

Should I give kids money? The role of pocket money on at-risk behaviors in Italian adolescents

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Abstract

Background. Discussion on the impact of pocket money on positive behaviors is still debated.

Objective. To investigate the effect of diverse money allowance schemes on risky behaviors (smoking, alcohol, binge drinking, drug use, gambling) during adolescence.

Method. 989 students aged 15 from Lombardy (Italy) reported information on money availability in the 2018 wave of the Health Behaviour in School-aged Children study. To analyze the relationship between money availability and risky behaviors we computed odds ratios and 95% confidence intervals through unconditional multiple logistic regression models.

Results. Spending more than 10€ weekly was associated with higher likelihood to smoke, binge drink or gamble. Receiving pocket money (rather than receiving money upon request) was related to higher likelihood to engage in risky behaviors.

Conclusions. Pocket money may have a negative impact on adolescents, particularly with a substantial amount of money. More research is needed to understand why providing money only if needed may serve as a protective factor against risky behaviors.

Key words

- pocket money
- smoking
- alcohol drinking
- gambling
- adolescents

INTRODUCTION

Pocket money (i.e., providing a fixed amount of money recurrently) is a common way to allow for intentional financial socialization during childhood and adolescence, but whether it represents an effective factor in endorsing positive behaviors and lifestyles is a controversial issue. Indeed, previous studies report both positive and negative effects, as well as no impact at all, of having a fixed amount of money available for children and adolescents.

On the one hand, scholars defend money allowances to children as a tool to endorse critical financial capabilities and responsibilities [1-4], to incentivize good behaviors as a mechanism of reward [5], and to equip children with resources to be used for their own consumption [6, 7]. Furthermore, past research suggests that pocket money may function as an intra-household resource allocation device, key to educating children [8] and associated to higher financial literacy levels [9]. In addition, it was also found that adolescents with pocket money are more likely to practice physical activity with higher frequency than their peers with no allowances [10].

On the other hand, another equally substantial body of studies claims that allowances alone do not improve competencies such as carrying a credit card balance, having a bank account or saving [11], suggesting instead a connection between allowances and financial dependence rather than capability [12]. Looking at research in the health sector, evidence confirms the role of pocket money in cigarette smoking in children and adolescents, with a higher amount of pocket money associated with a higher prevalence [13-19]. It was also found that pocket money represents a risk factor in boosting unhealthy eating habits, like consumption of soft drinks and out-of-home eating [20-23]. Furthermore, increasing levels of money availability are associated with higher risk of substance use [24] and higher likelihood of students' gambling [25].

As concerns the Italian context, evidence is quite limited, suggesting a connection between adolescents' pocket money availability with alcohol consumption and smoking habits [26-29].

This paper contributes to the existing literature by

providing insights on the effects of different money allowance schemes over five types of risky behaviors. Indeed, the research takes into account the differential effect of terms and conditions under which parents provide an allowance, rather than just the pocket money itself. Specifically, the analyses mostly concerned the impact of the amount of weekly expenses, the frequency of pocket money (regular vs irregular) and the amount of money available over five different risky practices (smoking, consuming alcohol, binge drinking, drug use, gambling). To the best of our knowledge, this is the first study investigating the effect of diverse money allowance schemes on risky behaviors during adolescence. Indeed, previous studies present some limitations. The majority of them only asked for the amount of money available to children and adolescents, with no differentiation in terms of the sources of such allowance [1, 10, 13, 15, 16, 18-20, 22, 23, 25, 27]. Furthermore, some studies focused only on regular pocket money [11, 26, 29], or they tested the effect of paid chores, earned income and allowances over risky behaviors [12, 24], rather than investigating the frequency of pocket money. Last, we can recall few other studies that treated all money sources at children's disposal as a unique variable, without distinguishing where the money comes from [2, 14, 17].

MATERIALS AND METHODS

We used Lombardy (Italy) regional data from the 2018 wave of the Health Behaviour in School-aged Children (HBSC) study, a cross-national investigation conducted on school children aged 11-15 in over 51 countries and regions across Europe and North America in collaboration with the World Health Organization (WHO) Regional Office for Europe [30].

The sampling procedure followed international guidelines. Classes were selected according to a systematic sampling method from the complete list of schools provided by the Italian Ministry of Education, University and Research. Participants were chosen via cluster sampling, with school classrooms serving as the primary sample unit. In the Italian HBSC, schools from Lombardy were oversampled to ensure sufficient statistical power to obtain robust frequency estimates at a regional level [31]. Details about the survey's sample methodology and data collection may be found elsewhere [31, 32]. The protocol for the study was approved by the National Institute of Health's Institutional Ethical Board (General protocol: PRE-876/17).

