Delinquency Among Pathological Gamblers: A Causal Approach

Gerhard Meyer, Ph.D. University of Bremen, Germany

Thomas Fabian, Dipl. Psych.

Bremer Institut für Gerichtspsychologie, Germany

In a comprehensive research project on gamblers in self-help groups in West Germany one object of investigation was the question of whether or not pathological gambling has a criminogenic effect. 54.5% of the 437 members of Gamblers Anonymous interviewed stated that they had committed illegal actions in order to obtain money for gambling. Comparisons of this sub-group with those interviewees who did not admit having committed criminal offences show distinct differences: Those who admitted illegal action were more excessive in their gambling behavior and experienced a higher degree of subjective satisfaction through gambling. They also showed a more pronounced problem behavior and more psychosocial problems because of gambling. A multiple regression within the framework of path analysis was computed in order to explore causal links between pathological gambling and delinquency. The results support the hypothesis that pathological gambling can lead to delinquent behavior. Forensic implications are discussed.

This article is a revised version of a paper presented at the Eighth International Conference on Risk and Gambling in London, U.K., August 15-17, 1990.

The content and presentation of this article has benefited from the comments of Agnes Roemer, Department of Psychology, University of Bremen.

Address correspondence and reprint requests to Dr. Gerhard Meyer, Universität Bremen, Fachbereich 9, Studiengang Psychologie, Sportturm, Postfach 330 440, D-2800 Bremen 33, Federal Republic of Germany.

INTRODUCTION

The American Psychiatric Association (APA) has included "pathological gambling" in its diagnostic manual—the DSM-III and DSM-III-R (APA, 1980, 1987)—as a diagnostic category of its own. It will also be included in the next diagnostic manual of the World Health Organisation (WHO), the "International Classification of Disease" (ICD-10) (WHO, 1987; Sartorius, Jablensky, Cooper & Burke, 1988). Both diagnostic manuals mention the committing of illegal acts in order to obtain money for gambling as a characteristic problem of pathological gamblers.

In clinical studies about pathological gamblers who sought therapeutic help a high rate of delinquent behavior has been repeatedly pointed out. In his article about ten gamblers who were treated in a psychiatric clinic in Hamburg, Rasch (1962) reported that all ten had committed embezzlements or gross breaches of confidence; only four however were prosecuted. According to Bellaire and Caspari (1989), 33 (72%) out of 46 gamblers treated in the University Clinic in Homburg/Saar were known to have committed criminal offences. Twenty-one patients (46%) had become delinquent exclusively in order to obtain money for gambling. Twelve patients had already committed illegal acts before their gambling career. Füchtenschnieder (1991) registered criminal offences for the purpose of financing gambling in the case of 36 (56%) out of 64 out-patient gamblers; nineteen (30%) had been convicted.

Blaszczynski, McConaghy and Frankova (1989) give a review of clinical studies in the English-speaking countries. According to these studies between 21% and 85% of pathological gamblers became involved in illegal activities, depending on whether criteria used included self-report measures or objective indices such as actual arrest or known criminal record.

To numerous authors (i.e. Rasch, 1962; Greenberg & Rankin, 1982; Lesieur, 1983, 1987; Custer & Milt, 1985; Meyer, 1986; Blaszczynski & McConaghy, 1987; Brown, 1987) these data serve as a basis for deducing a direct connection between delinquent behavior and pathological gambling.

The reason why some gamblers begin to resort to financially motivated criminal acts can be explained by taking into account the specific dynamics of pathological gambling (Meyer & Fabian, 1988): With the development of pathological gambling behavior and as a

consequence of thereby intensified gambling, financial expenditure grows and the gambler experiences a progressive narrowing-down of his perceptions to the necessity to obtain money for continued gambling. When financial resources and legal means of obtaining money are exhausted, it still remains the pathological gambler's goal to obtain money because of an inability to abstain from gambling. The pressure to act then becomes so strong that increasingly higher moral thresholds are passed (Lesieur, 1979). The gambler does not keep financial obligations and finally commits criminal acts in order to obtain the necessary financial means. Passing a moral threshold is not a distinct event but the result of a continuing process during which alternative actions are again and again mentally gone through and discarded until the gambler sees no other way out. Even borrowing money from relatives and acquaintances under false pretenses means that moral thresholds must be passed, but it becomes easier and easier to surmount them. In the further course of the gambling career, moral thresholds are lowered due to a habituation process. At the initial stage interiorized norms and values still have an effect on the gambler's actions. A delinquent gambler will often try to keep open a way to compensate for the damage caused. For example, stolen objects might be deposited at a pawnbroker's, thereby maintaining the possibility of redeeming and returning them in case the hoped for winnings should come about. The delinquency of the pathological gambler is basically caused by the widening gap between the amount of money required to continue gambling - for which a compulsive desire is felt - and the money which can be obtained by legal means.

