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Daily TV Use and Meaning in Life Among Older Adults: The Moderating Role of Selective and Compensatory TV Use

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ABSTRACT

Older adults (60+) spend a considerable amount of time watching TV. This can have important implications in terms of their daily sense of meaning in their life. Applying the selection, optimization, and compensation (SOC) model, we argue that the impact of the daily amount of time spent watching TV on daily perceptions of meaning in life is moderated by whether TV is generally used in a compensatory or selective manner. We present data from an intensive longitudinal study with $N = 101$ healthy older (60+) adults. Data were collected over five consecutive days. Compensatory and selective TV use were treated as a general strategy and thus as a trait-like variable measured in a baseline survey. Results show that the effect of the amount of daily television use on daily perceptions of meaning in life depends on the extent to which TV is generally used in a compensatory fashion as indicated by a cross-level interaction between compensatory TV use (between-person level 2) and daily self-reported TV use (within-person level 1) on daily perceptions of meaning in life. We discuss these findings in terms of both theoretical and methodological considerations.

According to the United Nations World Population report, older people (60+) are the fastest growing age group worldwide. Due to improvements in nutrition, health care, and technical advancements, longevity is likely to increase

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even more in the future (United Nations, 2019). The question arises how older adults can maintain or even improve their level of both mental and physical health on a daily basis, as older age is often associated with a potential risk for limited physical capacity, a decline in social contacts, and poor mental health (e.g., García-Esquinas et al., 2017). At the same time, research shows improvements in social and emotional health as people grow older (Charles & Carstensen, 2010). The maintenance or improvement of both mental and physical well-being has been referred to as *successful aging* (World Health Organization, 2020). The term is defined as "the maximization of gains and the minimization of losses" (Freund & Riediger, 2003, p. 612; see also Urtamo et al., 2019). Gains and losses can take different forms, such as physical and mental health or well-being.

One of the most important components of a person's general well-being and mental health is a sense of meaning in life (Reker, 2005; Reker et al., 1987; Steger, 2009; Steger et al., 2009). Meaning in life refers to "people's concerns with the core significance and purpose of their personal existence" (Dezutter et al., 2013, p. 335). Steger defines meaning in life as "the extent to which people comprehend, make sense of, or see significance in their lives, accompanied by the degree to which they perceive themselves to have purpose, mission, or overarching aim in life" (Steger, 2009, p. 682). More precisely, meaning in life is comprised of two components: comprehension and purpose. The first component describes "people's ability to find patterns, consistency, and significance in the many events and experiences in their lives" (Steger, 2009, p. 679). Purpose, the second component, "refers to highly motivating, long-term goals about which people are passionate and highly committed" (p. 679). Thus, meaning in life is an important outcome of the process of successful aging (Wong, 1989).

The maintenance of meaning in life is a central concern in later life. On the one hand, older people run the risk of lacking a sense of meaning due to retirement (i.e., the cessation of an important source of meaning in life), health problems, or shrinking social networks. On the other hand, meaning in life is likely to increase in later life due to changes in social roles (e.g., becoming a grandmother). Accordingly, some studies show a decline in the presence of meaning in life with increasing age (Ryff, 1989; Ryff & Essex, 1992). However, others demonstrate that meaning in life tends to increase or at least remain stable as people grow older (Reker, 2005; Reker et al., 1987; Steger et al., 2009). Although these findings are contradictory, there seems to be consensus that the maintenance of meaning in life is a central concern to older adults (Frankl, 1995; Steger et al., 2009, 2011).

As communication scholars, we should ask about the role media use plays in contributing to meaning in life of older adults (Hofer, 2016; van der Goot et al., 2012, 2015). Although there is a growing number of older adults using the Internet (Hofer & Hargittai, 2021; Hunsaker & Hargittai,

2018; Seifert & Cotten, 2020), research consistently shows that—to a large extent—older adults still rely on traditional media, such as newspapers, radio, and TV (Mares & Woodard, 2006; Östlund, 2010; Seifert & Cotten, 2020).

In terms of TV use, research shows that older adults spend significantly more time watching TV than middle-aged or younger adults. For instance, Depp et al. (2010) found that Americans aged 65 and older spend three times more time watching TV than do younger Americans. Dal Cin et al. (2021) similarly found TV to be the primary leisure activity of adults 60+ years old in a recent diary-based time use study, even among very computer-literate subgroups. Similarly, a cross-European survey indicated that older adults are more inclined to use traditional media and synchronous instead of asynchronous communication (Nimrod, 2017). In addition, evidence from a large cross-European study in Germany, Italy, and Switzerland indicates that on average, older adults (65+) spend around two hours per day watching TV (Da Ronch et al., 2015). Although it is unclear whether these age differences in TV use are age- or cohort-related, TV seems to be an important part of the daily life of older adults. The question arises how TV use is connected to the daily experience of meaning among older adults.

