

The Perceived Parental Media Mediation Scale (PPMMS): Supplemental Information on PPMMS Development

How to Cite

Valkenburg, P. M., Piotrowski, J.T., Hermanns, J., & de Leeuw, R. (2013). Development and Validation of the Perceived Parental mediation Scale: A Self-Determination Perspective. *Human Communication Research*, 39(4), doi 10.1111/hcre.12010

Description

The Perceived Parental Media Mediation Scale (PPMMS) is a 28-item scale that measures adolescents' perceptions of the frequency of restrictive and active parental mediation.

The PPMMS also measures adolescents' perceptions of different *styles* of restrictive (autonomy-supportive, inconsistent and controlling restriction) and active mediation (autonomy-supportive and controlling active mediation).

The PPMMS consists of 2 main scales to measure the frequency of active and restrictive mediation, and 5 follow-up scales to measure the style of mediation. All scales consist of 4 items. The response options for the main items are: (1) never, (2) almost never, (3) sometimes, (4) often, and (5) very often. The response options for the follow-up items are: (1) not true at all, (2) not true, (3) neutral, (4) true, (5) completely true.

The PPMMS has satisfactory psychometric properties. Cronbach alphas for all 4-item subscales are higher than .74. The four-month test-retest reliabilities are > .40. The scale has been validated with general parenting styles (autonomy-supportive, chaotic, and parental rejection), prosocial and antisocial behavior (Valkenburg et al., 2013).

The reported main and follow-up items have been explored and confirmed in exploratory and confirmatory factor analyses.

This Report

This report provides detailed information on exploratory factor analyses that informed the development of the PPMMS. In particular, due space constraints, we were unable to include the exploratory factor analyses of wave 1 data nor the exploratory factor analyses of the main items for the wave 2 data in the published manuscript. We were also unable to include the entire list of tested items in the manuscript. All tested items and factor loadings are presented here.

Please note: If you are looking for the final scale that was published in *Human Communication Research*, you can find those items in the Appendix of the article as well as in the Measures section of our website www.CcaM-ASCoR.nl

Table of Contents

Wave 1: PPMMS Items	2
Wave 1: Exploratory Factor Analysis for Main Items.....	5
Wave 1: Exploratory Factor Analysis for Follow-Up Items	5
Wave 2: PPMMS Items	7
Wave 2: Exploratory Factor Analysis for Main Items.....	10

Questions?

Any questions regarding this measure can be directed to Professor Patti Valkenburg (p.m.valkenburg@uva.nl) or Professor Jessica Piotrowski (j.piotrowski@uva.nl).

Supplemental Information on PPMMS Development

The creation of the PPMMS occurred in two steps. The first data wave, which involved a survey among 761 preadolescents and early adolescents, was used to explore and select the best main items for both the restrictive and active mediation strategies and to investigate whether the follow-up items (measuring mediation styles) clustered into distinguishable subscales. The following are the items that were tested in Wave 1.

Wave 1: PPMMS Items

1. How often do your parents tell you that you are not allowed to watch certain programs or movies (FSR)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 1.1... threaten to punish me if I want to watch that program after all (OCR¹).
- 1.2... make me feel guilty if I want to watch such programs or movies after all (CCR¹).
- 1.3... try to understand why I like such programs or movies (ASR¹).
- 1.4...Although my parents say that I am not allowed to watch such programs or movies, I can watch those programs again the next time (IR¹).

2. How often do your parents tell you that you are not allowed to play computer games that are meant for older children? (FSR)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 2.1... get angry if I still want to play that game (OCR).
- 2.2... tell me that I make them upset them if I still want to play that game (CCR).
- 2.3... explain to me why it's better to not play those games (ASR).
- 2.4...Although my parents say that I am not allowed to play these games, I can play those games again the next time (IR).

3. How often do your parents tell you that you are not allowed to visit certain websites, for example, sex sites or pay sites(FSR)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 3.1... make a threat that I cannot go on the internet anymore if I still want to visit the website (OCR).
- 3.2... frighten me by saying what could happen to me if I still visit those websites (CCR).
- 3.3... explain to me why it's better not to visit those websites (ASR).
- 3.4...Although my parents say that I am not allowed to visit these websites, I visit them again the next time (IR).