Outcome measures

Five at-risk behaviors were assessed: i) smoking and ii) drinking behavior, using the questions "How many days have you smoked at least one cigarette in the last 30 days" and "How many days have you consumed alcohol (if you ever had) in the previous 30 days", respectively. We then classified all those who answered with "at least one day" as smokers or drinkers; iii) binge drinking (yes/no) was assessed with the question "Have you ever drunk five or more glasses of alcoholic beverages on a single occasion in the last 12 months?"; and iv) cannabis use was assessed with the question "Have

you ever smoked cannabis in your life?". Lastly, v) gambling was assessed with the question "Have you ever bet and/or gambled money in your life?", where gambling was defined as betting on the outcome of a contest or game – including those organized by charities – in which money can be won or lost.

Other measures

In Lombardy Region only, adolescents aged around 15 were asked about money availability for their personal use, the average amount of money per week spent without parental supervision (open question, in €) and the following sources of money: weekly pocket money, monthly pocket money, money asked when needed. For the present analysis, 989 students aged 15 from 67 classes who provided information on self-reported money availability were included in the study.

Statistical analysis

We evaluated the odds ratios (OR) and corresponding 95% confidence intervals (CI) of i) smoking behavior during the previous month, ii) alcohol usage within the last month, iii) lifetime binge drinking, iv) lifetime cannabis use, and v) gambling using unconditional multiple logistic regression models. We also evaluated the ORs for at least four of the above-mentioned at-risk behaviors (i.e., smoking in the last 30 days, drinking in the last 30 days, binge drinking, cannabis use and gambling). All the models were adjusted for sex, age (in continuous), and the highest level of education of the parents. SAS version 9.4 (Cary, North Carolina, USA) was used to perform all statistical analyses. Materials and analysis code for this study are available by emailing the corresponding Author.

RESULTS

Table 1 shows the ORs for selected at-risk behaviors (namely smoking in the last 30 days, drinking in the last 30 days, binge drinking, cannabis use and gambling) according to money availability in adolescents in their third year of high school. Adolescents spending more than 10€ per week were more frequently smokers (compared to less than 10€, OR=1.60; 95% CI: 1.07-2.37 for 10-20€, and OR=1.66; 95% CI: 1.14-2.41 for more than 20€ per week). Those receiving pocket money were more frequently smokers (OR=1.69; 95% CI: 1.25-2.27) while no significant relation was observed with receiving money only upon request. Moreover, adolescents receiving less than 10€ on request per week had a lower likelihood to smoke (OR=0.53; 95% CI: 0.34-0.84), binge-drink (OR=0.65; 95% CI: 0.45-0.95), and gamble (OR=0.63; 95% CI: 0.42-0.94). Compared to <10€ (independently on the source), the OR of binge drinking for adolescents having more than 20€ available for their weekly expenses was 1.44 (95% CI: 1.04-1.99) and the OR of gambling was 1.43 (95% CI: 1.02-2.02). *Supplementary Table 1* and *Supplementary Table 2* available online show the ORs for the same at-risk behaviors in males and females, respectively.

Table 2 shows the ORs for having at least four out of the five aforementioned at-risk behaviors. Compared to adolescents having less than 10€ per week, the OR

Table 1

Distribution of adolescents in their third year of high school by selected at-risk behaviors, according to money availability. Corresponding odds ratios (OR) and 95% confidence intervals (CI). HBSC Lombardy 2017-2018