Because meaning in life is central to a person's mental health and because we find increases in the use of television as people grow older, both from a media effects and societal perspective, the examination of the role of television in terms of the meaning in life is a worthwhile endeavor. Therefore, in the present study, we examine the connection between daily TV use and daily perceptions of meaning in life in a sample of healthy older adults aged 60 years and older. We argue that TV use should not only be regarded in terms of the amount of time spent, but also as part of a broader life-management strategy (Hofer & Eden, 2020; Nimrod, 2020; van der Goot et al., 2012, 2015). Accordingly, we apply a meta-theoretical approach—the selection, optimization, and compensation model (SOC, e.g., Freund & Baltes, 1998). We argue that the effect of time spent watching TV on meaning in life is moderated by how TV is integrated into an individual's daily life; whether it is generally used in a more selective or a more compensatory manner.

Specifically, we build on the results by Hofer and Eden (2020) and expand their research in three ways. First, the study by Hofer and Eden (2020) was based on cross-sectional data, with which it is hard to examine processes in the daily life of respondents. In this study, we use intensive longitudinal data collected in older adults' daily lives. Using this methodology, one can model both between and within-person associations. In other words, by both examining relations across individuals on an overall level (i.e., between persons) and relations within individuals over time, one can model processes and dynamics that unfold in an individual's daily life (Curran & Bauer, 2011). More precisely, by examining within-person processes we can answer the question whether time spent

watching TV is related to meaning in life for a given person on a given day. In addition, by using a longitudinal design we meet at least one prerequisite of causality, namely chronological order (Bolger & Laurenceau, 2013). Finally, by focusing on daily life experiences we can avoid biases that are introduced by retrospective or global judgments (Steger et al., 2008).

Second, Hofer and Eden (2020) looked at direct associations between selective and compensatory TV use and well-being. In the present study, we argue that compensatory and selective TV use do not only directly affect outcomes but moderate the day-by-day association between the amount of time spent watching TV and respective outcomes.

Third, Hofer and Eden (2020) examined three well-being-related outcomes: social connection, life satisfaction, and perceived health. In this study, we look at a different outcome: meaning in life, which is regarded as one if not the most important outcome of successful aging (Frankl, 1995; Reker et al., 1987; Reker, 2005; Steger, 2009; Wong, 2012).

We start by reviewing research on the effects of TV watching on physical and mental health. We then argue that TV can be regarded as a source of meaning for older adults. In the next step, we introduce the SOC model and its application to media and communication research and conceptualize TV use as part of a general life-management strategy. Next, we present data from an intensive micro-longitudinal study examining the impact of daily TV watching and general TV use strategies on perceptions of meaning in life.

Literature review

Effects of TV watching on physical and mental health

When investigating the effects of TV watching, research has mostly examined the associations between time spent watching TV and older adults' physical and mental health. In terms of physical health, TV viewing is regarded as just another sedentary activity with links to physical health problems, such as cardiovascular problems, obesity, inflammation, or diabetes (Hamer et al., 2010, 2013, 2015). A large-scale study in Spain by García-Esquinas et al. (2017) found that the amount of time spent watching TV was associated with limitations in physical functioning even independently of physical activity. Thus, in terms of the effects of TV watching on physical health, research draws a rather somber picture.

In addition, the amount of time spent watching TV can affect an older person's mental health or well-being (Depp et al., 2010; Wagnild & Pollard, 2021). Goodwin et al. (2005) for instance, assessed affective reactions and TV watching over seven days in a sample of older adults. They found fewer positive emotions while watching TV than while being engaged in other activities. In addition, research also found adverse effects of watching TV on cognitive

functioning. For instance, using data from the English Longitudinal Study, Fancourt and Steptoe (2019) found that watching TV for more than 3.5 hours per day is associated with a decline in verbal memory over time. However, other research did not find any effect of watching TV on older adults' mental health, well-being, and cognitive functioning. For instance, in an experimental study, Deal et al. (2018) found no effect of watching cable news on subjective and physiological stress reactions and cognitive functioning. Similarly, Dal Cin et al. (2021) found no relationship between media use and well-being in their diary data; however, neither motivations for media use nor personal circumstances such as compensatory needs were included in their sample.

