on psychological resilience, that is, the individual ability to functionally adapt to adversity (Fletcher and Sarkar, 2013; Kalisch et al., 2017). Previous work suggests that various potential connections between the use of media entertainment and the development of resilience factors may exist (Reinecke and Rieger, 2021), however, a systematic theoretical integration of both strands of research is largely missing.

Consequently, the present paper aims at two central contributions: by providing theory synthesis (DeAndrea and Holbert, 2017) and bridging the theoretical gap between

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[1] Please note that in other work (e.g., Oliver and Raney, 2011), the term entertainment preferences is sometimes used to refer to trait-like individual differences in entertainment motivations or entertainment gratifications sought by media users. In the present study, we use the term to refer to the individual entertainment diet, that is, repeated exposure to entertaining content and to the frequency of such entertaining experiences.

the hitherto largely unconnected fields of entertainment and resilience research, we aim at contributing to *theory development* in narrative and entertainment research. *Empirically and methodologically*, the present study extends the predominantly short-term perspective on the effects of narratives and media entertainment on psychological wellbeing with a test of the longitudinal effects of media entertainment on psychological resilience and mental health. In a longitudinal survey study with two measurement points over a 6-month period and a quota sample of the German population in the age range of 18–65 years, we explore the prospective relationships between the preference for hedonic and eudaimonic entertainment, different resilience factors, and psychological health. To the best of our knowledge, the present study is the first to test the prospective effects of media entertainment on psychological resilience in a longitudinal research design.

Salutogenesis and the concept of psychological resilience

Research on physiological and psychological health was long dominated by a pathogenic perspective, focussing on drivers of illness and risk-factors that increase the likelihood of physical and psychological pathology (Mittelmark and Bauer, 2017). This perspective was crucially extended in the 1970s by the theoretical movement of salutogenesis (Antonovsky, 1979, 1996). The salutogenic perspective focusses on "salutary factors" (Antonovsky, 1996, p. 14) that promote health and wellbeing and support the individual in persevering against life challenges. Closely connected to the advent of salutogenesis is the development of the concept of psychological resilience, referring to the individual ability to "bounce back" (Richardson, 2002, p. 308) after critical life events and to successfully overcome stressors or difficult life circumstances.

The development of the theoretical concept of resilience is based on the observation that individuals differ significantly in their reactions to adversity and potentially traumatic events and experiences (Bonanno, 2004). *Adversity* can take widely different forms and can occur chronically, as ongoing abuse or prolonged problematic life circumstances, or in the form of isolated incidents or acute stressors, such as the loss of a loved one or sudden changes in life conditions (e.g., the onset of a pandemic) (Pangallo et al., 2015). Furthermore, adversity can vary in severity and refers to both disruptive and traumatic events and more common and less severe stressors, such as daily hassles (Bonanno, 2004; Chmitorz et al., 2020).

Despite the fact that the concept of resilience has received considerable and growing attention in psychology and the health sciences over the past years (Fletcher and Sarkar, 2013), no clear consensus regarding a widely accepted definition of psychological resilience exists (Kalisch et al., 2017). However,

alongside adversity as a necessary condition for resilience to occur, one central factor common to most definitions is *positive adaptation*, referring to the idea that psychological resilience is characterized by the maintenance of or a quick return to baseline levels of psychological wellbeing in the face of adversity (Fletcher and Sarkar, 2013; Kalisch et al., 2017). Accordingly, coping with adversity can be conceptualized as a continuum of successful or functional adaptation vs. unsuccessful and dysfunctional adaptation (Niitsu et al., 2017). Positive adaptation to adversity in the form of a return back to or even beyond pre-stressor levels of functioning without loss or developing impaired psychological health is thus at the heart of the resilience concept (Richardson, 2002; Fletcher and Sarkar, 2013).

Positive adaptation to adversity is essential for most conceptualizations of resilience, but theoretical approaches differ widely with regard to their temporal perspective and main unit of analysis. A first group of theoretical conceptualizations focuses on *relatively stable* individual differences in *trait resilience* (Hu et al., 2015). Beyond different measures of trait resilience that address person-level differences in the *general* ability to "bounce back" from adversity (Chmitorz et al., 2018), this line of research has identified a number of protective and promotive *resilience factors*, such as social support or self-efficacy, that facilitate positive adaption to adversity (Windle, 2011; Pangallo et al., 2015). A second line of research emphasizes the *process-character* of resilience and proposes that, rather than being a stable trait, resilience may *fluctuate within-person* and between different situations and life contexts (Fletcher and Sarkar, 2013). Other approaches provide a conceptual bridge between the state and trait perspective on resilience by suggesting that resilience is a dynamic and context-specific process that is facilitated by person-level resilience factors (Niitsu et al., 2017). Importantly, according to this perspective, promotive and protective resilience factors are not static but can fluctuate and develop over the life-span as the result of individual experiences and learning processes (Kalisch et al., 2017).

In the present paper, we adopt this theoretical conceptualization of resilience as the interplay of situational adaptation processes and person-level resilience factors. We further propose that the person-level protective and promotive factors supporting successful adaption to adversity may be shaped and reinforced through exposure to media entertainment and narratives (Reinecke and Rieger, 2021). By doing so, we introduce a salutogenetic perspective into entertainment research that addresses entertaining media use as a potential source for salutary factors that may help media users build up, restore, or maintain psychological resilience over time. In the following sections, we will first briefly explicate hedonic and eudaimonic forms of entertainment experiences based on recent two-factor models of entertainment. We will then discuss how preferences for hedonic and eudaimonic entertainment may be longitudinally related to different

person-level resilience factors, thus providing a theoretical integration of both literatures.