4. How often do your parents tell you that you cannot play computer games or go online that long(FSR)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 4.1... get mad if I want to game or browse longer after all (OCR).
- 4.2... not be nice to me if I want to game or browse longer after all (CCR).
- 4.3... try to understand why I cannot stop gaming or browsing (ASR).
- 4.4...Although my parents say that I am not allowed to game or browse longer, after a while I can it as long as I want again (IR).

5. How often do your parents tell you that you first have to finish homework before you can watch television, play video games, or go online(FSR)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 5.1... threaten to punish me if I still want to watch television, play video games, or go online first (OCR).
- 5.2... say that they would be disappointed in me if I still want to watch television, play video games, or go online first (CCR).
- 5.3... explain to me why it is better to finish my homework first (ASR).
- 5.4...Although my parents say that I have to finish my homework first, most of the time I can still keep on watching TV, playing computer games, or browsing the internet (IR).

6. How often do your parents say that they find some things in the media bad or disgusting (FAM)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 6.1... give their opinion and it is difficult to go against that (CAM).
- 6.2... respect it if I would think different about it (ASAM).

7. How often do your parents say that the gross language in media is unacceptable (FAM)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 7.1... give me the feeling that their opinion is more important than mine (CAM).
- 7.2... ask me to tell how I feel about it (ASAM).

8. How often do your parents say that they think that violence (e.g, fighting, shooting) in the media is too intense (FAM)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 8.1... have an opinion on this which cannot be changed (CAM).
- 8.2... want to know what I think about this (ASAM).

9. How often do your parents say that people in the media (for example, on TV or in movies) are too harsh or rude to each other (FAM)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 9.1... think they are right and I cannot do anything to change that (CAM).
- 9.2... be curious how I feel about this (ASAM).

10. How often do your parents say that things in movies or commercials can be very different in real life (FAM)?

And if your parents tell/would tell you this, how would they do this?
They would...

- 10.1... value their opinion more than mine (CAM).
- 10.2... encourage me to voice my own opinion (ASAM).

11. How often do your parents explain that things in the media (for example, in movies or commercials) are better portrayed than they are in real life (FAM)?

And if your parents tell/would tell you this, how would they do this?
They would...

11.1... think this, and nothing can be done to change that (CAM).

11.2... be curious whether I noticed these things too (ASAM).

12. How often do your parents say that fighting and shooting in the media (for example, in movies and games) is very different than it is in real life (FAM)?

And if your parents tell/would tell you this, how would they do this?
They would...

12.1... only tell me how they would feel about it and are not interested in the opinion of others (CAM).

12.2... be curious how I feel about this (ASAM).

¹FRM = frequency of restrictive mediation; FAM = frequency of active mediation;
OCR = Overtly controlling restriction; CCR = Covertly controlling restriction; ASR =
Autonomy-supportive restriction; IR = Inconsistent restriction; CAM = Controlling active
mediation; ASAM= Autonomy-supportive active mediation.

Wave 1: Exploratory Factor Analysis for Main Items

We started with an exploratory factor analysis (EFA) on the 12 main items (5 restrictive and 7 active mediation items). This EFA led to a two-factor solution that explained 51% of the variance. See table below for factor loadings.

Item Number (Intended Type)	F1	F2
11 (Active Mediation)	.834	
10 (Active Mediation)	.798	
12 (Active Mediation)	.700	
9 (Active Mediation)	.664	
7 (Active Mediation)	.575	.462
2 (Restriction)		.740
1 (Restriction)		.726
3 (Restriction)		.595
8 (Active Mediation)	.498	.566
6 (Active Mediation)	.521	.526
4 (Restriction)		.524
5 (Restriction)		.426

Note. Values under .40 are suppressed in the table.

One main restrictive mediation item had to be removed because it did not load as well on the restriction factor as the other items (#5). Three main active mediation items were removed because they either loaded on the wrong factor or high on both factors (#6, 7, 8). The remaining eight main items loaded separately on their hypothesized restrictive and active mediation factors (57% of variance explained). See table below for factor loadings.