TV watching and meaning in life

At a basic level, the extent of TV viewing among older adults can be regarded as a way of maintaining habits and routines that were developed over years and that provide a certain sense of stability (van der Goot et al., 2015). Looking at the definition of meaning in life by Steger (2009), we could argue that television being part of a routine can help older people "comprehend, make sense of, or see significance" (p. 682) in the world, and thus also in their lives. In a similar vein, Kubey (1980, 1986) argued that TV viewing can serve as a means to structuring the day in a meaningful way, as older adults generally have more time at their disposal (Robinson et al., 2004).

Other research on the effects of TV use on a person's meaning in life can be found in the realm of entertainment research (Hofer & Rieger, 2018; Hofer et al., 2014; Oliver & Hartmann, 2010). Using data from forced-exposure experimental studies or cross-sectional surveys, this research shows that the use of so-called meaningful entertainment can lead to a heightened sense of personal meaning in life. In addition, older age goes along with specific content preferences; research suggests that older adults are generally interested in genres like news and information to keep up with societal or health-related developments (Kubey, 1980, 1986; Mares & Sun, 2010). Other studies have shown that older age is also associated with preferences for emotionally and socially meaningful genres (i.e., dramas or documentaries; Bartsch, 2012; Hofer, 2020a; Mares et al., 2008). These genre preferences could be interpreted as a search for meaning of older adults through their media diet (Oliver & Raney, 2011). Accordingly, research suggests that older adults are indeed more likely to derive a sense of meaning in their lives from watching movies or television in general (Hofer, 2016, 2020a; Hofer et al., 2014; Mares et al., 2016).

In this study, we focus on TV use and its implications for meaning in life for healthy older adults in their daily lives. Van der Goot et al. (2015, see also Hofer, 2016; Hofer & Eden, 2020) argued that to understand the impact of TV in the daily lives of older adults it might be useful to regard

TV use as one of multiple life-management strategies rather than merely looking at the time spent watching TV, content preferences, or short-term effects of specific movies. They base their argument on a model from life-span psychology: The selection, optimization, and compensation (SOC) model (Baltes & Baltes, 1990; Freund & Baltes, 1998).

The SOC model is a meta-model to conceptualize successful aging as the interplay of the processes of selection, optimization, and compensation. Selection means choosing and committing oneself to certain goals. It also entails prioritizing one goal over another. The most important function of selection is the efficient and prudent utilization of resources. Especially for older adults who often have to deal with declines and losses, selection should focus on the promotion of a correct fit between needs and resources (Freund, 2008). Compensation denotes the processes that deal with the management of gains and losses (Freund & Baltes, 2000). For instance, a person might compensate for his or her age-driven short-sightedness with glasses. Finally, optimization refers to the acquiring and coordinating of resources for goal achievement. Heckhausen and Schulz (1993, 1998) have argued that optimization is "a higher order regulatory process" (pp. 55–56) that is served by selection and compensation. Thus, optimization can be regarded as the ultimate goal in the process of successful aging, rather than a separate strategy.

Selective and compensatory TV use

The SOC-model has been adapted to explain how TV (or media in general) can be used in the process of successful aging (Hofer & Eden, 2020; Hofer, 2016; Nimrod, 2020; van der Goot et al., 2012, 2015). Selective TV use is conceived of as an optimal choice from a wide range of other activities, such as meeting friends or playing an instrument. Using TV in a selective way entails purposefully watching programs according to one's preferences. As outlined above, among older adults these preferences include information and meaningful entertainment (Bartsch, 2012; Mares et al., 2008). In contrast, if used in a compensatory manner, TV serves as a substitute for other activities that might not be possible anymore due to limited resources that go along with growing older (Hofer & Eden, 2020; van der Goot et al., 2015). For instance, a person who is not able to meet friends or family due to an illness might fill his or her time watching TV which most likely includes watching programs that do not match his or her preferences.

Compensatory and selective TV use showed differential associations with various mental health outcomes. In a qualitative study, van der Goot et al. (2015) found that using TV in a selective way positively affects an older person's well-being, whereas TV used to compensate for activities that are not possible anymore, or just to pass time, is rather unsatisfactory and therefore negatively affects a person's well-being. Similarly, across two different samples of older adults,

Hofer and Eden (2020) found that using TV in a selective way is positively associated with a sense of social integration, perceived health, and life satisfaction. In contrast, compensatory TV use was negatively related to those outcomes.

Current study

The current study investigates the effects of daily TV viewing on daily perceptions of meaning in life of older adults. We also examine the effect of how TV is used as part of a general life-management strategy. More precisely, relying on research by van der Goot et al. (2015) and Hofer and Eden (2020), we hypothesize that compensatory and selective TV use have different effects on perceptions of meaning in life. More precisely, we hypothesize the following:

H1: Selective TV use is positively related to meaning in life.

H2: Compensatory TV use is negatively related to meaning in life.