Hedonic and eudaimonic entertainment experiences

The past years have seen a marked shift in entertainment theory and research. For decades, entertainment research was dominated by a hedonic view on entertainment experiences (Vorderer and Reinecke, 2015). In this research tradition, the entertainment experience has primarily been conceptualized as pleasurable *enjoyment* and as "positive reactions toward the media and its contents" (Vorderer et al., 2004, p. 388), such as fun and suspense. Accordingly, the use of and selective exposure to entertaining content has predominantly been explained through hedonistic motivations, such as mood management (Zillmann, 1988) or the need to escape form real-world frustrations (Halfmann and Reinecke, 2021). This hedonistically oriented research tradition has produced a large body of empirical evidence that supports the notion that entertainment use is indeed linked to pleasurable experiences and resembles a highly effective tool for mood optimization (e.g., Reinecke, 2017). At the same time, the inability of an exclusively hedonic conceptualization of entertainment experiences to explain exposure to and appreciation of sad and poignant media content has been discussed as a central limitation of the field early on (Oliver, 1993). In reaction to this theoretical gap, the field of entertainment research has undergone a paradigmatic shift with the introduction of two-factor models of entertainment experiences that complement the traditional hedonic view on media enjoyment by introducing a second set of eudaimonic media experiences (Oliver and Raney, 2011; Vorderer and Reinecke, 2015; Janicke-Bowles et al., 2021). This second eudaimonic factor of entertainment refers to more complex forms of entertainment experiences induced by tragic or poignant media content that confronts viewers with cognitive and emotional challenges (Bartsch and Hartmann, 2017). Oliver and Bartsch (2010) refer to such eudaimonic entertainment experiences as *appreciation*, which they define as an "experiential state that is characterized by the perception of deeper meaning, the feeling of being moved, and the motivation to elaborate on thoughts and feelings inspired by the experience" (p. 76). Furthermore, eudaimonic entertainment experiences are frequently elicited by depictions of moral beauty and closely associated with moral emotions, such as elevation or awe (Oliver et al., 2012). More recent conceptualizations further differentiate eudaimonic entertainment experience into more inward-oriented and self-focused experience such as feelings of meaning, contemplation and mixed affect represented by the construct of appreciation vs. more outward-oriented and other-focused experience, such as interconnectedness and

altruism (Oliver et al., 2018; Janicke-Bowles et al., 2021). This latter group of experience is also referred to as self-transcendent emotions associated with a decreased salience of the self and an increased openness to others, a heightened sense of connectedness to humanity and increased motivation to better oneself or the world (Janicke-Bowles et al., 2021).

This empirical evidence clearly emphasizes the complexity of the entertainment experience and suggests that exposure to narratives and entertainment elicits a multitude of affective and cognitive processes in viewers that appear pivotal for individual wellbeing. In fact, both hedonic and eudaimonic forms of entertainment have been linked to short-term effects on different outcomes directly or indirectly related to wellbeing, such as vitality, intrinsic need satisfaction, or recovery from stress and strain (Reinecke and Rieger, 2021). It remains largely unclear, however, whether such hedonic and eudaimonic experiences also support viewers in cultivating resilience factors that in turn support their mental health and wellbeing over time. In the following section, we will review mechanisms that may connect long-term patterns of hedonic and eudaimonic entertainment exposure to the development of protective factors and discuss how both forms of entertainment may differentially contribute to psychological resilience.

Entertainment preferences as a source of resilience

Previous research has not yet established direct connections between media entertainment and psychological resilience, but initial evidence supports the general notion that narratives and entertaining content may have long-term effects on viewers' coping with adversity (Greenwood and Long, 2015; Slater et al., 2018). More specifically, previous research suggests that entertaining media may provide role models and learning opportunities for the development of long-term strategies for dealing with critical life events (Greenwood and Long, 2015; Nabi et al., 2017; Slater et al., 2018). Survivors of traumatic events and protagonist demonstrating perseverance in the face of adversity are a frequent theme in narratives and media entertainment (Greenwood and Long, 2015; Kim and Tsay-Vogel, 2016). By putting viewers in the shoes of protagonists confronted with adversity, narratives provide viewers with ego references, provoking a "cognitive switch" (p. 321) from the protagonist's perspective to one's own situation and life circumstances (Schramm and Wirth, 2010). Narratives thus provide important opportunities for vicariously experiencing the confrontation with and progression through personal crisis, loss, and critical life events (Slater et al., 2018) and provide "new templates" (p. 626) for dealing with adversity and life challenges (Greenwood and Long, 2015).

Overall, narratives may thus be an important context for the social learning (Bandura, 2001) of resilient coping with adversity. Furthermore, repeated exposure to portrayals of resilience in narratives and entertainment media may result in cultivation processes (Gerbner et al., 2002; Busselle and van den Bulck, 2020) that may impact viewers' perceptions of their own capacity to overcome such adversity. In fact, entertaining media content has been identified as a central source of inspiring portrayals of human virtue and altruism (Raney et al., 2018) and a high share of media users report inspiring media experiences (Janicke-Bowles et al., 2019). Repeated exposure to such content may instill a motivation for personal growth in many users and reinforce their perception that they possess the necessary coping resources to be resilient in the face of adversity.

The present study

As the resilience literature has identified a large number of resilience factors (Fletcher and Sarkar, 2013), covering all facets of psychological resilience is undoubtedly beyond the scope of a single study. Instead, we aim at addressing the longitudinal relationship between preference for hedonic and eudaimonic entertainment with *hope* and *meaning in life*—two central resilience factors particularly frequently discussed in the literature—as well as *trait resilience* as the general personal capability for positive adaptation to adversity.

One form of positive affective disposition that has received particular attention in the literature is hope (Gillespie et al., 2007). Hope is characterized by two underlying factors (Snyder, 2002): the perceived ability to find routes to realize personal goals and cope with challenges (i.e., pathways) as well as to show perseverance in following through with these routes to goal achievement (i.e., agency). Meta-analytic evidence consistently links hope to psychological health and wellbeing (Alarcon et al., 2013). Previous research demonstrates that personal levels of hope can be altered through training and interventions (Snyder, 2002), suggesting that higher levels of hope could indeed be cultivated by external influences such as exposure to narratives (Merolla et al., 2017).

Eudaimonic forms of entertainment show strong connections to the concept of hope. In a content analysis of eudaimonic and inspirational YouTube videos, Dale et al. (2017) found that eudaimonic content frequently features "hope elicitors" (p. 904) such as protagonists receiving encouragement and support or showing perseverance. Eudaimonic narratives thus provide role models and examples of finding strategies for successfully coping with critical life events and successfully following those to overcome adversity (Raney et al., 2018). Consequently, they should reinforce both the pathways and the agency component of hope. First empirical evidence suggests that eudaimonic content, such as underdog narratives, can have short-term effects and increase hope temporarily (Prestin, 2013; Prestin and Nabi, 2020). We thus propose that:

H1: Higher preference for eudaimonic entertainment at T1 is associated with higher levels of hope at T2.[2]