Apart from the specific dynamics of pathological gambling which play a major role in the gambler's delinquency there are however other factors to be taken into account, such as the personality of the gambler, biography and conditions of socialization, previous delinquency, age and social context at the beginning of the gambling career and the degree of involvement with the gambling scene (see Kreuzer, 1987).

So far in the Federal Republic of Germany, very little research has been done on gambling related delinquency. The aim of this study was to gain empirically based information about the delinquency of gamblers who commit illegal acts in order to obtain money for gambling. The data were also to be used for a first examination of causal relations between pathological gambling and delinquency. This was done on the basis of data collected in a comprehensive research project on gamblers in self-help groups (Meyer, 1989a, b). In this article selected results

will be presented in respect to the question of gambling related delinquency.

METHOD

Sample

Four hundred and thirty-seven gamblers from 54 self-help groups were interviewed. The mean age of the mainly male (95%) interviewees was 31 years. In comparison with the age structure of the overall population, the age group 20 to under 40 is overrepresented in this sample. The male interviewees had a better education. With respect to profession and monthly net income there were no substantial divergences from the overall population. 91.6% of the interviewees met at least four of the diagnostic criteria of the DSM-III-R on the scale "pathological gambling."

Procedure

All then existing 54 self-help groups for gamblers in the Federal Republic of Germany were contacted in 1987 and the group members were interviewed with standardized instruments. These consisted of a comprehensive questionnaire about a wide range of different aspects of gambling—including the diagnostic criteria of the DSM-III-R—, which was developed for the purpose of this investigation, a list of adjectives (following Janke & Debus, 1978) for self-description of the emotional state while gambling, the Freiburg Personality Inventory (FPI-R) (Fahrenberg, Hampel & Selg, 1984) and questions concerning socio-demographic data. The scalability of the instruments was tested with a probabilistic scaling procedure (Mokken, 1971).

Group comparisons (t-test, Chi-square-test) were made between those interviewees who reported they had obtained money for gambling through illegal means and those who denied this.

Furthermore, a multiple regression in the framework of a path analysis was computed in order to examine hypothetical causal links between different aspects of pathological gambling in regard to delinquency. Path analysis is a procedure through which the impact of a number of independent variables on a specified dependent variable can be examined with regard to a hypothesized causal order of effects. The independent variables are entered into the analysis according to the assumed order and a series of regression equations is computed in which each of the independent variables in turn becomes the dependent variable in a new equation. Standardized partial regression coefficients (ß-coefficients) are then used to assess the impact of each independent variable on the criterion variable.

For the path analysis those scales from the gambling question-naire, the emotional state questionnaire and the personality inventory were selected which focus on emotional stress, because it can be assumed that delinquent gamblers show a more pronounced problem behavior than non-delinquent gamblers. Altogether nine variables were entered into the path analysis in the following sequence: age \rightarrow personality scale "emotional instability" \rightarrow scale "function of gambling as substitute and escape" \rightarrow scale "experience of excitement during gambling" \rightarrow scale "symptoms of pathological gambling" \rightarrow duration of excessive gambling phase \rightarrow gambling debts \rightarrow neglect of financial obligations \rightarrow delinquency. A second path analysis was computed in which the scale "emotional instability" was substituted by the scale "aggressiveness."

RESULTS

Frequencies

54.5% (n = 238) of the gamblers interviewed reported having obtained money for gambling through illegal means. 10.3% (n = 45) of the interviewees had already been sentenced for criminal offences committed in order to obtain money for gambling. These were mainly non-violent offences against property, such as theft (42.2%), embezzlement (31.1%), fraud (26.7%), forgery of documents, tax evasion or manipulation of gambling machines (13.3%), but included also robbery or blackmail (15.6%).

Group Comparisons

The group comparisons show that the group of interviewees who had admittedly committed criminal offences gambled more often and longer. Their average stakes were higher and their losses larger. Their total gambling debts were about one and a half times higher. Their

gambling behavior was therefore altogether more excessive than that of the non-delinquent group (Table 1).