In terms of the effect of daily TV use, research shows an unclear picture: Whereas entertainment studies suggest that older adults would use TV to serve their increased need for meaning (Bartsch, 2012; Hofer et al., 2014; Mares et al., 2008, 2016), other studies—although they are not directly examining meaning in life—find adverse effects or no effect of TV viewing time on both mental and physical health or no such effects (Da Ronch et al., 2015; Deal et al., 2018; Hamer et al., 2010, 2015). Therefore, we ask the following research question:

RQ1: What is the effect of daily TV use on meaning in life (both across individuals and over time)?

Finally, we argue that general strategies of how TV is integrated into an older person's life moderate the impact of time spent watching TV on meaning in life. More precisely, following van der Goot et al. (2015) as well as Hofer and Eden (2020) we regard selective and compensatory media use as trait-like variable that is likely to vary between persons, but not so much within persons. Hofer and Eden (2020) could demonstrate that these two general usage patterns showed different associations with well-being and health variables. However, in addition to such direct associations, we argue that selective and compensatory media use might provide the context in which the amount of time spent watching TV affects daily perceptions of meaning in life. In other words, we argue that selective and compensatory TV use moderate the effect of the amount of watching TV on perceptions of meaning in life. If a person generally uses TV in a selective manner, the time spent on TV watching is considered "as a positive choice amidst other possible activities" (van der Goot et al., 2015, p. 100). Therefore, the amount of time spent watching TV is likely to have a positive

effect on perceptions of meaning with increasing levels of selective TV use. Therefore, we hypothesize the following:

> H3: Selective media use moderates the impact of daily TV use on meaning in life, such that at high levels of selective media use, the impact of TV use is more positive than at low levels of selective media use.

Conversely, if a person generally uses TV in a compensatory manner (because he or she is physically ill and not able to do much else) the time spent watching TV is likely to be perceived as a mere "substitute for activities that are not possible" (van der Goot et al., 2015, p. 100). Thus, we can expect that the amount of time spent watching TV is likely to have a negative effect on perceptions of meaning in life with increasing levels of compensatory TV use. Therefore, we hypothesize the following:

> H4: Compensatory media use moderates the impact of daily TV use on meaning in life, such that at high levels of compensatory media use, the impact of TV use is more negative than at low levels of compensatory media use.

Method

Information about the current study and data can be accessed on OSF: (https://osf.io/u84fp/?view_only=1b6c914d55a74c0aa2d659d41dddde05). For the present study, we used the second measurement week (i.e., the second burst) of the measurement burst study described on OSF (see also Hofer, 2020b)[1] The study including all measures and procedures was approved by the ethics committee of the University of Zurich.

[1]The reasons for only using one of the three measurement weeks are the following: We changed the measurement of television use from the first to the second measurement week that made it hard if not impossible for us to use both bursts because the measures would not be comparable across burst. More specifically, we asked participants on the first measurement week (i.e., at 9 a.m.) about how long they watched TV since the last evening at 9 p.m. However, we only started asking this question from the second measurement week on. In the first week, we asked about how much time participants spent watching TV "this morning." Therefore, the measurement of TV watching is not comparable across measurement weeks. The reason for not using the data from the third burst has to do with sample attrition and the fact that because we were not able to use data from the first measurement week (i.e., the first burst) we only had two data points (i.e., two bursts), which would make model identification impossible. We believe that by focusing on the second burst which had the most participants and the "cleanest" measurements, we could provide a clear picture.

Participants and procedures

The current study used an intensive longitudinal design (Mehl & Conner, 2012). All data were collected from a convenience sample of older adults aged 60 years and older living in Switzerland ($N = 101$, $n_{female} = 55$, $M_{age} = 71.42$; $SD_{age} = 6.46$). Participants were recruited via newspaper ads, from a pool of older participants at the local University, and in courses for seniors at the same University. All surveys were conducted in German and took place between March and April 2019. Over the course of five days, participants responded to three surveys a day from Monday to Friday (referred to as *measurement week* in the following).

Before the measurement week, participants were invited to in-person sessions at the research institution and filled out a paper-pencil survey about their age, sex, relationship status, subjective health, compensatory and selective TV use, and other demographic and personality variables not used in this research. These baseline measures can be found in Table 1. During these in-person sessions, they were also handed their study phones and explained the handling of these phones as well as the procedure of the

Table 1. Selective and compensatory TV use, age, sex, relationship status, and subjective health for the sample.