Compared to eudaimonic entertainment, the connection between hope and hedonic content and narratives appears less clear. Hedonic entertainment, such as comedy, is typically characterized by positive affective valence, depicting life in a positive and cheerful way (Zillmann, 1988). Other forms of hedonically positive narratives may feature suffering of protagonists or unpleasant and suspenseful scenes (e.g., action or crime movies), yet culminate in a hedonically positive happy ending or comic relief (Reinecke, 2017). Frequent exposure to such cheerful narratives may plausibly increase optimism and a generally positive view on life and its outcomes. Its capacity to provide problem-solving strategies or initiate social learning process that increase the perceived capability to overcome adversity appears less likely. Direct effects of a hedonic entertainment diet on the central pathways and agency dimensions of hope thus seem less likely and are also not supported by previous research on short-term effects of hedonic narratives on hope (Prestin and Nabi, 2020). Hedonic entertainment may, however, support the cultivation of hope indirectly through the reinforcement of optimism and generalized positive outcome expectations. In fact, hedonic entertainment preferences have been linked to optimism in previous research (Oliver and Raney, 2011). Even though optimism and hope are distinct theoretical concepts, both show substantial positive correlations (Alarcon et al., 2013). We thus pose the following research question:

RQ1a: Will higher preference for hedonic entertainment at T1 be associated with higher levels of hope at T2?

A second protective factor that has been consistently linked with psychological resilience and shows strong connections to media entertainment is the presence of meaning in life (Pangallo et al., 2015). Higher levels of meaning in life have been identified as a central protective factor and linked to mental health and positive adjustment to various forms of adversity or traumatic events (Park, 2017; Ward et al., 2022). Furthermore, meaning making, that is, restoring meaning after trauma and critical life events, is an important mechanism that strengthens resilience (Park, 2017), for example through the acceptance of change or the reappraisal of the situation as an opportunity for growth or a source of wisdom (Folkman and Moskowitz, 2007).

Eudaimonic narratives appear to have a strong potential for supporting processes of meaning making and for

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2   Hypotheses 1−4 and research questions 1a−1c were pre-registered prior to data analyses. The pre-registration can be found at https://osf. io/8n6eg. Please note that the sequence and numbering of hypotheses and research questions in the paper deviates from that in the pre-registration document.

establishing higher levels of meaning in life. Themes related to meaningfulness and purpose in life are central to eudaimonic entertainment (Oliver and Bartsch, 2010) and frequent exposure to such content may increase the general salience of meaning in life. Furthermore, eudaimonic narratives should provide crucial learning opportunities for strategies of meaning making, as they frequently portray protagonists' attempts to find meaning in their own struggles with the human condition (Slater et al., 2018). Additionally, eudaimonic entertainment content is typically characterized by high levels of cognitive and emotional challenge (Bartsch and Hartmann, 2017) and the ability to trigger reflective thoughts (Clayton et al., 2019). When used as an ego-reference and applied to the viewer's own situation (Schramm and Wirth, 2010), this should invite media users to engage in and practice meaning making during and after exposure (Khoo and Oliver, 2013). Over time, repeated exposure to such forms of eudaimonic entertainment that provide opportunities for the vicarious experience of meaning or for active engagement in meaning making may result in increased presence of meaning in life for media users. We thus propose that:

H2: Higher preference for eudaimonic entertainment at T1 is associated with higher presence of meaning in life at T2.

Again, expectations are less clear for a potential longitudinal relationship between meaning in life and a hedonic entertainment diet. In contrast to eudaimonic entertainment, themes of meaning and meaning making are less prevalent in hedonic entertainment content (Oliver and Bartsch, 2010). Furthermore, rather than motivating viewers to cognitively reflect upon their own situation, exposure to hedonic forms of entertainment frequently represents an avoidance strategy (Knobloch-Westerwick et al., 2009) aiming at escapism and distraction from personal problems and frustrations (Halfmann and Reinecke, 2021). Frequent exposure to such content may thus have a negative longitudinal effect on meaning in life. On the other hand, positive affect has been identified as a central predictor of meaning in life in previous research (King et al., 2006). Repeated exposure to hedonic entertainment may thus exert an indirect effect on meaning in life via an increased prevalence of positive mood in daily life. We thus pose the following research question:

RQ1b: Will higher preference for hedonic entertainment at T1 be associated with higher levels of meaning in life at T2?

In addition to the two resilience factors of hope and meaning in life, the present study also aims at exploring the relationship between exposure to entertainment and trait resilience as a general measure of the individual ability to positively adapt to adversity. We propose that the same mechanisms connecting exposure to entertainment with hope

and meaning in life should also be applicable to general trait resilience. Accordingly, the considerable potential of eudaimonic narratives to provide opportunities for vicarious learning of coping and resilience strategies (Greenwood and Long, 2015; Slater et al., 2018), their capacity of triggering reflective thought about life and life purpose (Oliver and Bartsch, 2010; Clayton et al., 2019), as well as their potential to inspire and instill believe in one's own resourcefulness (Raney et al., 2018; Janicke-Bowles et al., 2021), suggest that they may support viewers in cultivating trait resilience over time. Predominantly hedonic narratives, in contrast, likely provide fewer role models for resilient behavior and may be used as a means of distraction, rather than reflection and meaning-focused reappraisal. As such forms of avoidance coping are negatively associated with trait resilience (Chmitorz et al., 2018), chronic exposure to hedonic entertainment may hinder rather than reinforce resilience. Alternatively, hedonic entertainment may support resilience by increasing the prevalence of positive affect in daily life. Hedonic entertainment may also increase trait resilience by providing opportunities for recovery from stress and strain in daily life, thus replenishing taxed resources that may support media users' ability to positively adapt to adversity (Rieger et al., 2014, 2017). We thus formulate the following hypothesis and research question:

> H3: Higher preference for eudaimonic entertainment experiences at T1 is associated with higher levels of trait resilience at T2.

> RQ1c: Will higher preference for hedonic entertainment at T1 be associated with higher levels of trait resilience at T2?

In the preceding sections, we have proposed that both hedonic and eudaimonic entertainment experiences may be important sources of resilience. If longitudinal connections between entertainment diets and these resilience factors exist, psychological resilience would be a promising mechanism that could link exposure to narratives and entertainment to longitudinal effects on psychological health. Both trait resilience and the resilience factors hope and meaning in life have consistently been linked to increased psychological health and wellbeing in previous work (Alarcon et al., 2013; Pangallo et al., 2015; Chmitorz et al., 2018). To replicate these findings and to provide further evidence for the relevance of resilience factors in the context of media entertainment and psychological health, we also test the relationship between the three resilience variables and mental health outcomes in this study. Following the Extended Two-Continua Model of Mental Health (Meier and Reinecke, 2021), indicators of psychopathology (depression and anxiety) and of psychological wellbeing (life satisfaction) were included. Accordingly, we hypothesize that:

> H4: Higher levels of (a) trait resilience, (b) hope, and (c) meaning in life at T2 are associated with higher levels of psychological health (i.e., lower depression/anxiety and higher life satisfaction) at T2.