Item Number (Intended Type)	F1: Active Mediation ($\alpha = .79$)	F2: Restriction ($\alpha = .67$)
11 (Active Mediation)	.865	
10 (Active Mediation)	.837	
12 (Active Mediation)	.720	
9 (Active Mediation)	.628	
2 (Restriction)		.787
1 (Restriction)		.765
3 (Restriction)		.631
4 (Restriction)		.546

Note. Values under .40 are suppressed in the table.

Wave 1: Exploratory Factor Analysis for Follow-Up Items

We then ran an EFA on the follow-up items of each of the eight final main items. This resulted in a five-factor solution that explained 58% of the variance. The results partly mirrored the expected dimensional structure.

Autonomy-supportive active mediation and inconsistent restrictive mediation occupied separate factors. The remaining items did not cluster perfectly. The remaining items did not cluster perfectly. First, the follow-up items measuring overtly and covertly controlling restrictive mediation loaded on one factor and, therefore, could not be distinguished. Because these results are consistent with those of Soenens et al. (2009), we decided to continue with only one type of controlling restrictive mediation in wave 2. We chose for overtly controlling restrictive mediation because (a) the resulting scale led to a higher α (.76 vs. .71) and (b) its pattern of correlations with the construct-validity measures was more pronounced. Finally, the follow-up items meant to measure autonomy-supportive restrictive mediation did not load together. In wave 1, autonomy-supportive restrictive mediation was operationalized by items about (a) parents' explanation of why they restrict their children's media use and (b) parents' understanding of their child's media use. For similar reasons as for controlling mediation, we decided to continue with one type of autonomy-supportive items in wave 2—the items meant to measure explanation of why parents restrict their children's media use. See table below for factor loadings.

The Perceived Parental Media Mediation Scale (PPMMS)

Item Number (Intended Type)	F1	F2	F3	F4	F5
12.2 (Autonomy-supportive active mediation)	.830				
9.2 (Autonomy-supportive active mediation)	.821				
11.2 (Autonomy-supportive active mediation)	.813				
10.2 (Autonomy-supportive active mediation)	.786				
1.3 (Autonomy-supportive restriction)	.570				
4.3 (Autonomy-supportive restriction)	.549				
3.3 (Autonomy-supportive restriction)	.517				
11.1 (Controlling active mediation)		.817			
9.1 (Controlling active mediation)		.794			
10.1 (Controlling active mediation)		.778			
12.1 (Controlling active mediation)		.762			
4.4 (Inconsistent restriction)			.763		
2.4 (Inconsistent restriction)			.744		
1.4 (Inconsistent restriction)			.728		
3.4 (Inconsistent restriction)			.722		
2.2 (Covertly controlling restriction)				.705	
1.2 (Covertly controlling restriction)				.663	
2.1 (Overtly controlling restriction)				.658	
1.1 (Overtly controlling restriction)				.583	
2.3 (Autonomy-supportive restriction)	.410			.449	
4.1 (Overtly controlling restriction)					.781
4.2 (Covertly controlling restriction)					.651
3.1 (Overtly controlling restriction)					.617
3.2 (Covertly controlling restriction)					.533

Note. Values under .40 are suppressed in the table

Wave 2: PPMMS Items

In the second data wave (n=499 adolescents), we re-administered the eight main items from the first wave (four restriction and four active mediation items). However, to ensure that (a) the PPMMS covered main items about different media, (b) the main restrictive mediation scale consisted of items measuring content and time restriction, and (c) the main active mediation scale consisted of items to measure parents' tendency to explain and to convey their opinions about media content, we added five new main items (three new restrictive and two new active mediation items). Thus, in wave 2, a total of seven main restrictive and six main active mediation items were administered.

All Wave 2 items are listed below. At the end of every time, you can identify whether this item was tested in Wave 1 or was a newly added item in Wave 2. To aid any comparisons, the original numbering for the Wave 1 items remains.

1. How often do your parents tell you that you are not allowed to watch certain programs or movies (FSR)? [wave 1 item]

And if your parents tell/would tell you this, how would they do this?
They would...

- 1.1... threaten to punish me if I want to watch that program after all (CR¹).
- 1.3... try to understand why I like such programs or movies (ASR¹).
- 1.4... Although my parents say that I am not allowed to watch such programs or movies, I can watch those programs again the next time (IR¹).

2. How often do your parents tell you that you are not allowed to play computer games that are meant for older children? (FSR)? [wave 1 item]

And if your parents tell/would tell you this, how would they do this?
They would...