	(*n* = 101)
Selective Media Use	
Range	1-5
M	4.12
SD	0.89
N/A	3.00%
Compensatory Media Use	
Range	1-5
Mean	1.51
SD	0.78
N/A	2.00%
Age	
Range	60-88
Mean	71.33
SD	7.24
N/A	1.00%
Sex	
Female	53.40%
Male	45.50%
N/A	1.00%
Relationship Status	
In a relationship	49.50%
Single	49.50%
N/A	1.00%
Subjective Health	
Range	1-5
M	3.91
SD.	0.85
N/A	0.00%

study. Finally, they filled out a written consent form and were compensated for their participation by receiving 50 Swiss Francs (51.00 USD) and reimbursement of transportation costs.

For the daily measures, we used a fixed time-based approach (Conner & Lehman, 2014). Every day at 9 a.m., 2:30 p.m., and 9 p.m. participants received a notification on their study phones to answer questions about their TV use since the last survey. Each evening (at 9 p.m.), participants responded to two items about how meaningful they felt their life was on that day. This process was repeated for each of the five measurement occasions. To implement the daily surveys and for data administration, we used the platform movisens XS (https://www.movisens.com).

Measures

Baseline measures

People who indicated that their relationship status was single, separated, divorced, or widowed were classified as single (coded as *0*). People who reported either being married or in a civil partnership were classified as in a relationship (coded as *1*).

Perceived health was assessed with one item: "How would you assess your overall health?" on a Likert-scale ranging from 1= *poor* to 5 = *excellent*.

We used the scale developed by Hofer and Eden (2020) to assess selective and compensatory TV use. Specifically, selective TV use was assessed with three items (e.g., "I decide what I want to watch before I put the TV on,"α = .68). Compensatory TV use was measured with five items (e.g., "Because I don't do many activities anymore, I watch TV," α = .82). People could indicate their (dis-)agreement on a Likert-scale ranging from 1 = *I completely disagree* to 5 = *I completely agree* (see Hofer & Eden, 2020 for the complete list of items).

Daily measures

Daily TV use was measured three times a day (see above) by asking participants if they have watched TV (both linear and non-linear TV) since the last survey. If they answered this question with "yes" they were asked about how much time they spent watching TV since the last survey.[2] They could choose between eight categories ranging from 1 = *1 to 15* minutes to 9 = *more than 121 minutes*. We created a sum index of the three measurements each day to get participants' daily TV use scores, with higher scores representing more TV use (see Table 2). Next, we created two

[2]Note that on the first measurement occasion (i.e., on Monday at 9 a.m.) we asked about how long they watched TV since the last evening at 9 p.m.

Table 2. Means and standard deviations of TV use and meaning in life across days.

	M	*SD*
Self-reported TV use		
Day 1	5.46	4.92
Day 2	5.63	4.72
Day 3	5.56	4.49
Day 4	5.08	4.63
Day 5	5.33	4.71
Daily Meaning in life		
Day 1	4.19	0.68
Day 2	4.19	0.68
Day 3	4.19	0.74
Day 4	4.27	0.68
Day 5	4.30	0.61

separate variables to capture both within- and between-person associations. More precisely, after grand-mean centering the variable, we split the variable into two orthogonal components: a between-subject mean component and a within-subject deviation from those means component (cf. Bolger & Laurenceau, 2013). The between-component reflects average amounts of time spent watching TV across the five days, whereas the within-component reflects deviations from those averages and thus the amount an individual varies in terms of time spent watching TV over time.

At the end of each day, we measured daily meaning in life using The Daily Meaning Scale (DMS, Steger et al., 2008). The scale consists of two items: "How meaningful does your life feel today?" and "How much do you feel your life has purpose today?" The repeated measures (or within) correlation (Bakdash & Marusich, 2017) between the two items was $r = .59$, $p < .001$. The correlation between the average daily meaning in life was $r = .96$, $p < .001$. Therefore, we averaged the two items to an index for each day of the measurement week. In Table 2, means and standard deviations of daily TV use and daily meaning in life are displayed.

Results

All data analyses were conducted using the software program *RStudio* (Version 1.4.1717; R Core Team, 2019), and multilevel models were conducted using the *nlme* package (Pinheiro et al., 2013). To assess repeated measures correlations, we used the *rmcorr* package (Bakdash & Marusich, 2017).

Between-person correlations between the average amount of time spent watching TV across days, daily meaning in life, compensatory and selective media use, age, and perceived health are displayed in Table 3. Average daily meaning over five days was positively associated with average TV use ($r = .12$, $p = .01$). Compensatory TV use showed a negative correlation with average meaning in life ($r = -.26$, $p < .001$), whereas selective TV use positively correlated with

Table 3. Between-person correlations with 95% confidence intervals [in Brackets].