The central focus of the present study lies on the potential long-term effects of entertainment use on resilience. Nevertheless, reverse or reciprocal relationship between those variables appear equally plausible. Selective exposure to entertainment is certainly driven by short-term fluctuations in needs or mood states (Zillmann, 1988), but entertainment preferences have also been linked to more stable person-level variables. In an experiment by Appel et al. (2019), participants with high levels in personality characteristics lacking empathy (e.g., narcissism), showed more negative evaluations of eudaimonic entertainment content than individuals low in these traits. Furthermore, cross-sectional survey data by Oliver and Raney (2011) suggest that selective exposure to entertainment could also be driven by person-level differences in resilience factors. In their study, preferences for hedonic entertainment were positively predicted by optimism and preferences for eudaimonic entertainment by meaning in life. Accordingly, it seems plausible to assume that pre-existing person-level differences in psychological resilience may influence individual entertainment diets and that media users gravitate toward narratives that resonate with their views on life and the human condition. We thus pose the following research question:

> RQ2: Are hope, meaning in life, and trait resilience at T1 associated with preference for hedonic and eudaimonic entertainment at T2?[3]

Methods

Design and pre-registrations

We tested our hypotheses with a longitudinal survey with two waves and a 6-month lag. This study is part of a larger research project, for which we pre-registered design, sampling plan, and all measured variables prior to data collection: https://osf.io/6dwrz/?view_only=d0f0d0d1a1ef477d9aa7a06b58956997. Hypotheses and analyses were pre-registered prior to data analysis: https://osf.io/8n6eg.

Sample and procedure

An online quota-sample was recruited by Ipsos, a large market research company, in Germany. The panel was

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3 Please note that RQ2 was not preregistered prior to data analyses but added post-hoc as an exploratory extension of H1−H4 and RQ1a−c.

representatively stratified for the general population in Germany in the age-range of 18 to 65 years regarding sex, age, education, and region. Participants were informed that the survey would ask them about their media use as well as potentially stressful situations in their own life. Afterwards, they were asked a number of questions about their general media use and entertainment preferences, resilience factors, stress and adversity, and mental health and wellbeing.[4] Lastly, participants were debriefed, thanked for their participation and kindly asked to participate in the subsequent wave of data collection 6 months later. Participants received compensation according to the market research company's compensation protocol.

We conducted an a-priori power analyses to determine sample size before data collection (see pre-registrations for details). In the first wave of data collection in October 2021, N_{T1} = 5,230 people completed the questionnaire. The second wave of data was collected in April 2022 with N_{T2} = 2,604 participants. In line with our pre-registration, we excluded participants that either failed an attention check item in T1 or T2, or completed <90% of the questionnaire. The final sample consists of N = 2,561 participants. Forty-nine percent of the sample were women, 51% men, with some people (<1%) identifying as gender-diverse or other. Mean age at T2 was 49.5 years (SD = 10.9), ranging from 18 to 65 years. About half of the sample had a university entrance degree or a university degree (51%). Most participants worked part- or full-time (66%). In both waves, TV was the medium that was used most on an average day. Twenty-four percent of participants reported watching TV for 1–2 h per day, 48% reported watching TV for 2–3 h or more. Movies were watched for 1–2 h on an average day by 35% and for 2–3 h or more by 20%. Series and shows were watched less frequently, with 26% watching shows and series for 0.5–1 hour daily, 25% for 1–2 h, and 15% for 2–3 h or more.

Measures

Entertainment preferences

To assess preferences for and general frequencies of eudaimonic and hedonic entertainment experiences, we adapted the 3-item appreciation and the 3-item fun subscales, respectively, by Oliver and Bartsch (2010) in their validated German translation (Schneider et al., 2019). In its original form, the scale aims at measuring entertainment experiences after watching a specific film. As it concisely captures the main aspects of hedonic and eudaimonic entertainment, we adapted the scale to measure entertainment experiences of general media use. To assess eudaimonic entertainment preferences, participants were asked how often they used media content that was moving, thought-provoking, or meaningful. For hedonic

entertainment preferences, participants were asked how often they used media content that was fun, entertaining, and lets them have a good time. The scale ranged from 1= *never* to 7 = *very frequently*. Internal consistency was good for both scales in both waves (hedonic: $\omega_1 = 0.87$, $\omega_2 = 0.86$; eudaimonic: $\omega_1 = 0.86$; $\omega_2 = 0.84$).

Resilience factors

All resilience factors were measured on a 7-point scale ranging from 1= *strongly disagree* to 7 = *fully agree*. Reverse-coded items were recoded.

Trait resilience

We used the validated German translation (Chmitorz et al., 2018) of the 6-item Brief Resilience Scale (Smith et al., 2008) to assess trait resilience. The scale consists of a number of statements to evaluate how participants perceive their ability to bounce back from stress and adverse life events. The scale includes three positively-worded items (e.g., "I tend to bounce back quickly after hard times") and three negatively-worded items (e.g., "I have a hard time making it through stressful events"). The scale exhibited high internal consistency at T1 and T2 ($\omega_1 = 0.90$, $\omega_2 = 0.91$).

Hope

Dispositional hope was measured via the German translation (Maier and Surzykiewicz, 2015) of the Hope Scale (Snyder et al., 1991). Eight items represent both a pathways (e.g., "There are lots of ways around any problem") and an agency (e.g., "I energetically pursue my goals") subscale. Despite its two subscales, it has been suggested that a unidimensional structure is a better fit for this particular scale (Brouwer et al., 2008), which we used for our model. Internal consistency was excellent in both waves ($\omega_1 = 0.91$, $\omega_2 = 0.92$).

Meaning in life

The German translation (Steger, n.d.) of the presence of meaning in life subscale of the Meaning in Life Questionnaire (Steger et al., 2006) was used to assess meaning. A sample item is "I have a good sense of what makes my life meaningful." The scale showed high internal consistency in both waves ($\omega_1 = 0.92$, $\omega_2 = 0.91$).