- 2.1... get angry if I still want to play that game (CR).
- 2.3... explain to me why it's better to not play those games (ASR).
- 2.4... Although my parents say that I am not allowed to play these games, I can play those games again the next time (IR).

3. How often do your parents tell you that you are not allowed to visit certain websites, for example, sex sites or pay sites(FSR)? [wave 1 item]

And if your parents tell/would tell you this, how would they do this?
They would...

- 3.1... make a threat that I cannot go on the internet anymore if I still want to visit the website (CR).
- 3.3... explain to me why it's better not to visit those websites (ASR).
- 3.4... Although my parents say that I am not allowed to visit these websites, I visit them again the next time (IR).

13. How often do your parents forbid you to watch certain TV programs or movies because there is too much violence in them? (FSR) [new wave 2 item]

And if your parents tell/would tell you this, how would they do this?
They would...

- 13.1... get mad if I still want to watch them (CR).
- 13.2... explain to me why it's better not to do that (ASR).
- 13.3... Although my parents say that I am not allowed to, the next time I can watch these programs or movies again(IR).

14. How often do your parents tell you that cannot play computer games for that long? (FSR) [new wave 2 item]

And if your parents tell/would tell you this, how would they do this?
They would...

- 14.1... threaten to punish me if I keep on gaming (CR).
- 14.2... tell me why they don't want that (ASR).
- 14.3...tell me I am not allowed to, but most of the time I can just keep on doing it(IR).

15. How often do your parents tell you that you are not allowed to go online for too long? (FSR) [original wave 1 #4 → split into #15 and 16]

And if your parents tell/would tell you this, how would they do this?
They would...

- 15.1... get mad if I keep on browsing (CR).
- 15.2... tell me why it is better to stop (ASR).
- 15.3...tell me I am not allowed to, but most of the time I can just keep on doing it (IR).

16. How often do your parents forbid you to watch certain TV programs or movies? (FSR) [original wave 1 #4 → split into #15 and 16]

And if your parents tell/would tell you this, how would they do this?
They would...

- 16.1... threat to punish me if I keep on watching (CR).
- 16.2... explain to me why it's better to not watch these programs or movies (ASR).
- 16.3...forbid these programs or movies, but the next time I can still watch them again (IR).

9. How often do your parents say that people in the media (for example, on TV or in movies) are too harsh or rude to each other (FAM)? [wave 1 item]

And if your parents tell/would tell you this, how would they do this?
They would...

- 9.1... think they are right and I cannot do anything to change that (CAM).
- 9.2... be curious how I feel about this (ASAM).

10. How often do your parents say that things in movies or commercials can be very different in real life (FAM)? [wave 1 item]

And if your parents tell/would tell you this, how would they do this?
They would...

- 10.1... value their opinion more than mine (CAM).
- 10.2... encourage me to voice my own opinion (ASAM).

11. How often do your parents explain that things in the media (for example, in movies or commercials) are better portrayed than they are in real life (FAM)? [wave 1 item]

And if your parents tell/would tell you this, how would they do this?
They would...

- 11.1... think this, and nothing can be done to change that (CAM).
- 11.2... be curious whether I noticed these things too (ASAM).

12. How often do your parents say that fighting and shooting in the media (for example, in movies and games) is very different than it is in real life (FAM)? [wave 1 item]

And if your parents tell/would tell you this, how would they do this?
They would...

12.1... only tell me how they would feel about it and are not interested in the opinion of others (CAM).

12.2... be curious how I feel about this (ASAM).

17. How often do your parents tell you that the language in the media is too rude (e.g., on TV, in videoclips, in movies) (FAM)? [new wave 2 item]

And if your parents tell/would tell you this, how would they do this?
They would...

17.1... give me the feeling that their opinion is more important than mine (CAM).

17.2... ask me to tell how I feel about it (ASAM).

18. How often do your parents tell you that there is too much violence (fighting, shooting) in the media (e.g., in movies or games) (FAM)? [new wave 2 item]

And if your parents tell/would tell you this, how would they do this?
They would...

17.1... would have an opinion on this and this cannot be changed (CAM).

17.2... want to know what I think (ASAM).