	1	2	3	4	5	6
1. Average Meaning in life	-					
2. Self-reported TV use	**0.12** **[.003, .22]**			-		
3. Selective TV Use	**0.41** **[.31, .49]**	0.09 [−.001, .17]	-			
4. Compensatory TV Use	**−0.26** **[−.36, −.16]**	**0.24** **[.16, .33]**	−0.01 [−.10, .08]	-		
5. Age	**0.24** **[.14, .35]**	−0.04 [−.13, .05]	**0.17** **[.09, .26]**	**0.11** **[.02, .19]**	-	
6. Health	**0.17** **[.06, .28]**	**−0.19** **[−.27, −.11]**	0.08 [−.01, .17]	**−0.40** **[−.47, −.33]**	**−0.06** **[−.15, −02]**	-

Results with a $p < .05$ are bolded.

meaning in life ($r = .41$, $p < .001$). Both age ($r = .24$, $p < .001$) and perceived health ($r = .17$, $p < .001$) showed positive correlations with meaning in life. That is, on average, older people experienced higher levels of meaning in life and so did healthier participants. We also looked at the within-person correlation between daily meaning in life and daily TV use. This correlation was not significant ($r = -.06$, $p = .26$).

To test H1, H2, H3, H4, and RQ1, we constructed five separate multi-level models to test both between- and within-associations between daily meaning in life, TV use in general, and compensatory and selective TV use. All models were random intercept models[3] with an AR1 error covariance structure, wherein day was nested within-person (Bolger & Laurenceau, 2013). Model 1 was an intercept only model to assess variance based on days and persons. As indicated by the ICC in Table 4 (Model 1), around 70% of the variability of meaning in life is between subjects. Next, in Model 2, we included day within- and between-person components of TV watching. We found no effect of daily TV use on perceptions of meaning, neither on the within- nor the between-person level (RQ1). In Model 3, we included the level 2 variables selective and compensatory TV (to test H1 and H2) use and Model 4 comprised the cross-level interactions between self-reported TV use (w/n) and compensatory and selective TV use, respectively (to examine H3 and H4). Finally, Model 5 tested whether the effects held when controlling for important covariates including perceived health, age, and relationship status; perceived health and age were grand mean centered, while relationship status was dummy coded so 0 represented not being in a relationship. The model showed that the effects were stable. Moreover, none of the covariates was significantly related to the outcome.

[3]We also tested random intercept and random slope models (i.e., allowing the slope of TV use w/n to vary across individuals). However, these models did not result in a better fit nor did the slopes show any significant variance.

Table 4. Building up of five multilevel models with Level 1 and Level 2 variables predicting daily meaning in life.

Predictors	Model 1		Model 2		Model 3		Model 4		Model 5	
Fixed Effects	*Est.*	*[95% CI]*	*Est.*	*[95% CI]*	*Est.*	*[95% CI]*	*Est.*	*[95% CI]*	*Est.*	*[95% CI]*
Intercept	**4.2**	**[4.08, 4.32]**	**4.23**	**[4.11, 4.36]**	**4.27**	**[4.16, 4.38]**	**4.26**	**[4.15, 4.37]**	**4.25**	**[4.12, 4.37]**
Day[a]			0.02	[−0.01, 0.04]	0.02	[−0.01, 0.04]	0.02	[−0.01, 0.04]	0.02	[−0.01, 0.04]
TV use (w/n)			−0.01	[−0.02, 0.00]	−0.01	[−0.02, 0.00]	−0.01	[−0.02, 0.01]	−0.01	[−0.0, 0.01]
TV use (b/n)			0.03	[−0.00, 0.06]	0.03	[−0.00, 0.06]	0.03	[−0.00, 0.06]	**0.03**	**[0.00, 0.06]**
Selective TV use					**0.20**	**[0.08, 0.31]**	**0.20**	**[0.08, 0.32]**	**0.16**	**[0.07, 0.28]**
Compensatory TV use					**−0.25**	**[−0.39, −0.10]**	**−0.25**	**[−0.39, −0.10]**	**−0.23**	**[−0.38, −0.07]**
TV use (w/n)*Selective TV use							−0.01	[−0.03, 0.00]	−0.01	[−0.03, 0.00]
TV use (w/n)*Compensatory TV use							**−0.02**	**[−0.03, −0.003]**	**−0.02**	**[−0.03, −0.003]**
Age									0.02	[−0.00, 0.03]
Health									0.11	[−0.04, 0.26]
Relationship status[b]									−0.21	[−0.55, 0.13]
Random Effects	*SD [95% CI]*		*SD [95% CI]*		*SD [95% CI]*		*SD [95% CI]*		*SD [95% CI]*	
Intercept	.57 [.49, .67]		.56 [.49, .66]		.49 [.42, .57]		.49 [.42, .58]		.48 [.41, .56]	
Residual	.38 [.35, .41]		.37 [.35, .41]		.38 [.35, .41]		.34 [.37, .40]		.34 [.37, .40]	
ICC	.70		.69		.63		.64		.63	
AIC	630.213		629.632		604.262		601.186		582.252	