On the scale which describes symptoms of pathological gambling and also includes the diagnostic criteria of the DSM-III-R the group of delinquent interviewees shows a significantly higher mean score (Table 2). They also more often had a very strong subjective feeling of dependence on gambling (Table 3) and they more often described withdrawal-like symptoms such as sleep disorders, restlessness, irritability, sweating, nightmares or headaches (Table 2). There were, however, no significant differences on the scale which describes attempts to abstain from or reduce gambling (Table 2).

There were significant differences with regard to motivating and maintaining factors. For the delinquent interviewees who, as mentioned above, had gambled more excessively, gambling had served to a greater extent as a kind of substitute or escape behavior. They more

Table 1
Variables of Gambling Behavior (N = 437)

	delinquent group (n = 238)		non-delinquent group (n = 199)		t-test	
	M	s	M	s	t	prob.
frequency (per week)	5.5	1.7	4.9	1.9	3.76	.000
duration per day (in hours)	4.4	2.0	3.8	1.8	3.59	.000
intensive phase (in months)	75.7	64.0	58.3	50.0	3.07	.002
average stake ^a (in DM)	365.8	640.0	259.6	445.3	1.95	.05
highest loss (in DM)	2,656.2	5,990.9	1,492.6	3,533.2	2.40	.01
highest win (in DM)	5,187.7	14,740.6	2,018.6	6,443.2	2.81	.005
total losses (in DM)	115,846.7	231,381.2	59,757.1	87,956.6	3.20	.001
total debts (in DM)	33,080.5	75,242.9	21,241.9	34,355.2	2.02	.04

aNote: 1 DM = \$0.61 US

Table 2
Variables of Pathological Gambling (N = 437)

	delinquent group $(n = 238)$		non-delinquent group $(n = 199)$		t-test	
	\overline{M}	s	\overline{M}	s	t	prob.
scale "symptoms of pathological gambling"	15.5	5.4	12.3	5.7	6.58	.001
scale "function of gambling as substitute or escape"	5.4	2.1	4.3	2.4	4.97	.001
scale "reduction of gambling"	3.4	1.8	3.1	1.7	1.42	n.s.
scale "happy mood while gambling"	13.3	9.5	10.6	9.1	2.98	.003
scale "excitement while gambling"	7.6	3.0	6.3	3.4	4.25	.000
scale "self- confidence while gambling"	3.4	2.6	2.4	2.2	4.48	.000
scale "dreaminess while gambling"	1.7	1.6	1.0	1.2	4.66	.000
scale "concentration while gambling"	3.2	1.7	2.8	1.6	2.63	.009
scale "negative withdrawal-like symptoms"	4.9	3.6	3.7	3.4	2.97	.003
personality scale "emotional instability"	9.0	3.4	8.0	3.7	2.84	.005
personality scale "aggressiveness"	5.6	3.0	4.4	2.6	4.63	.000

Table 3
Variables "Feeling of Dependency" and "Problems Because of Gambling" (N = 437)

	delinquent group $(n = 238)$	CHI ²	D.F.	prob.
feeling of dependency on gambling	more frequently "very strong"	26.65	2	.000
degree of psychological problems because of gambling	more frequently "very strong"	14.72	6	.02
problems with partner because of gambling	more frequently "strong"	18.97	6	.004
problems with job because of gambling	more frequently "strong"	19.30	6	.003
problems with social contacts because of gambling	more frequently "strong"	21.39	6	.001
problems with leisure time because of gambling	more frequently "strong"	13.56	6	.03
loss of job because of gambling	more frequent	38.32	2	.000
loss of housing because of gambling	more frequent	11.41	2	.003
separation from partner because of gambling	more frequent	14.38	2	.000

often described such motives for their gambling as trouble at home and in their jobs or depressive moods. Gambling was a significantly more positive experience for them—they felt happier, more excited, more self-confident, dreamier and more concentrated while gambling (Table 2).

The two groups differ with respect to personality characteristics.

The delinquent interviewees described themselves to a greater extent as emotionally unbalanced (Table 2).