¹FRM = frequency of restrictive mediation; FAM = frequency of active mediation;
CR = Controlling restriction; ASR = Autonomy-supportive restriction; IR = Inconsistent restriction; CAM = Controlling active mediation; ASAM= Autonomy-supportive active mediation.

Wave 2: Exploratory Factor Analysis for Main Items

To meet the criterion of cross-population validity, we randomly selected approximately half of the wave 2 sample (n=243) to submit to an EFA and the other half (n=256) to submit to a CFA. Following Noar (2003), we started with two EFAs on the seven main restrictive and six main active mediation items separately. The best four main items from each EFA were selected using both high factor loadings and breadth of the construct as criteria for inclusion. The process of selecting these best four items is detailed below.

The 7 main restriction items loaded on one factor (49% of variance explained). First, the lowest loading item (“How often do your parents tell you that are not allowed to go online for too long”) was dropped. Next, correlations indicated that two items were highly correlated with one another ($r = .74$) and were quite similar in wording and content. The item with the lower loading (“How often do you parents forbid you to watch certain TV programs or movies”) was dropped. Finally, to ensure that the main restriction items were balanced in terms of types of media and restriction behaviors (i.e., restriction of time and content), one additional item was dropped (“How often do your parents tell you that you are not allowed to visit certain websites”) leaving 4 main restriction items. See table below for factor loadings.

How often do your parents..	Factor Loading	Correlations						
		1	2	3	4	5	6	7
1. ...forbid you to watch certain TV programs or movies because there is too much violence in them?	.85	1.00	0.74	0.59	0.62	0.40	0.28	0.33
<i>2....forbid you to watch certain TV programs or movies?</i>	.82		1.00	0.51	0.51	0.39	0.35	0.38
3.... tell you that you are not allowed to watch such programs or movies?	.76			1.00	0.53	0.44	0.30	0.27
4.... tell you that you are not allowed to play computer games that are meant for older children?	.75				1.00	0.37	0.27	0.24
<i>5.... tell you that you are not allowed to visit certain websites? (for example, sex sites or pay sites)</i>	.60					1.00	0.23	0.16
6....tell you that you cannot play computer games for that long?	.54						1.00	0.46
<i>7....tell you that you are not allowed to go online for too long?</i>	.53							1.00

Note. All correlations significant at $p < .05$ (n = 243); items in italicized were dropped from the main restriction scale.

The 6 main active mediation items also loaded on one factor (59% of variance explained). As with the main restrictive items, the best 4 items were selected by reviewing factor loadings as well as the content of the items. First, the lowest loading item (“How often do your parents explain that things in the media are better portrayed than they are in real life”) was dropped. Next, we reviewed the item correlations as well as the item content to ensure that the items included different media, and reflected items measuring both parental explanation of and opinions about media content. Two items were quite similar in terms of content and were highly correlated ($r = .66$). The item with the lower loading

The Perceived Parental Media Mediation Scale (PPMMS)

("How often do your parents tell you that the language in the media is too rude") was removed, resulting in 4 main active mediation items. See table below for factor loadings.

How often do your parents..	Factor Loading	Correlations					
		1	2	3	4	5	6
1.... say that people in the media (for example on TV or in movies) are too harsh or rude to each other?	0.81	1.00	0.66	0.48	0.45	0.66	0.41
2.... tell you that there is too much violence (fighting, shooting) in the media (e.g., in movies or games)?	0.79		1.00	0.48	0.38	0.67	0.38
3.... say that fighting and shooting in the media (for example in movies and games) is very different than it is in real life?	0.76			1.00	0.57	0.39	.57
4.... say that things in movies or commercials can be very different in real life?	0.76				1.00	0.37	0.73
5.... <i>tell you that the language in the media is too rude (e.g., on TV, in videoclips, in movies)?</i>	0.75					1.00	0.33
6.... <i>explain that things in the media (for example in movies or commercials) are better portrayed than they are in real life?</i>	0.74						1.00

Note. All correlations significant at $p < .05$ ($n = 243$); items in italicized were dropped from the main active mediation scale.

Following these analyses, an exploratory factor analysis for the follow-up items was conducted. This EFA, along with results from a confirmatory factor analysis and construct validity analyses, are available in the published *Human Communication Research* manuscript.