TV use is entered both within (w/n) and between (b/n) people. Results with a $p < .05$ are bolded.
[a]Day is coded −2 = Monday, −1 = Tuesday, 0 = Wednesday, 1 = Thursday, 2 = Friday,
[b]Relationship status is coded 0 = single, 1 = in a relationship,

All results, AICs, and ICCs for the five two-level models can be found in Table 4. As indicated by decreasing AICs, model fit improved from Model 1 to Model 5. In Model 2, none of the predictors showed significant effects on daily meaning in life. That is, there is neither a within-person nor a between-person effect of the amount of time spent watching TV on meaning in life (RQ1). In Model 3, we found significant effects of selective ($\gamma = 0.20$ [0.08, 0.31], $p = .002$) and compensatory TV use ($\gamma = -0.25$ [−0.39, −0.10], $p = .001$). Selective TV use was positively associated with average meaning in life; compensatory TV use showed a negative association with the dependent variable. Thus, we found support for H1 and H2. In Model 4, the cross-level interaction between self-reported TV use (within-person) and compensatory TV use was significant ($\gamma = -0.02$ [−0.03, −0.003], $p = .023$). The effect is displayed in Figure 1. At low levels of compensatory media use, the effect of TV use (within-person) on daily meaning is positive; at higher levels it is negative. In other words, those who generally use TV in a more compensatory manner, and who reported more TV use on a given day, had lower levels of meaning in life that day. In contrast, those who generally use TV in a less compensatory manner and who reported more TV use on a given day had higher levels of meaning in life that day. The interaction between self-reported TV use (w/n) and selective media use did not reach significance. Therefore, our data supports H4, but not H3.

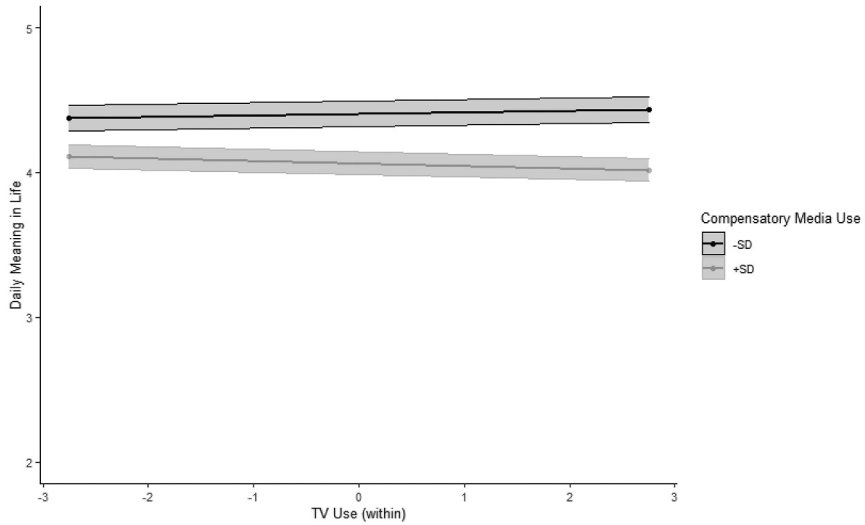

Figure 1. Daily meaning in life as a function of the cross-level interaction between compensatory TV use (Level 2) and daily TV use (Level 1, w/n).

Discussion

A sense of meaning in life is an important component of a person's well-being and mental health. It is also a central concern in later life (Steger, 2009; Steger et al., 2009, 2011). In this study, we examined the effects of daily TV use on perceptions of meaning in life in older adults. We did this using an intensive micro-longitudinal design, which is uniquely suited for investigating processes in an older person's daily life (Seifert & Harari, 2019). We argued that daily TV use would predict daily meaning in life depending on how TV is integrated into a person's life in general—either as a means for compensation or in a selective way to optimize well-being.

Our results show that mean levels of meaning in life across the measurement week were predicted by how TV is integrated into a person's life. More precisely, we found that TV used in a compensatory way is negatively associated with meaning in life, whereas using TV selectively shows positive associations with meaning in life. These findings are in line with results by Hofer and Eden (2020) and van der Goot et al. (2015).