Mental health and wellbeing

Covering for the most common psychological symptoms, we adopt the validated German items of the PHQ-4 (Kroenke et al., 2009), which combines two items measuring depressive symptoms (e.g., "Feeling down, depressed, or hopeless") and two items measuring anxiety (e.g., "Feeling nervous, anxious, or on edge"). Participants were asked how often they experienced the respective symptoms on a 4-point scale that ranged from 1=

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4 The questionnaire featured more constructs than reported here. For details, see the preregistration of design and measures.

TABLE 1 Means, standard deviations, and zero order correlations of all constructs at T1 and T2.

		M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	T1 Eudaimonic entertainment	4.30	1.31														
2	T1 Hedonic entertainment	5.19	1.21	0.48***													
3	T1 Hope	4.89	1.10	0.31***	0.20***												
4	T1 Meaning in life	4.78	1.49	0.27***	0.15***	0.59***											
5	T1 Trait resilience	4.46	1.27	0.04*	0.03	0.56***	0.45***										
6	T1 Life satisfaction	4.44	1.48	0.16***	0.12***	0.61***	0.66***	0.50***									
7	T1 Depression/Anxiety	1.69	0.74	0.03	0.01	−0.4***	−0.47***	−0.59***	−0.53***								
8	T2 Eudaimonic entertainment	4.29	1.29	0.59***	0.26***	0.26***	0.19***	0.02	0.12***	0.06**							
9	T2 Hedonic entertainment	5.14	1.20	0.27***	0.52***	0.19***	0.12***	0.02	0.11***	0.01	0.44***						
10	T2 Hope	4.88	1.14	0.25***	0.15***	0.76***	0.54***	0.52***	0.56***	−0.36***	0.28***	0.23***					
11	T2 Meaning in life	4.77	1.49	0.23***	0.12***	0.56***	0.77***	0.42***	0.61***	−0.43***	0.21***	0.15***	0.62***				
12	T2 Trait resilience	4.46	1.29	0.03	0.03	0.51***	0.43***	0.77***	0.47***	−0.53***	0.02	0.06**	0.55***	0.45***			
13	T2 Life satisfaction	4.46	1.49	0.15***	0.10***	0.58***	0.60***	0.47***	0.82***	−0.48***	0.14***	0.12***	0.63***	0.67***	0.49***		
14	T2 Depression/Anxiety	1.71	0.74	0.05*	0.02	−0.38***	−0.44***	−0.55***	−0.49***	0.74***	0.10***	0.02	−0.41***	−0.47***	−0.59***	−0.51***	

N = 2,561. All constructs were measured on a scale from 1 to 7, except for depression/anxiety (1–4).

$***p < 0.001$, $**p < 0.01$, $*p < 0.05$.

never to $4 = almost\ every\ day$. Internal consistency was high in both waves ($\omega_1 = 0.90$, $\omega_2 = 0.90$).

As a measure of subjective wellbeing, we assessed life satisfaction using the German translation (Schumacher, 2003) of the 5-item Satisfaction with Life Scale (Diener et al., 1985) on a scale ranging from 1= *strongly disagree* to 7 = *fully agree*. The scale showed excellent internal consistency in T1 and T2 ($\omega_1 = 0.93$, $\omega_2 = 0.93$).

Analytical strategy

Data and code are available on the OSF: https://osf.io/acr24/.

Before testing our hypotheses, we conducted confirmatory factor analyses and invariance testing for all measures. Measurement invariance was established for all measures (see R-Markdown for details).

We tested all hypotheses simultaneously in a structural equation model. All constructs were modeled as latent factors based on the items of the respective scales. Trait resilience and depression/anxiety were modeled as second-order factors. Factor loadings for all constructs were constrained to be equal over time and all exogenous variables were correlated. Analyses were conducted with lavaan (version 0.6.11; Rosseel, 2012) in R (version 4.0.2). We used maximum likelihood estimation with robust standard errors (MLR) and as per our pre-registration, we

used full information maximum likelihood estimation to handle missing data (cf. Enders and Bandalos, 2001).

Results

Means, standard deviations, and correlations of all constructs are displayed in Table 1.

In a first step, we tested a model including all pre-registered hypotheses, where entertainment preferences at T1 predicted resilience factors at T2 and resilience factors at T2 predicted mental health and wellbeing at T2, while controlling for autoregression of the resilience factors and mental health. The model had acceptable fit, $\chi^2_{(1,772)} = 8,433.76$, $p < 0.001$, CFI = 0.95, RMSEA = 0.04, 90% CI [0.04, 0.04], SRMR = 0.06. All estimates, standard errors, and confidence intervals are displayed in Table 2. Our hypotheses stated that eudaimonic preferences at T1 would positively affect hope (H1), meaning in life (H2), and trait resilience (H3) at T2. We did not find a relationship between eudaimonic entertainment preferences at T1 and hope and trait resilience at T2, hence lending no support for H1 and H3. We did, however, find a significant, albeit very small, effect of eudaimonic preferences at T1 on meaning in life at T2. H2 was therefore supported. For hedonic entertainment preferences, RQ1 asked whether higher levels of hedonic preferences at T1 would be associated with higher hope (RQ1a), meaning in life (RQ1b), and trait resilience (RQ1c) at

TABLE 2 Results of the pre-registered structural equation model testing H1−4 and RQ1.

Effect	Estimate	SE	CI		p
			LL	UL	
Media effects on resilience					
Hedonic preferences T1 → Hope t2	−0.016	0.021	−0.058	0.025	0.440
Hedonic preferences T1 → Meaning in life T2	−0.029	0.028	−0.084	0.027	0.308
Hedonic preferences T1 → Trait resilience T2	0.002	0.024	−0.045	0.049	0.924
Eudaimonic preferences T1 → Hope T2	0.023	0.019	−0.014	0.060	0.223
Eudaimonic preferences T1 → Meaning T2	0.06*	0.026	0.009	0.11	0.021
Eudaimonic preferences T1 → Trait resilience T2	−0.001	0.022	−0.043	0.042	0.972
Resilience effects on mental health					
Hope T2 → Depression/anxiety T2	0.017	0.016	−0.015	0.048	0.297
Hope T2 → Life satisfaction T2	0.21***	0.032	0.147	0.273	<0.001
Meaning in life T2 → Depression/anxiety T2	−0.038***	0.009	−0.057	−0.020	<0.001
Meaning in life T2 → life satisfaction T2	0.216***	0.020	0.177	0.256	<0.001
Trait resilience T2 → Depression/anxiety T2	−0.117***	0.017	−0.150	−0.084	<0.001
Trait resilience T2 → Life satisfaction T2	0.032	0.025	−0.016	0.081	0.188
Autoregressive paths (T1 → T2)					
Hope	0.801***	0.021	0.759	0.842	<0.001
Meaning in life	0.758***	0.017	0.724	0.793	<0.001
Trait resilience	0.922***	0.022	0.879	0.965	<0.001
Depression/anxiety	0.664***	0.029	0.607	0.720	<0.001
Life satisfaction	0.608***	0.022	0.564	0.651	<0.001

N = 2,561. Estimate, unstandardized coefficients; CI, confidence interval; LL, lower limit; UL, upper limit. ***p < 0.001, **p < 0.01, *p < 0.05.