Determinants	Smoking in the last month [^]		Alcohol in the last month [^]		Binge drinking [¥]		Cannabis use [¥]		Gambling [¥]	
	%	OR* (95% CI)	%	OR* (95% CI)	%	OR* (95% CI)	%	OR* (95% CI)	%	OR* (95% CI)
Total	25.3		53.1		38.1		22.6		37.9	
Weekly expenses[§]										
<10€	19.6	1.00 [°]	50.0	1.00 [°]	33.2	1.00 [°]	18.4	1.00 [°]	34.0	1.00 [°]
10-20€	27.8	1.60 (1.07-2.37)	55.3	1.25 (0.89-1.75)	39.7	1.34 (0.95-1.89)	24.9	1.47 (0.98-2.21)	39.2	1.27 (0.88-1.83)
≥20€	29.0	1.66 (1.14-2.41)	55.1	1.21 (0.88-1.65)	42.0	1.44 (1.04-1.99)	24.9	1.44 (0.98-2.12)	41.8	1.43 (1.02-2.02)
P for trend		0.012		0.276		0.032		0.083		0.042
Pocket money[§]										
No	21.7	1.00 [°]	51.8	1.00 [°]	36.1	1.00 [°]	21.1	1.00 [°]	35.7	1.00 [°]
Yes	31.8	1.69 (1.25-2.27)	55.2	1.14 (0.87-1.49)	41.7	1.26 (0.96-1.64)	25.5	1.24 (0.91-1.69)	41.5	1.24 (0.93-1.65)
Pocket money[§]										
No	21.7	1.00 [°]	51.8	1.00 [°]	36.1	1.00 [°]	21.1	1.00 [°]	35.7	1.00 [°]
Yes										
<10€	28.8	1.41 (0.84-2.39)	51.3	0.97 (0.60-1.55)	35.4	0.94 (0.58-1.53)	15.9	0.70 (0.37-1.31)	35.4	1.01 (0.61-1.69)
10-20€	34.0	1.93 (1.23-3.05)	54.4	1.12 (0.73-1.71)	45.7	1.51 (0.99-2.30)	30.8	1.60 (1.00-2.54)	43.3	1.26 (0.80-1.97)
≥20€	31.9	1.69 (1.15-2.47)	57.7	1.26 (0.88-1.79)	42.3	1.28 (0.90-1.83)	27.0	1.33 (0.89-1.99)	43.6	1.35 (0.93-1.96)
Money if needed[§]										
No	27.3	1.00 [°]	52.2	1.00 [°]	40.9	1.00 [°]	23.6	1.00 [°]	40.8	1.00 [°]
Yes	24.2	0.82 (0.60-1.12)	53.6	1.03 (0.79-1.35)	36.7	0.82 (0.62-1.08)	22.1	0.92 (0.66-1.26)	36.5	0.87 (0.65-1.16)
Money if needed[§]										
No	27.3	1.00 [°]	52.2	1.00 [°]	40.9	1.00 [°]	23.6	1.00 [°]	40.8	1.00 [°]
Yes										
<10€	17.4	0.53 (0.34-0.84)	50.3	0.90 (0.62-1.29)	31.8	0.65 (0.45-0.95)	19.5	0.77 (0.50-1.21)	29.9	0.63 (0.42-0.94)
10-20€	23.9	0.81 (0.54-1.22)	54.4	1.08 (0.75-1.55)	34.2	0.74 (0.51-1.08)	20.7	0.86 (0.56-1.33)	35.9	0.87 (0.59-1.28)
≥20€	29.5	1.08 (0.75-1.55)	55.6	1.10 (0.79-1.53)	42.4	1.03 (0.74-1.44)	25.2	1.07 (0.73-1.57)	42.0	1.09 (0.77-1.56)

*ORs were estimated by unconditional multiple logistic regression models, after adjustment for sex, parental highest level of education and age of the pupil.

Estimates in bold are those statistically significant at 0.05 level.

[°]Reference category.

[§]Whether adolescents did not indicate having money, the money availability's variables (i.e., weekly expenses, pocket money and money if needed) were categorized as "no" or as "less than 10 euros".

[^]Smoking use and alcohol use were asked within the last 30 days. ORs for smoking were based on 974 individuals, and for alcohol on 973.

[¥]Binge drinking was assessed with the question "Have you ever drunk five or more glasses of alcoholic beverages on a single occasion in the last 12 months?".

Cannabis use was assessed with the question "Have you ever smoked cannabis in your life?". Gambling was assessed with the question "Have you ever bet and/or gambled money in your life?". ORs for binge drinking were based on 988, for cannabis use on 985, for gambling on 984.

HBSC: Health Behaviour in School-aged Children.

for those having 10-20€ was 1.76 (95% CI: 1.10-2.82) and the OR for those having more than 20€ per week was 1.69 (95% CI: 1.08-2.64). Those receiving pocket money were more likely to engage in at least four at-risk behaviors (OR=1.48; 95% CI: 1.05-2.10), while no significant relationship was found for those receiving money only upon request. Last, adolescents having less than 10€ on request were less likely to engage in at least four at-risk behaviors (OR=0.49; 95% CI: 0.28-0.83).

DISCUSSION

In light of the controversial evidence concerning the effect of pocket money on unsound activities, we examined the impact of different allowance schemes over five types of risky behaviors. Based on multiple logistic regression models on a sample of Italian adolescents,

the analyses suggest that higher financial means are more likely to induce adolescents to adopt a risky lifestyle, characterized by excessive behaviors such as alcohol consumption and smoking as well as gambling. Such results echo and complement previous studies in the health sector, confirming the active role of pocket money and economic availability in cigarette smoking [17, 18], alcohol consumption [26] and gambling [25]. The novelty of the present study is to reveal the differential effect of diverse allowance payment schemes in inducing risky behaviors.