Most important, we also found a cross-level interaction between daily self-reported TV use (within-person, level 1) and compensatory TV use (a between-person variable, level 2). That is, using TV less as a means of compensation for other activities leads to a positive effect of the amount of time spent watching TV on a given day; more compensatory TV use in general resulted in a negative effect of time spent watching TV on meaning in life. It seems that how older people in our sample generally integrate television into their lives moderates the influence of the daily amount of time spent watching television on perceptions of meaning that day. This finding is meaningful and adds to the qualitative research by van der Goot et al. (2015) and the cross-sectional studies by Hofer and Eden (2020) in that it shows that how television is used as part of a life management strategy can drive the effects of the amount of time spent watching television.

Surprisingly, we did not find any interaction between selective TV use and self-reported TV use. That is, on a daily basis it did not matter whether TV was used in a more or less selective manner. Given the rather high mean of selective media use (M = 4.12), we may be dealing with a ceiling effect that would prevent the cross-level interaction from becoming significant. In other words, most of the participants in our sample are already highly selective in their TV use, and therefore the effect of the amount of TV watching does not depend on how selectively it is used in general. This finding could also be explained by looking at previous research by Hofer and Eden (2020), who found that younger adults who were highly selective in their TV use had negligible associations between TV use and well-being outcomes. In addition, this argument is also in line with findings by van der

Goot et al. (2015) who found that older people in their sample were highly selective in their TV use.

Limitations

Like any other study, also ours has limitations. First, we did not measure the type of content people were watching during the day. As discussed above, older age tends to indicate specific content preferences. More precisely, as people grow older, they show an increased preference for media content that is likely to serve their need for meaning (Bartsch, 2012; Mares et al., 2008). Although it might be rather hard for participants to remember specific content (De Vreese & Neijens, 2016), future studies could consider this. For instance, it could be useful to examine whether compensatory and selective media use would alter the effects of the use of preferred genres by older adults.

Second, we considered compensatory and selective media use to be trait variables that are unlikely to vary over shorter periods of time. The decision to treat these variables as such was made following the conceptualization of selective and compensatory media use by van der Goot and colleagues and Hofer and Eden (2020) as being part of a general life management strategy. Consequently, we used a measure that reflects this trait-like character of the two variables. However, it is possible that selective and compensatory media use varies at shorter time intervals. Future research would have to develop a measure that could capture such short-term variability.

Third, our sample consisted of healthy, well-educated, and well-integrated community-dwelling older adults living in a country with a very high living standard. Therefore, inference about the general population of people over the age of 60 is limited. Future studies should also consider studying less healthy and less integrated older adults in other countries and other living situations (e.g., long-term care facilities). For instance, research shows that among older adults with advanced diseases, meaning in life can considerably enhance their overall well-being (e.g., satisfaction with their life or their perceived quality of their life), enhance coping strategies, and increase tolerance of adverse physical symptoms (Guerrero-Torrelles et al., 2017).

Fourth, we only looked at the effects of TV among all possible media. Given that older adults incorporate multiple media technologies into their daily routines, including the use of the Internet or streaming services like Netflix or YouTube (Dal Cin et al., 2021; Hofer, 2016; Hunsaker & Hargittai, 2018; Seifert & Cotten, 2020), future studies could broaden the perspective in terms of media technologies and services. Research by Nimrod (2020) suggests that also the Internet is used in selective and compensatory ways with different implications for an older person's well-

being. For instance, one could hypothesize that active Internet use (posting videos or photos) would positively affect a person's meaning in life and that this positive effect would be enhanced by a general selective use of the Internet or decreased by compensatory use. However, the present study is a direct continuation of the work by van der Goot et al. (2012, 2015) and Hofer and Eden (2020) that was specifically concerned with the role of TV use in the lives of older adults and its implications for well-being.

Finally, our research has not incorporated other important factors increasing or decreasing an older person's meaning in life, such as social interactions or the lack thereof, particularly in the light of the recent COVID-19 pandemic and associated restrictions in everyday life. Future research could also incorporate these factors within longitudinal measurement during and after the pandemic.

Conclusion

In this study, we examined how the use of TV and meaning in life are related in the daily lives of older adults. Following previous research (Hofer & Eden, 2020; van der Goot et al., 2015), we emphasized the importance of considering how older adults use TV as part of a general life-management strategy. Our results on the between-person level (i.e., the effects of compensatory/selective TV use and average meaning in life) are in line with the qualitative findings by van der Goot et al. (2015) and the quantitative findings by Hofer and Eden (2020). However, by employing an intensive longitudinal design—a design that is uniquely suitable to examine within-person processes in people's daily lives (Mehl & Conner, 2012)—we were able to examine how television use on a given day affects perceptions of meaning in life that day. Consequently, our study provides an important additional insight: The moderated effect of daily TV use on meaning in life depends on the extent to which TV is integrated into the life of older adults in a compensatory manner.

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