T2. We found no significant effects of hedonic preferences at T1 on either resilience factor at T2.

We further assumed that each resilience factor would positively relate to wellbeing and negatively relate to psychological symptoms (H4a–c). Meaning in life (H4c) indeed exhibited the expected significant positive association with life satisfaction and the significant negative association with depression/anxiety. Trait resilience showed no association with life satisfaction, but was significantly negatively related to depression/anxiety, yielding partial support for H4a. Hope showed the reverse pattern compared to trait resilience: there was no association with depression/anxiety but a significant positive relationship with life satisfaction, yielding partial support for H4b.
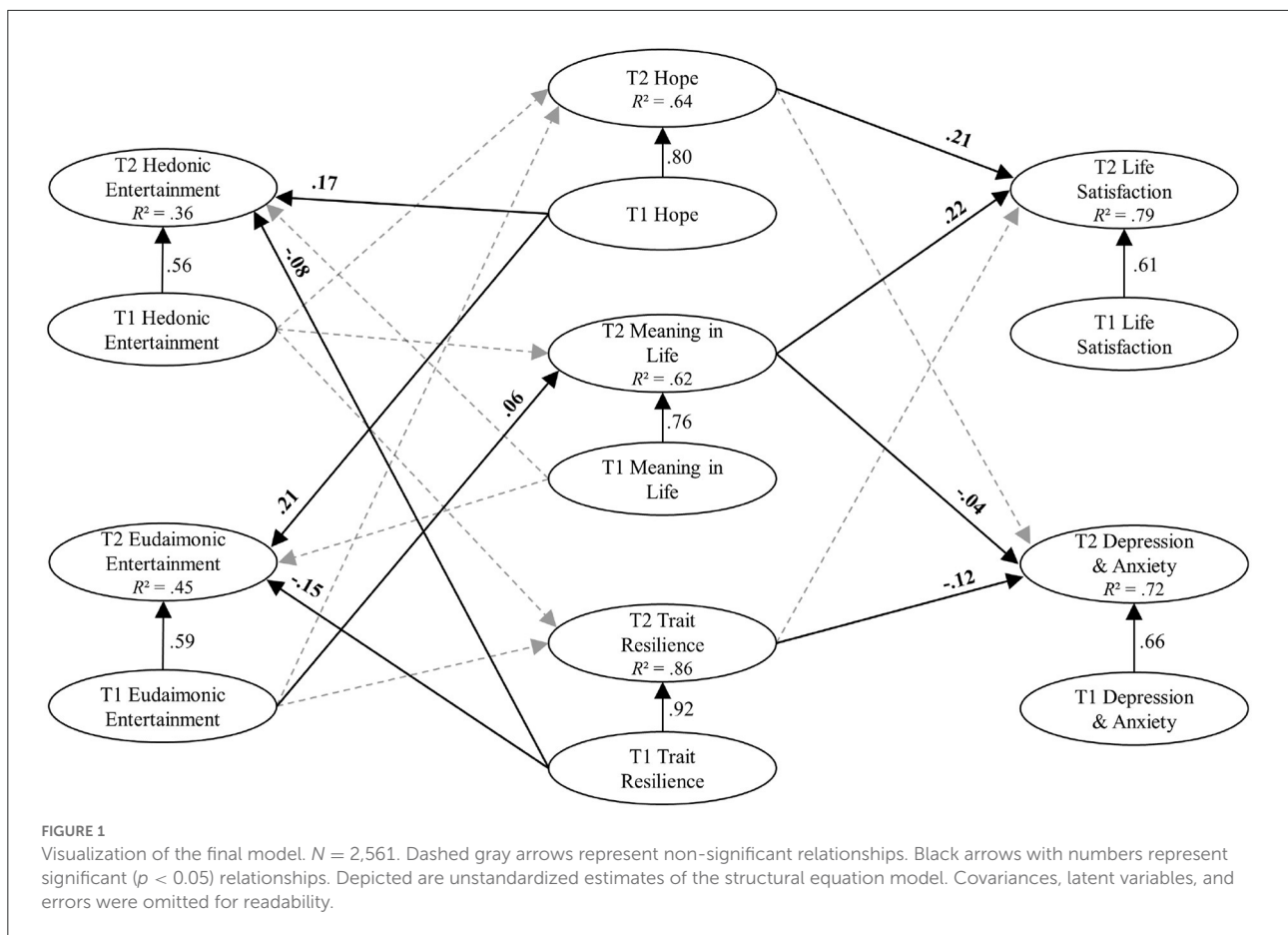
In a second step, we tested an extended cross-lagged model. Next to the *media effects* of entertainment preferences at T1 on resilience factors at T2, we also included *selection effects* of resilience factors at T1 on entertainment preferences at T2 (RQ2). Since the selection effects were not our primary research interest, these analyses were not featured in our pre-registration, and are therefore exploratory.

This model also showed acceptable fit, $\chi^2_{(2,138)} = 9{,}234.26$, $p < 0.001$, CFI = 0.95, RMSEA = 0.04, 90% CI [0.04, 0.04], SRMR = 0.06. The pattern of effects for T1 entertainment

and T2 resilience factors was the same as in the first model. Additionally, the model revealed several selection effects linking resilience factors at T1 to entertainment preferences as T2. Interestingly, although we found a media effect of eudaimonic preferences at T1 on meaning in life at T2, we did not find a selection effect of meaning at T1 on eudaimonic or hedonic preferences at T2. Trait resilience at T1 negatively predicted both hedonic and eudaimonic entertainment preferences at T2. Hope at T1 positively predicted both hedonic and eudaimonic entertainment preferences at T2. The final model is visualized in Figure 1.