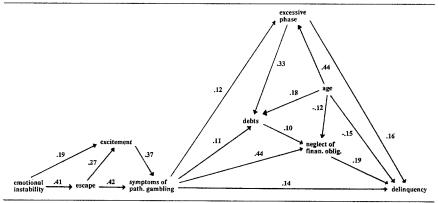
A comparison of the two groups with regards to the psychological and social effects of gambling more frequently shows a very high degree of psychosocial stress for the delinquent interviewees (Table 3): They experienced more problems concerning their partnerships, jobs, social contacts or leisure time activities than the non-delinquent interviewees. They also more often reported separation from their partners, loss of job or housing.

Path Analysis

All coefficients were significant at a p < .001 level. For the diagrams resulting from the path analysis only those ß-coefficients were considered that were equal or higher than .10.

The first path diagram (Figure 1) shows a strong link between the personality variable "emotional instability" and the variable "function of gambling as an escape from reality." There is also a link between the

Figure 1
Path Diagram of Age, Personality Variable "Emotional Instability," Pathological Gambling and Delinquency



Residual variance (1-R²): variable "emotional instability" .99, variable "escape" .83, variable "excitement" .84, variable "symptoms of pathological gambling" .58, variable "duration excessive phase" .80, variable "debts" .79, variable "neglect of financial obligations" .73, variable "delinquency" .85

personality variable and the experience of pleasurable excitement while gambling. There are direct links between function of gambling as escape and experience of excitement while gambling and symptoms of pathological gambling, but there is no direct link between the personality variable and the symptom scale, nor are there direct links between the age variable and the personality or the three gambling variables.

Concerning the delinquent behavior this diagram shows no direct links between personality, escape behavior or the experience of pleasurable excitement and delinquency, but there is a relatively weak link between the symptom scale and delinquency. The link between the symptom scale and debts is also relatively weak. We find no direct link between debts and delinquency here. The link between neglect of financial obligations and delinquency is weak, but there is a strong link between the symptom scale and neglect of financial obligations.

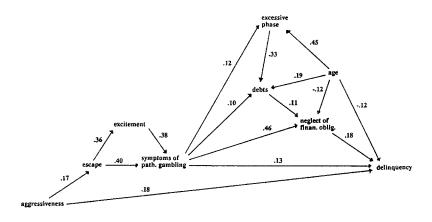
The path diagram shows direct links between the age variable and the duration of the intensive gambling phase and the amount of debts, and negative correlations between this variable and neglect of financial obligations as well as delinquency. Lastly, there is a direct link between the symptom scale and the duration of the intensive gambling phase as well as between the latter and the amount of debts and also delinquency.

If the personality variable "emotional instability" is substituted by the personality variable "aggressiveness" in the path analysis, the following changes result (Figure 2): In contrast to the first path diagram there is no direct link between the duration of the intensive gambling phase and delinquency, but there is a direct link between the personality variable and delinquency. There is no link between the personality variable and the variable "excitement while gambling." The link between the personality variable and the variable "function of gambling as substitute and escape" is considerably weaker than in the first diagram.

DISCUSSION

This study gives further evidence for the linkage between pathological gambling and delinquent behavior which has been observed in clinical and forensic practice and documented in case studies. The

Figure 2
Path Diagram of Age, Personality Variable "Aggressiveness,"
Pathological Gambling and Delinquency



Residual variance (1-R²): variable "aggressiveness" .99, variable "escape" .97, variable "excitement" .87, variable "symptoms of pathological gambling" .58, variable "duration excessive phase" .79, variable "debts" .79, variable "neglect of financial obligations" .72, variable "delinquency" .83

results show that there is a considerable degree of delinquent behavior among pathological gamblers. They also indicate a relationship between delinquent behavior and the symptoms of pathological gambling.

With a little more than half of the interviewees reporting illegal actions in order to obtain money and just over a tenth having already been sentenced for criminal offences, the prevalence rate in our sample is slightly lower than in other German clinical studies. This may be due to the fact that it is easier for a gambler to seek help from a self-help group than to go to professional therapists. Therefore it can be assumed that although the subjective problems are high among our sample, the symptoms are less aggravated than among patients seeking professional help. This interpretation is supported by the results of a cluster analysis computed with the data (Meyer, 1991): One cluster (n = 125, 29% of the sample) consists of interviewees who reported only little emotional involvement while gambling and for them gambling served only to a small extent as an escape from reality. They showed less severe symptoms of pathological gambling and relatively

seldom reported illegal actions because of gambling. Even though the rate of delinquency in the overall sample indicates that illegal actions are a characteristic feature of pathological gambling, they don't allow the identification of an exact prevalence rate of delinquency among pathological gamblers: The results are based on self-reports and the sample consisted exclusively of members of Gamblers Anonymous groups.