Indeed, the present research showed that differential money schemes have divergent results on the adoption of risky behaviors. On the one side, pocket money (i.e., providing a fixed amount of money recurrently) negatively impacted adolescents' lifestyles, above all those

Table 2

Distribution of 962 adolescents in their third year of high school who provided information on all the five selected at-risk behaviors, by at-risk behaviors according to money availability. Corresponding odds ratios (OR) and 95% confidence intervals (CI). HBSC Lombardy 2017-2018

Determinants	At least four at-risk behaviors		
	N [^]	%	OR* (95% CI)
Total	962	17.0	
Weekly expenses[§]			
<10€	275	12.4	1.00 [°]
10-20€	283	19.8	1.76 (1.10-2.82)
≥20€	369	19.5	1.69 (1.08-2.64)
P for trend			0.035
Pocket money[§]			
No	613	14.8	1.00 [°]
Yes	342	21.1	1.48 (1.05-2.10)
Pocket money[§]			
No	613	14.8	1.00 [°]
Yes			
<10€	80	13.8	0.90 (0.46-1.79)
10-20€	99	23.2	1.69 (1.00-2.85)
≥20€	163	23.3	1.68 (1.09-2.58)
Money if needed[§]			
No	316	19.9	1.00 [°]
Yes	642	15.7	0.74 (0.52-1.06)
Money if needed[§]			
No	316	19.9	1.00 [°]
Yes			
<10€	190	11.1	0.49 (0.28-0.83)
10-20€	191	16.2	0.80 (0.49-1.29)
≥20€	261	18.8	0.91 (0.60-1.38)

[^]For each determinant the sum does not add to the total because of few missing values.

*ORs were estimated by unconditional multiple logistic regression models, after adjustment for sex, parental highest level of education and age of the pupil. Estimates in bold are those statistically significant at 0.05 level.

[°]Reference category.

[§]Whether adolescents did not indicate having money, the money availability's variables (i.e., weekly expenses, pocket money and money if needed) were categorized as "no" or as "less than 10 euros".

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related to smoking habits. Specifically, 10€ represents the weekly threshold above which the negative effect of allowance is registered. On the other side, granting money on request results as a protective factor over risky behaviors, in particular when limited to a restricted amount of money (i.e., less than 10€ per week). In fact, giving children limited amount of money on demand decreased the likelihood to smoke, incur in binge drinking and gambling patterns.

Different hypotheses might be formulated to interpret such result. First, requesting money from parents often implies to clarifying the reasons behind the request; this in turn could result in a sort of pre-commitment undertaken by children who might feel more likely to

respect the commitment with parents. Second, we can speculate that the absence of regular money provision might induce adolescents to feel higher responsibility for money requested, felt not as a right whereas as a way of being part of family household management and balance. Indeed, as Lee and Mortimer [12] suggested, regular allowance payments might induce children to excessively rely upon parents promoting financial dependence rather than capability. Other strategies to provide money to children might obtain better effects, such as contingent upon chores [11, 33] and money on request. Such strategies allow to engage in discussions and negotiations about money which are key in the financial socialization process, while pocket money does not require regular conversations [34]. Further research is needed to assess such hypotheses and to shed light on the reasons why irregular money provision rather than recurrent pocket money might function as a protective factor towards risky behaviors.

In terms of implications for policies and public health, the findings suggest the importance to inform parents and caregivers of the potential negative impact of money availability (in particular when fixed) over risk behaviors. Additionally, they might benefit from education programs discussing the use of different money schemes and the impact of diverse allowance amounts. While pocket money and high amounts might represent a risk factor in inducing unhealthy activities, providing restricted amount of money on request might be a useful strategy to limit such behaviors during adolescence.

Our study has some limitations. First, the study was based on cross-sectional data, so causality between variables cannot be established. Second, data were collected on a relatively limited sample size. Therefore, data should be generalized with caution. Furthermore, future research should take into consideration additional variables which were not included in the present dataset, and which might provide further insight on the relationship between money allowance schemes and risky behaviors (e.g., parental monitoring and parental risky habits). Last, since data were self-reported by respondents, misreporting of risky behaviors might occur.

CONCLUSIONS

To conclude, the present study reports novel insights on the effect of different money allowance schemes and economic availability over a broad range of risky behaviors, being the first to consider both the impact of the amount of weekly expenses and the frequency of pocket money. Results show that pocket money alone and high economic availability might have a counteractive impact on adolescents and children, being related to risky behaviors, while money on request might function as a protective factor especially with restricted amount of money.

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Authors' contributions

EL: conceptualization, writing (original draft, writing) review & editing, project administration, supervision, data interpretation. CMJ: data curation, formal analysis, writing (original draft, writing) review & editing, data interpretation. GS: writing (original draft, writing) review & editing, data interpretation. EM: writing (review & editing, supervision, data interpretation). AL: writing (review & editing, supervision, data interpretation). ES: writing (review & editing, data interpretation). SG: conceptualization, data curation, formal analysis, writing (original draft, writing) review & editing, project administration, supervision, data interpretation. HBSC: Lombardy Committee data curation.

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Data sharing

Materials and analysis code for this study are available by emailing the corresponding Author.

Conflict of interest statement

There are no potential conflicts of interest or any financial or personal relationships with other people or organizations that could inappropriately bias conduct and findings of this study.

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