Discussion

The present study aimed at two central contributions. First, we provide important theoretical impulses to previous research on the effects of narratives and entertainment content by introducing a salutogenic perspective. This perspective emphasizes the role of entertainment as a potential source for salutary factors that promote psychological health and wellbeing over time. To do so, we have adopted the concept of psychological resilience and systematically identified theoretical connections between hedonic and eudaimonic entertainment

FIGURE 1
Visualization of the final model. $N = 2,561$. Dashed gray arrows represent non-significant relationships. Black arrows with numbers represent significant ($p < 0.05$) relationships. Depicted are unstandardized estimates of the structural equation model. Covariances, latent variables, and errors were omitted for readability.

and trait resilience as well as hope and the presence of meaning in life, two central resilience factors frequently discussed in literature on mental health. By providing a theoretical bridge between these two theoretical perspectives that have been largely disconnected in previous research (Reinecke and Rieger, 2021), we aim at making an important step toward theory synthesis (DeAndrea and Holbert, 2017). We believe that our theoretical argumentation provides convincing evidence for the theoretical potential of narratives and entertainment to have long-term salutary effects on psychological health and wellbeing and underlines the relevance of a salutogenic perspective in future entertainment research.

Second, empirically and methodologically, the present study provides an important extension of previous research on the effects of narratives and entertainment content by testing the longitudinal effects of media entertainment on mental health. Despite a growing number of studies that find evidence of beneficial short-term effects on psychological wellbeing (e.g., Reinecke et al., 2011; Rieger et al., 2014; Nabi et al., 2017), evidence for prospective effects is scarce. Very few studies have addressed the effects of repeated exposure to narratives and entertainment over a few days or weeks (Neubaum et al., 2019;

Prestin and Nabi, 2020; Janicke-Bowles et al., 2022). To the best of our knowledge, however, the present study is the first to test potential effects of entertainment on resilience factors in a large sample of the general population over a 6-month period.

Despite the convincing theoretical connections between the use of narratives and entertaining content and the cultivation of resilience, the findings of our longitudinal study provide little evidence for any prospective effects of exposure to entertainment on the development of resilience factors. In the first part of our model, we investigated the longitudinal relationships of preferences for hedonic and eudaimonic entertainment with hope, the presence of meaning in life, and trait resilience, respectively. Contrary to our expectations (H1 and H3), exposure to eudaimonic entertainment did not show any significant longitudinal association with hope or trait resilience. Though we did find the expected positive prospective relationship between eudaimonic entertainment preferences and the presence of meaning in life (H2), this effect was statistically significant, yet negligibly small. With regard to hedonic entertainment preferences (RQ1a–c) we did not find any significant longitudinal effects on the three resilience variables.

In the second part of our model (H4), we tested the effects of trait resilience, hope, and presence of meaning in life on mental health. Our findings largely support our expectations and underline the important function of resilience for psychological health and wellbeing. The presence of meaning in life was significantly related to both mental health indicators in our study. Hope, on the other hand, was only related to increased levels of life satisfaction, and trait resilience was only related to decreased levels of depression and anxiety. Overall, these findings replicate the positive mental health effects of psychological resilience found in previous work (Fletcher and Sarkar, 2013; Hu et al., 2015).

In a final step, our model explored potential selective exposure effects emerging between the three resilience variables and entertainment diets over time. In fact, our data suggest that pre-existing levels of resilience have a longitudinal effect on entertainment preferences. Our findings revealed a positive longitudinal relationship between hope and exposure to both hedonic and eudaimonic entertainment content, whereas trait resilience showed negative longitudinal associations with both entertainment preferences. In contrast, meaning in life was not related to entertainment diets over time. The selection effects we found in our data were considerably stronger than the media effects associated with entertainment preferences. This may suggest that rather than being a resource supporting the development and cultivation of resilience factors, exposure to narratives and entertainment content may be coping tools that are selectively used by individuals depending on individual differences in coping strategies (Wolfers and Schneider, 2020). The longitudinal pattern of results found in the present study closely resemble cross-sectional findings of a study by Eden et al. (2020), exploring the use of entertainment content as a coping strategy during the first lockdown in the COVID-19 pandemic. In their study, hope was also a positive predictor for the use of hedonic and eudaimonic media content, whereas trait resilience negatively predicted hedonic entertainment use, yet was unrelated to eudaimonic entertainment use. Overall, these findings could suggest that different resilience factors may systematically correspond to the use of specific media-related coping strategies which may then result in selective exposure to media entertainment as a coping tool. However, as coping strategies were not addressed empirically in the present paper, this remains an open question for future research. Furthermore, the negative longitudinal relationship between trait resilience and entertainment use may also suggest that some forms of exposure to narratives and entertainment may represent dysfunctional forms of escapist or distraction-oriented coping (Knobloch-Westerwick et al., 2009) that are less frequently chosen by highly resilient individuals. Future research should thus explore the relationship between psychological resilience and different forms of media-related coping more systematically.

Moreover, although the evidence for selection effects is much stronger in the present study, the significant albeit very small longitudinal effect of meaningful entertainment content on the presence of meaning in life suggests that entertainment use and psychological resilience may have reciprocal effects. Future research should thus explore the possibility of mutual reinforcement of resilience and entertainment preferences more systematically. In any case, the present study clearly suggests that unidirectional longitudinal effects of narratives and entertainment content on psychological resilience are highly implausible.

We believe that our study provides important new empirical insights into the longitudinal dynamics between entertainment use and resilience. Still, the findings need to be discussed on the basis of further theoretical considerations and a number of limitations of the present study. This appears particularly relevant with regard to the lack of empirical support for longitudinal effects of entertainment use on resilience. Even if our findings may suggest that such effects do not exist or have a negligibly small effect size, other explanations appear equally plausible.

First, the present study tested the *direct* longitudinal effects of entertainment preferences on psychological resilience. We believe that this is an important first step in exploring salutogenic effects of narratives and entertainment content, however, *indirect* effects of media exposure on resilience may be a more likely scenario (Valkenburg and Peter, 2013). In fact, in one of the few studies testing the effects of repeated exposure to eudaimonic narratives, Neubaum et al. (2019) did not find direct effects of exposure on psychological wellbeing, yet indirect effects via daily levels of elevation. This reveals one of the major limitations of our study design: our measures of hedonic and eudaimonic entertainment preferences appear well-suited to provide an overall measure of the frequency of exposure to different forms of narratives and entertainment, but they do not convey any information on how these narratives are processed individually and what cognitive and emotional reactions they trigger. A large body of research documents the complexity of narrative engagement and viewer reactions to narratives (Dill-Shackleford et al., 2016). A multitude of potentially mediating processes appears highly relevant to better understand the potential role of narratives and entertainment content for the acquisition of resilience factors. These processes include narrative engagement and transportation into the mediated story world (Busselle and Bilandzic, 2008), as well as the identification with and emotional attachment to portrayed characters (Cohen and Klimmt, 2021), or the moral judgement of their actions (Raney, 2004; Eden et al., 2017). Furthermore, the cognitive reactions to narratives appear particularly relevant for the vicarious experiences and learning processes proposed as a central mechanism linking narratives to increased resilience in the present paper. Such learning processes should be more pronounced if viewers make a cognitive connection between the situation of the protagonists in a narrative and their own situation (Schramm and Wirth, 2010) or if they temporarily

extend the boundaries of the self to vicariously experience the characters fate and integrate the protagonist's characteristics into their own self-concept (Slater et al., 2014). Integrating these and similar processes of narrative engagement and narrative processing is a vital task for future research on media entertainment and resilience.