The pattern of delinquency found in this sample is similar to those described by Lesieur (1984) and Brown (1987). It seems to be the case that pathological gamblers are mainly involved in non-violent offences against property. But the results of this study also support the observation of Lesieur (1987, p. 100) that these are not the only crimes committed by pathological gamblers. Although the data of this study don't allow to draw conclusions as to under which circumstances gamblers are involved in violent offences we would agree with Brown's (1987, p. 107) assumptions that these occur in states of extreme desperation.

However, the identification of a typical pattern of delinquent behavior which—as Brown (1987) has shown—is statistically different from that of the general population does not say anything about possible causal links between pathological gambling and crime.

The comparison of those interviewees who said that they had not committed criminal offences for gambling with those who admitted they had shows that the latter were more excessive in their gambling behavior and experienced a higher degree of gratification through gambling. They also felt more subjectively dependent on gambling; they had higher losses, larger debts and more psychosocial problems. The question remains open, however, whether these problems are to be accounted for by gambling alone or whether they were aggravated by the illegal actions. It is interesting to note that the higher amount of problems experienced by the delinquent interviewees does not seem to have led to more attempts to abstain from or reduce gambling. Possibly, the illegal acts were a kind of "way out" which enabled them to continue to gamble.

The group comparisons show that delinquent gamblers show a more pronounced problem behavior and were clearly in more financial trouble. Thus a hypothetical model can be drawn which assumes that more excessive and problematic gambling behavior leads to financial trouble which, in combination with the failure to resist the urge to continue gambling, leads to delinquency. Brown (1987) (summarizing Lesieur, 1984) has regarded high losses and exhaustion of options or strategies to obtain money for gambling as central for the explanation of the delinquent behavior of pathological gamblers (Brown, 1987, p. 112). Brown has also raised the question whether there are common causes for both crime and addictions.

Etiological studies show that emotional instability is a characteristic personality feature of pathological gamblers (McCormick & Taber, 1987) whereas aggression is a typical personality feature of delinquents (Steller & Hunze, 1984). In this study, to differentiate between delinquent behavior caused primarily by pathological gambling and delinquency caused by both gambling and personality characteristics, two path analysis were computed.

Considering the causes of delinquent behavior of gamblers the results of the two analyses confirm the assumption, that a high occurrence of symptoms of pathological gambling as well as a resulting neglect of financial obligations are predictors for criminal behavior. The considerable link between the symptoms of pathological gambling and the neglect of financial obligations confirms the impact of loss of responsibility and retreat from social context on the gamblers life situation. While the symptoms of pathological gambling are not agespecific, age does affect the amount of debts as well as the duration of the excessive gambling phase. The negative correlations between age and neglect of financial obligations as well as delinquency suggest that age plays a role in moderating values and standards of responsibility. Interestingly it is not the amount of debts but rather the neglect of financial obligations which shows a direct link to delinquency. Debts as such are not a phenomenon typical of gambling, and it can be assumed that people who neglect their financial obligations run out of legal possibilities to obtain money. This suggests that the exhaustion of legal options for obtaining more money with which to continue to gamble is an important factor that leads the pathological gambler to such desperation that he will become delinquent (Lesieur, 1984; Meyer & Fabian, 1988).

While aggressiveness can be a direct predictor of delinquency, emotional instability, as one of the causes of pathological gambling, is not, thereby confirming the hypothesis that under certain conditions the delinquent behavior of gamblers can be attributed primarily to their pathological gambling behavior and also, that there may well be a

"common cause" for both crime and pathological gambling in certain cases. Interestingly, the path diagram resulting from the second path analysis—in which aggressiveness was entered as independent variable—does not show a direct link between the duration of the excessive gambling phase and the delinquency, whereas in the case of the analysis with the variable "emotional instability" such a link exists. This would suggest, that gamblers with stronger aggressive personality aspects may well turn delinquent after short periods of gambling or may even have been delinquent before becoming a pathological gambler, while the "true" pathological gambler commits illegal acts only after a certain amount of time.

In the first analysis also, the link between the personality variable "emotional instability" and the function of gambling as "escape" is considerably larger than in the second analysis with the personality variable "aggressiveness"; and there is a direct link to "excitement" as feeling while gambling in the first path diagram which does not appear in the second. Both of these differences further strengthen the assumption that for those gamblers, who have more aggressive personalities, gambling plays subjectively a less important role. In a certain sense the two diagrams point to the distinction often made in the literature on gamblers when types of gamblers are described (Custer & Milt, 1985).

Although the variance explained in both path analyses is relatively low—which was to be expected with such a complex linkage between gambling and delinquency—, the differences between the two diagrams support the thesis that under certain conditions the delinquent behavior of gamblers is very much caused by pathological gambling. Even though we must assume that other (above all, socialization) factors contribute to the delinquent behavior, the dynamics of pathological gambling play a chief part in the delinquency of these pathological gamblers.

Forensic aspects

The reported empirical results have implications for the forensic assessment of the delinquent behavior of pathological gamblers. In the Federal Republic of Germany the recognition that certain illegal acts can be accounted for by pathological gambling is increasingly taken into consideration by criminal courts. According to our experiences as

expert witnesses in more than 40 trials, many criminal courts today recognize diminished culpability for pathological gamblers (Meyer, Fabian & Wetzels, 1990).

If pathological gambling is the decisive factor which has led to a criminal offence, it may be assumed that control of action was reduced due to addiction. According to a verdict of the German Federal Court (8.11.1988 - 1 StR 544/88, LG Augsburg) (StV 1989, 141) diminished culpability should only be assumed in the case of severe personality changes due to pathological gambling. Only in these cases can the diagnosis "pathological gambling" be subsumed under the legal criterion "grave psychological abnormality."

In our view it is useful to base the first step in identifying the symptoms of pathological gambling in a forensic-psychological assessment on the diagnostic criteria of the DSM-III-R, although these, while relevant with regard to the need for treatment, do not suffice as sole criteria for answering forensic questions. As with other mental disorders, the severity of the psychological disturbance is an important factor in determining, whether the diagnosis "pathological gambling" meets the legal term "grave psychological abnormality." For an assessment of culpability, the diagnosis "pathological gambling" must be substantiated by describing additional disturbances of psychosocial development within the context of etiological explanations. Rasch (1988) regards habituation, the impact on the way of life, the destruction of the social person and the characteristic one-dimensional orientation towards gambling as decisive aspects of the psychopathological quality of pathological gambling.

If a diagnosis of pathological gambling has been made and lasting changes of the personality are discernible, the question arises whether the offender was able to control his actions in the actual situation in which he committed the crime. In order to answer this question the dynamics of the event must be reconstructed in detail in each individual case and it must be ascertained if and how the diagnosed symptoms became effective during the perpetration of the offence. Criteria used in this context are: the behavior being a symptom and not a structural characteristic of the personality, the impulsiveness of action and the exclusive use of the money for gambling (Schumacher, 1981). If a direct link between pathological gambling and the criminal offences can be ascertained, it can be assumed in most cases that the incriminated illegal acts are to be judged as indirect money-procuring offences

which were motivated by the no longer controllable gambling motivation. In those cases it can be assumed that the ability of the pathological gambler to control his actions was reduced considerably.