Second, the entertainment preferences measure used in the present study is limited in several ways. First, the items ask about the frequency of use very broadly and without providing any specification in terms of context or different situations of use. Also, the measure does not provide any specific time reference (e.g., "over the past week") but rather assesses the general tendency for prolonged and reoccurring use of hedonic and eudaimonic content. Although this "chronic" use of entertainment corresponds well with the mechanisms of repeated exposure described in our theoretical argumentation, our measure appears less able to account for any fluctuations of use between different contexts. Future research would benefit from implementing more situational measures of entertainment use.

Further, the present study provides only limited information on the role of the specific content and structure of narratives and entertainment for the development of resilience. As discussed in our theoretical argumentation, hedonic and eudaimonic entertainment content differs substantially in the role models, learning opportunities as well as emotional and cognitive challenges they provide to viewers (Oliver and Bartsch, 2010; Bartsch and Hartmann, 2017; Slater et al., 2018; Clayton et al., 2019). At the same time, the structure and content of narratives in hedonic and eudaimonic entertainment offerings is very heterogeneous (Raney et al., 2018; Janicke-Bowles et al., 2019). Our measures of hedonic and eudaimonic entertainment preferences cannot convey any nuance in terms of narrative content but rather provide a broad proxy of the general "entertainment menu" of our respondents. Additionally, as our entertainment preferences measures refer to media content in general, they also do not provide any information regarding the media technology or platform that was used as the source of the entertaining content by our participants. These limitations are central, as specific content within the hedonic and eudaimonic entertainment spectrum distributed via different channels and technologies is likely to vary substantially with regard to the content characteristics relevant to the reinforcement of psychological resilience. Not all eudaimonic content may be equally suitable to support processes of meaning making or contain the same amount of hope elicitors, and hedonic content may vary substantially in its potential to provide opportunities for escapism and distraction. Furthermore, the potential effects of entertainment on resilience may depend strongly on the fit between the themes and narrative content viewed by an individual media user and the adversity and life challenges experienced by that person. It is reasonable to assume that narratives may be a particular powerful source of resilience

if their content resonates with the viewers' life experiences (Vorderer and Halfmann, 2019; Das and Peters, 2022) and thus provides particularly relevant impulses for positive adaption to adversity. It thus appears paramount for future research to systematically explore the narrative content of entertainment as well as the correspondence between content and individual life challenges as a central boundary condition of potential effects of entertainment use on resilience. Furthermore, with regard to the technical distribution of content, different platforms and contexts of use may demand for the differentiation of specific forms of usage practices. In the context of social media use, for example, it may be important to differentiate the effects of finding vs. sharing eudaimonic or inspiring content (Janicke-Bowles et al., 2022). Future research should thus explore the role of content platforms and context-specific forms of use for the relationship between entertainment use and resilience.

A further aspect that needs to be considered regarding the findings of the present study is the temporal resolution of our data and the temporal stability of our central variables. The longitudinal design clearly is a main methodological strength of our study. Finding the right time-lag between points of measurement, however, represents a main challenge for any longitudinal research design. As no previous research on media entertainment and resilience was available for reference, a 6-month interval for data collection was chosen for the present study based on prior research addressing longitudinal media effects on psychological trait variables and wellbeing outcomes (e.g., Reinecke and Trepte, 2014). This may have resulted in different problems. First, our data demonstrate that our three resilience variables show very high levels of temporal stability over the two points of measurement (see Figure 1). This may have several reasons: the time-lag may have either been too short to assess long-term developments in resilience, or too long to capture short-term fluctuations in the three variables. Importantly, our research design only allows for a test of group-level, *between person effects*, whereas more points of measurement would be needed to model *within-person effects*, that is, intraindividual changes in the respective variables over time (Thomas et al., 2021). Furthermore, the temporal resolution of our study does not allow us to account for the process character of resilience and positive adaption to adversity, that may have a shorter cadence and a higher temporal volatility. Overall, this strongly suggests that future research would benefit greatly from research designs with shorter and varying time-frames (e.g., daily or weekly reports) that provide a more nuanced perspective of the within-person processes and dynamics linking the use of narratives and entertainment to resilience and positive adaptation to situational adversity.

A last potential limitation refers to the time of data collection of the present study. Data were collected during the COVID-19 pandemic in October 2021 and April 2022. The individual, social, and professional repercussions of the pandemic have resulted in increased levels of strain and decreased levels of

mental health in large parts of the general population (Xiong et al., 2020). With regard to our resilience measures, this suggests that our participants were likely confronted with higher-than-usual levels of adversity. This may have increased the use of media as a coping tool (Eden et al., 2020) and thus intensified the relationship between media use and resilience. On the other hand, the higher global levels of adversity may have obscured the more nuanced relationship between individual media use patterns and resilience. Future research should thus test the replicability of the results of the present study in a post-pandemic environment.

Despite these limitations, we believe that our study constitutes an important first step toward a salutogenic perspective on the prospective effects of narratives and media entertainment on mental health. Though the present study provides limited support for *direct* effects of exposure to entertainment content at best, we are convinced that the field of entertainment research will benefit significantly from further exploring the relationship between exposure to narratives and resilience by addressing potential indirect and reciprocal effects of both constructs. It is our hope that addressing the numerous open questions and limitations identified above will help us to further increase our understanding of the salutogenic potentials of the ubiquity of narratives and entertainment experience in people's everyday lives.

Data availability statement

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found at: https://osf.io/acr24/.

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

Author contributions

LR designed the study. LR and RK contributed to conception and design of the survey and wrote the first draft of the manuscript. RK performed statistical analyses. Both authors revised, read, and approved the submitted version.

Funding

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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