REFERENCES

- APA (American Psychiatric Association) (1980). Diagnostic and statistical manual of mental disorders (DSM-III) (3rd edition). Washington, D.C.: APA.
- APA (American Psychiatric Association) (1987). Diagnostic and statistical manual of mental disorders (DSM-III-R) (3rd revised edition). Washington, D.C.: APA.
- Bellaire, W. & Caspari, D. (1989). Die Behandlung von Spielern in der Universitäts-Nervenklinik-Psychiatrie (Homburg/Saar). Praxis der klinischen Verhaltensmedizin und Rehablilitation, 2, 15-18.
- Blaszczynski, A. & McConaghy, N. (1987). Demographic and clinical data on compulsive gambling. In M. Walker (Ed.), *Faces of Gambling* (pp. 263-272). Sydney: National Association of Gambling Studies.
- Blaszczynski, A., McConaghy, N. & Frankova, A. (1989). Crime, antisocial personality and pathological gambling. *Journal of Gambling Behavior*, 5, 137-152.
- Brown, R.I.F. (1987). Pathological gambling and associated patterns of crime: comparisons with alcohol and other drug addictions. *Journal of Gambling Behavior*, 3, 98-114.
- Custer, R. & Milt, H. (1985). When luck runs out. New York: Facts On File.
- Fahrenberg, J., Hampel, R. & Selg, H. (1984). Das Freiburger Persönlichkeitsinventar (FPI-R) (revidierte Fassung). Göttingen: Hogrese.
- Füchtenschnieder, I. (1991). Bericht über die Arbeit der Beratungsstelle für Spielabhängige und Angehörige des Diakonischen Werkes in Herford. In Fachverband Sucht (Ed.), Tagungsband vom Kongreß Sucht und Psychosomatik, 27.–28. Juni 1990 in Heidelberg (in press).
- Greenberg, D. & Rankin, H. (1982). Compulsive gamblers in treatment. British Journal of Psychiatry, 140, 364-366.
- Janke, W. & Debus, G. (1978). Die Eigenschaftswörterliste (EWL). Göttingen: Hogrefe.
- Kreuzer, A. (1987). Jugend Drogen Kriminalität (3. Auflage). Neuwied: Luchterhand.
- Lesieur, H.R. (1979). The compulsive gambler's spiral of options and involvement. *Psychiatry*, 42, 79–87.
- Lesieur, H.R. (1983). Pathological gambling and criminal behavior. Paper presented at Carrier Foundation Training Conference, Golden Nugget Casino, Atlantic City, New Jersey, June 22.
- Lesieur, H.R. (1984). The chase. Cambridge, MA: Schebkman.
- Lesieur, H.R. (1987). Gambling, pathological gambling and crime. In T. Galski (Ed.), *The handbook of pathological gambling* (pp. 89-110). Springfield, ILL: Charles C. Thomas.
- McCormick, R.A. & Taber, J.I. (1987). The pathological gambler: salient personality variables. In T. Galski (Ed.), *The handbook of pathological gambling* (pp. 9-39). Springfield, ILL: Charles C. Thomas.
- Meyer, G. (1986). Abhängigkeit vom Glücksspiel und delinquentes Verhalten. Kriminalistik, 40, 212-216.
- Meyer, G. (1989a). Glücksspieler in Selbsthilfegruppen. Hamburg: Neuland.
- Meyer, G. (1989b). Glücksspieler in Selbsthilfegruppen erste Ergebnisse einer empirischen Untersuchung. Suchtgefahren, 35, 217-234.
- Meyer, G. (1991). Klassifikation von Glücksspielern aus Selbsthilfegruppen mittels Clusteranalyse. Zeitschrift für Klinische Psychologie, Psychopathologie und Psychotherapie, (in press).
- Meyer, G. & Fabian, T. (1988). Abhängigkeit vom Glücksspiel und Beschaffungskriminalität. In C. Wahl (Ed.), Spielsucht (pp. 103-132). Hamburg: Neuland.

- Meyer, G., Fabian, T. & Wetzels, P. (1990). Kriminalpsychologische Aspekte und forensischpsychologische Wertung des pathologischen Glücksspiels. *Strafverteidiger*, 10, 464-469.
- Mokken, R.J. (1971). A theory and procedure of scale analysis. The Hague: Mouton.
- Rasch, W. (1962). Über Spieler. In Festschrift zum 65. Geburtstag von Prof.Dr. H. Bürger-Prinz, Randzonen des menschlichen Verhaltens (pp. 170-184). Stuttgart: Enke.
- Rasch, W. (1988). Pathologisches Glücksspiel und Schuldfähigkeit. Unveröff. Vortragsmanuskript, 15. März in Paderborn.
- Sartorius, N., Jablensky, A., Cooper, J.E. & Burke, J.D. (1988). Psychiatric classification in an international perspective. *British Journal of Psychiatry*, 152, (Supplement 1).
- Schumacher, W. (1981). Die Beurteilung der Schuldfähigkeit bei nichtstoffgebundenen Abhängigkeiten (Spielleidenschaft, Fetischismen, Hörigkeit). In R. Hamm (Ed.), Festschrift für Werner Sarstedt (pp. 361-372). Berlin: de Gruyter.
- Steller, M. & Hunze, D. (1984). Zur Selbstbeschreibung von Delinquenten im Freiburger Persönlichkeitsinventar (FPI) - eine Sekundäranalyse empirischer Untersuchungen. Zeitschrift für Differentielle und Diagnostische Psychologie, 5, 87-109.
- WHO (World Health Organisation) (1987). ICD-10, 1987 draft of chapter V-mental, behavioural and developmental disorders. Genf: WHO.